

City of Follansbee Contact Info 2/27/2025

Wednesday, April 9, 2025 1:42 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

RE: Availability for a call?

1 message

Farley R. Wood, P.E. <fwood@empirede.com>
To: "Andrews, Edward S" <edward.s.andrews@wv.gov>

Thu, Feb 27, 2025 at 11:08 AM

Ed,

Thanks for the email.

I will get working on that today.

The new City Manager for Follansbee is Christine (Chris) Stover. The number at the city building is 304-527-1330.



Farley R. Wood, P.E.
Vice President of Engineering

Main Office: (304) 935-5851
Fax: 304-914-4625
Mobile: (304) 650-2023
Work: 304 609 3854

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Wednesday, February 26, 2025 1:44 PM
To: Farley R. Wood, P.E. <fwood@empirede.com>
Subject: Fwd: Availability for a call?

Farley,

Here is that marked up version of the application.

Also, if it is not too much trouble, could you forward me the contact information on the new city manager for Follansbee.

Thanks,

Ed

304-414-1244

----- Forwarded message -----

From: **Andrews, Edward S** <edward.s.andrews@wv.gov>

Date: Wed, Feb 5, 2025 at 9:11 AM

Subject: Availability for a call?

To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>

Kathy,

Thank-you very much for making yesterday's meeting possible.

I have looked over the application and identified a few areas that might need to be addressed based on our discussion yesterday.

If possible I would like to talk to you about the Empire's NHSM determination. I am available anytime upto 2:30 PM today; anytime on Thursday except from 10 to 11; and all day on Friday.

Thanks,

Ed

--

Edward Andrews, P.E.

Engineer

WVDEP/Division of Air Quality

304-414-1244

[601 57th Street, SE](#)

[Charleston, WV 25304](#)

External Email. Please make sure you trust this sender before clicking on any links or opening attachments. [Learn why this is important](#)





Andrew, Edward S <edward.s.andrew@wv.gov>

Fwd: Availability for a call?

1 message

Andrew, Edward S <edward.s.andrew@wv.gov>
To: Kathy Beckett <kathy.beckett@stephewjohnson.com>

Wed, Feb 26, 2025 at 1:43 PM

Fwdy,

Here is that marked-up version of the application.

Also, if it is not too much trouble, could you forward me the contact information on the new city manager for Federated.

Thanks,
Ed

2024-14-1244

----- Forwarded message -----
From: Andrew, Edward S <edward.s.andrew@wv.gov>
Date: Wed, Feb 5, 2025 at 9:11 AM
Subject: Availability for a call?
To: Kathy Beckett <kathy.beckett@stephewjohnson.com>

Kathy,

Thank-you very much for making yesterday's meeting possible.

I have looked over the application and identified a few areas that might need to be addressed based on our discussion yesterday.

If possible I would like to talk to you about the Empire's NESHM determination. I am available anytime upto 2:30 PM today, anytime on Thursday except from 10 to 11, and all day on Friday.

Thanks,
Ed

Edward Andrew, P.E.
Engineer
WVDEP/Division of Air Quality
604-4-1244
601 57th Street, SE
Charleston, WV 25304

📎 **813-3555 Modification_Application_800 -Redacted_Final_Rev_Attrbtlg_markup.pdf**
2376KB



813-3555
Modification...

NSR (45C SR13) APPLICATION FORM



WEST VIRGINIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601-57th Street, SE
Charleston, WV 25304
(304) 526-6247
www.deq.wv.gov

**APPLICATION FOR NSR PERMIT
AND
TITLE V PERMIT REVISION
(OPTIONAL)**

PLEASE CHECK ONE TYPE OF WORK REQUESTING PERMIT:
☒ CONSTRUCTION ☒ MODIFICATION ☐ RELOCATION
☐ CLOSURE/RECONSTRUCTION/REUSE ☐ TOWER/STACK
☐ CLOSURE/RECONSTRUCTION/REUSE ☐ OTHER/RELOCATION

PLEASE CHECK ONE TYPE OF REVISION REQUESTING PERMIT:
☐ CONSTRUCTION/RELOCATION ☐ REUSE/RELOCATION
☐ CLOSURE/RECONSTRUCTION/REUSE ☐ TOWER/STACK
☐ CLOSURE/RECONSTRUCTION/REUSE ☐ OTHER/RELOCATION

FOR TITLE V PERMIT ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision applies. Complete a "Title V Permit Revision Worksheet" and attach as appendix to the application. Please refer to the Permit Application.

SECTION I - GENERAL

1. Name of applicant (see registration with the WV Secretary of State's Office):
Gardner Green Corporation, LLC

2. Resident Employer (E- No, P-Yes):
P- 00077020

3. Name of facility (if different from above):
Federated Operations

4. The applicant is for:
☒ CONSUMPTION ☐ STORAGE/USE ☐ REUSE/RELOCATION

5a. Applicant's mailing address:
1000 West Street, Charleston, WV 25307

5b. Facility's present physical address:
1000 West Street, Charleston, WV 25307

6. West Virginia Business Registration: Is the applicant a resident of the State of West Virginia? ☒ YES ☐ NO
If YES, provide a copy of the Certificate of Registration/Registration Certificate (Form 1) and attach to the application. If YES, provide a copy of the Certificate of Authority/Authority of L.L.C. Registration (and page) including any name change amendments or other Business Certificate or Attachment A.
If applicant is a subsidiary corporation, please provide the name of parent corporation.
Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed work? ☒ YES ☐ NO
If YES, please explain: Own and Operate
If NO, who are you eligible to be acquired for this activity?

7. Type of plant or facility (industrial, commercial, institutional, residential, institutional, agricultural, etc.) and a brief description of the proposed work (e.g., new production plant, plant expansion, etc.):
Production Facility for Fuel
8. North American Industry Classification System (NAICS) code for the facility:
332920

9a. CMAQ Phase II No. (for working facilities only):
000-00041

9b. List all current CMAQ II and CMAQ III (Title V) permit numbers associated with this process (for working facilities only):
900-000

All of the required forms and additional information can be found under the Permitting Section of DEQ's website, or requested by phone.

Page 1 of 4

NSR (45C SR13) Business Application Form (Rev. 10/20/20)

000-00141, BPR-13-3555A, 9-26-2024 Page 5

Page 2 of 6
Healthcare Voucher Allocation Application Form (October 2019) - EnglishPage 2 of 4
 2019-2020 Year 9 Food-Business Application Form (Revised) (10/2019)Page 6 of 6
STATISTICS & MARKETING APPLICATIONS FOR BUSINESS (BBA) - 2019-2020

City of Follansbee

CITY LICENSE



Follansbee, West Virginia

This is to certify that the undersigned, in pursuance of the authority vested in him by law has this day granted to:

Name of Establishment: **EMPIRE GREEN GENERATION LLC**

Address: **1400 MAIN ST**
FOLLANSBEE WV 26037-1218

Name of Owner: **FRANK ROSSO**

Address: **401 EAST LAS OLAS BLVD SUITE 1400**
FORT LAUDERDALE FL 33301-3218

a license to engage in, conduct or operate the business of, or devices for which license tax has been assessed and paid as shown in license schedule herein.

Date Issued: **28-Jul-2022**

Expiration Date: **30-Jun-2023**

BY CHECK ONLY

PAID

07/28/2022

City of Follansbee

Any automatic device licensed herein is that which is not a gambling device under city ordinance or the laws of the State of West Virginia

LICENSE No.: 298



John G. McIntosh
City Manager

DISPLAY IN A CONSPICUOUS PLACE.

State of West Virginia



Certificate

I, **Mac Warner, Secretary of State of the State of West Virginia**, hereby certify that

EMPIRE GREEN GENERATION, LLC

was duly authorized under the laws of this state to transact business in West Virginia as a foreign limited liability company on December 02, 2021.

The company is filed as an at-will company, for an indefinite period.

I further certify that the company has not been revoked or administratively dissolved by the State of West Virginia nor has the West Virginia Secretary of State issued a Certificate of Cancellation or Termination to the company.

Accordingly, I hereby issue this Certificate of Authorization

CERTIFICATE OF AUTHORIZATION

Validation ID: **SWV3R_YA3BM**

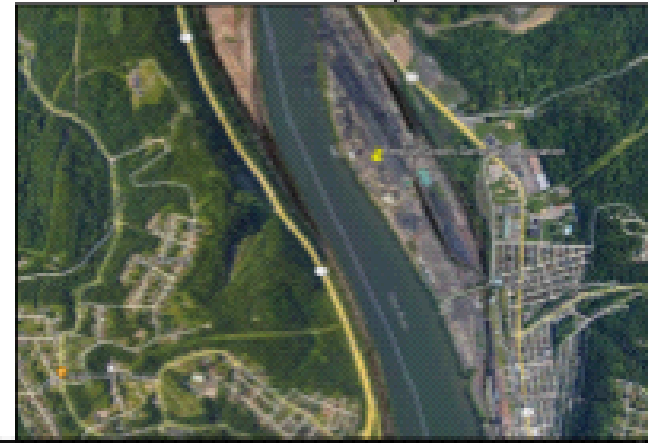
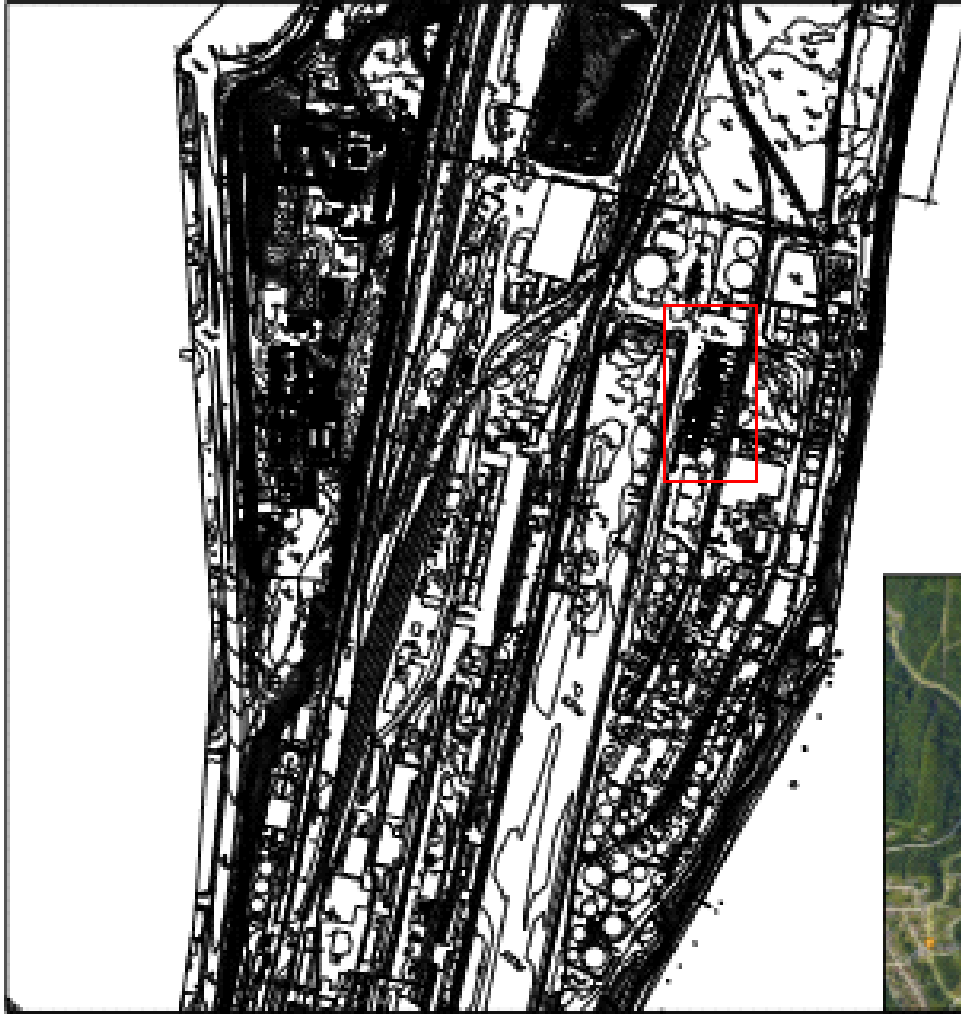
Given under my hand and the Great Seal of the State of West Virginia on this day of **January 07, 2022**


Mac Warner
Secretary of State



ATTACHMENT B

Maps



EMPIRE GREEN GENERATION, LLC
FOLLANSBEE, WV
SITE MAP AND LAYOUT

ATTACHMENT C

Installation and Startup Schedule



ATTACHMENT C: INSTALLATION AND START-UP SCHEDULE

Line	Start of Installation	Approximate Start of Operations
903 & 3008 (Thermal Oxidizer and Stack Exhaust)	October 2022	February 2024

74

ATTACHMENT D

Regulatory Discussion

75

1.1 West Virginia State Requirements

The Facility will be a minor source of emissions under the NSR Program as well as the Title V Operating Permit program under §45CSR30. However, the potential uncontrolled emissions for the Facility will exceed the permitting threshold of 6 pounds per hour (lb/hr) and/or 144 pounds per day (lb/day) in accordance with WVDEP §45CSR13-2.24. Accordingly, Empire Green Generation, LLC is submitting this application for a minor source permit to install and operate.

In addition to regulations, state regulations that pertain to this Facility are listed in Table 1-1. Titles shown in capital letters in the table are permits, notifications, and/or reports that will be needed for construction and operation of the Facility.

Federal authority is delegated to the State of West Virginia, and all permit applications will be submitted to West Virginia Department of Environmental Protection (WVDEP). The following list of air permits is applicable to the proposed facility:

Table 1-1 West Virginia DEP Applicable Regulations

Rule	Description
45CSR03	Control of visible and particulate emissions from stationary sources
45CSR08	Ambient Air Quality Standards
45CSR10	General emission limit provisions for sulfur dioxide
45CSR11	Prevention Of Air Pollution Emergency Episodes
45CSR13	Permits to install New Sources and Permit-to-Install and Operate Program
45CSR17	Restrictions of emissions of fugitive dust
45CSR21	Control of emissions of VOCs from stationary sources

1.1.1 Permit Applicability

Air pollution control regulations have been established by the WVDEP for air emissions associated with stationary sources and fugitive emissions resulting from material transfer activities.

To determine permit applicability for the Facility's emission sources, the Potential-to-Emit (PTE) emissions have been presented in Attachment J and Permit Determination Form, the proposed Facility will be considered a minor source with potential uncontrolled PM emissions greater than 25 tons per year (tpy) and less than major source thresholds. Therefore, the Facility will need to obtain a permit to construct and operate. Applicable federal regulations present in Table 1-2 below.

Table 1-2b, Inc.

Attachment Form

Table 1-2 Federal Applicable Regulations

Rule	Description
40 CFR Part 63 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
40 CFR 60 Subpart A	General Provisions
40 CFR 60.15	General control device and work practice requirements

1.1.2 Criteria For Fuel

Processing the plastic feed stock is not viewed as a waste disposal through incineration, the plastics are being used as a fuel to create a syngas. The process for producing the syngas is through pyrolysis which is classified as an advanced recycling in West Virginia's House Bill 4048.

Tetra Tech, Inc. Application Form

ATTACHMENT E

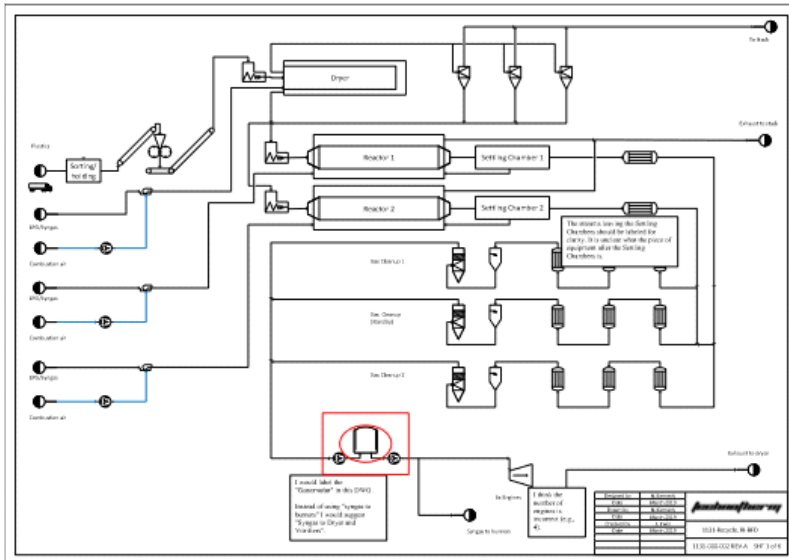
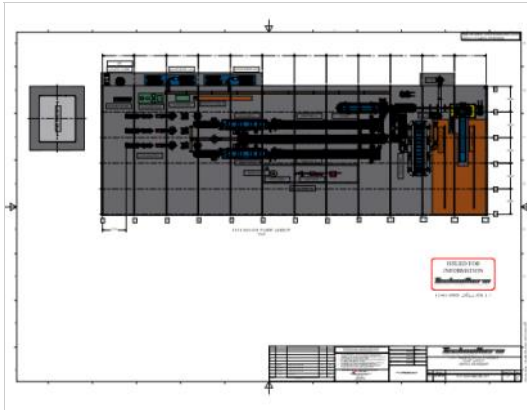
Plot Plan

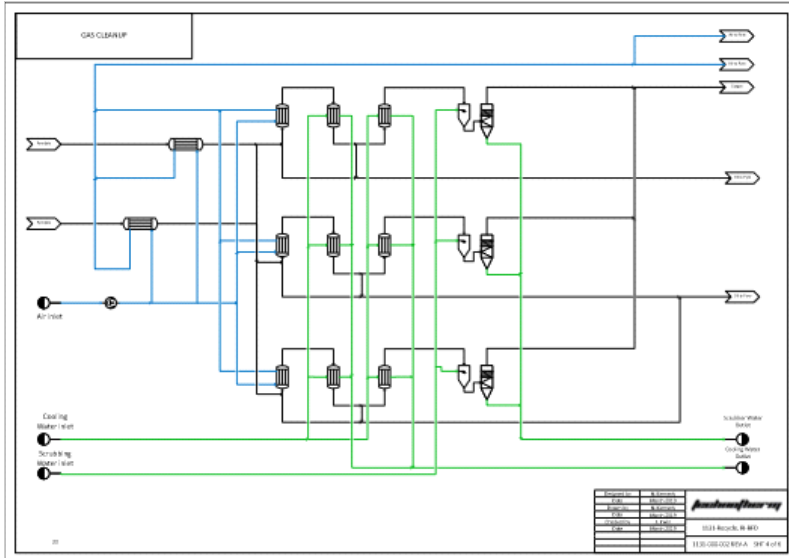
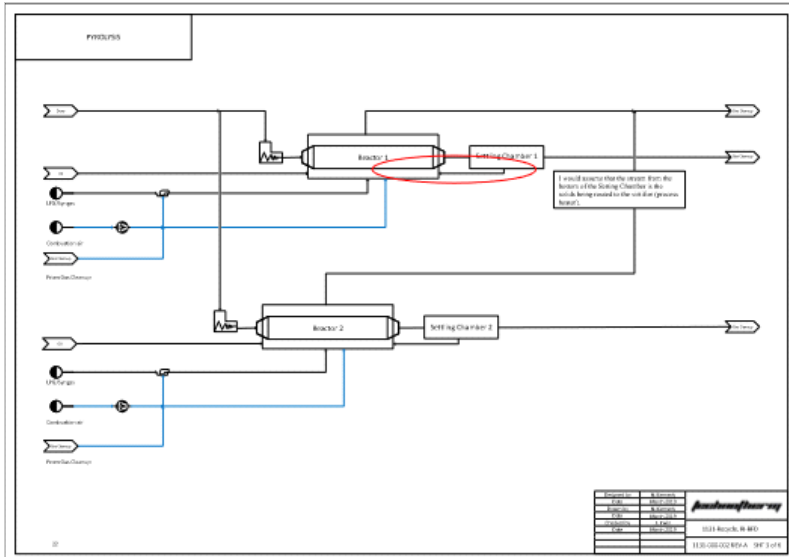
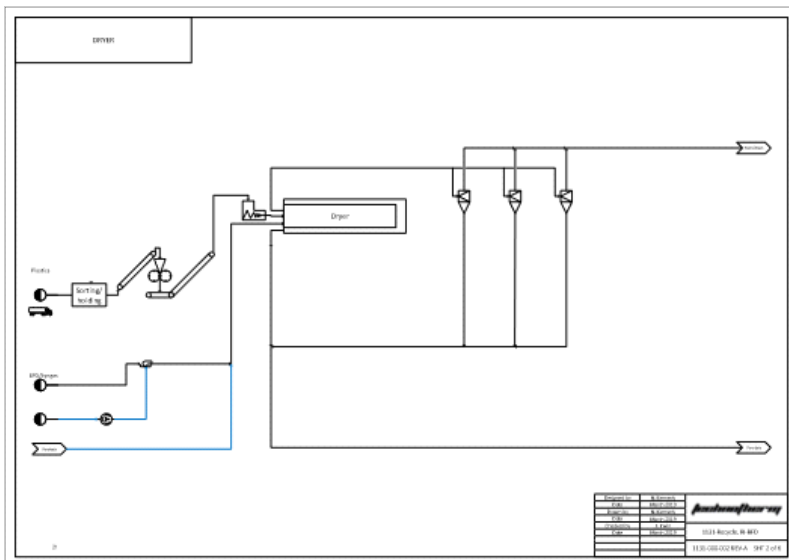
14

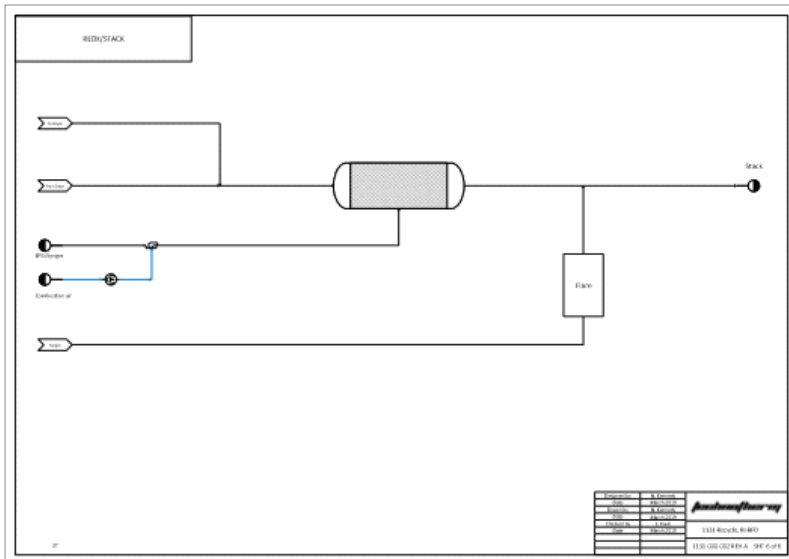
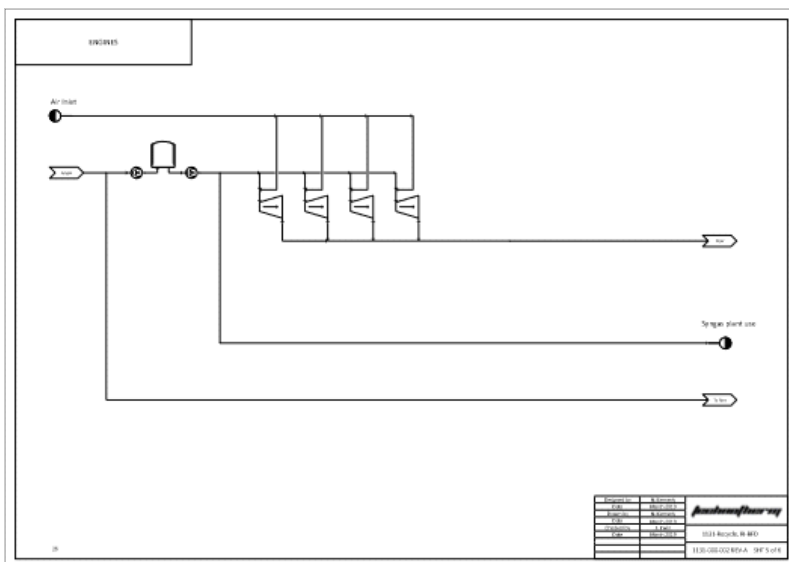


ATTACHMENT F

Process Flow Diagram







ATTACHMENT G

Process Description

Feedstocks will be sourced from log-skins, manufacturing, and waste products. Referring to Figure 1, Plastics will be recovered at or off the location located in the state of Ohio. The plastics will be sorted by hand and sent to a shredder or shredder is a comminution generator which will be used to make an Ohio EPA Generator by Permit 8. The plastics will be shredded to 1/16" size pieces will then be loaded or placed into super sacks and loaded onto trucks for delivery to the facility as needed. The trucks into the site will be controlled by Engen Power Generation and the anticipated truck traffic is to be 4-6 trucks a day entering into the site via Route 2 from the north.



Overall process takes plastics, received by a transporting company, and thermally processes it in a pyrolysis system operating at 800°C - 900°C (1,472°F - 2,162°F). Waste composition will consist of plastics with resin, ranging from one through seven. Chemical matter and hydrocarbons from the plastics are thermally decomposed without oxygen forming a gas stream that can directly be used as a fuel source for electrical generating engines. Oil and tar are produced where the oil is recycled through the pyrolysis system to make more syn gas and the tar is used to heat a vitrification system in which acids from the process are vitrified and made inert. The electrical generator's exhausts from the engines are sent to a drying unit where the plastic is dried prior to be introduced into the pyrolysis system. All exhaust gases are sent to a Thermal Oxidizer where they are conditioned for release to atmosphere via a stack at a temperature of 850°C (1,562°F).

[illegible]

SUB-SYSTEM OPERATION PRIME EQUIPMENT DETAIL

Prime Equipment & Systems

The following descriptions represents the Process Flow Diagram (PFDs) shown in Figure 1.

1. Delivery of Material

The material will be offloaded from five (5) tractor-trailers per day and tipped onto the receiving conveyor with the use of bin tipping stations as shown in Figure 2.



Figure 3: Illustration of typical bin tipping station

The waste operator will record the weight of each load prior to tipping. Additionally, a weighbridge operator records the weight of the trucks as they enter and exit the plant.

The material will automatically feed the Masserator required and diluted by the plant control philosophy.

An air extraction system is built into the Masserator with an extraction fan pulling from the top side of the Masserator at a rate of 1.2 m³/sec. Masserator will be under negative pressure of <0.024 kPa at all times during operations.

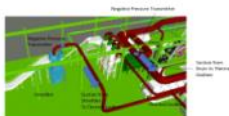


Figure 4: Negative Pressure from Masserator to Thermal Oxidiser.
Note all areas prior to thermal oxidation are sealed and under negative pressure

Further detail, qualifying waste in prepared sealed containers are delivered to the plant and placed on an input conveyor. After placing on the conveyor operator has no further involvement with the waste.

Material input conveyor

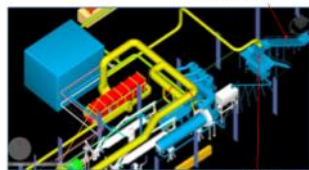


Figure 5:

2. Materials input conveyor to Masserator under negative pressure to Thermal Oxidiser.

The material / masserator has a single opening that is sealed, allowing the waste to enter as presented through a single entry point under suction that is closed when waste is not prepared for an extended period or during shut-down incidents.

The entire facility is closed to the operating environment and operates under a negative pressure (0.024 kPa), ensuring the escape of odours or pathogens.

Transfer from the Masserator to the dryer and from the dryer to the thermal pyrolysis is also sealed to the environment operating under a negative pressure.

Progression to the high temperature pyrolysis unit (Fig. 6) is again needed.

The main item that is creating a negative pressure is an Induced Draft Fan. This fan is connected to the regenerative thermal oxidiser, from the Thermal oxidiser to the Masserator, dryer and all material sideflows.



Figure 6: The Regenerative Thermal oxidiser is maintained at 1100°C

2.1 Interlocks: The plant cannot be energised unless the ID fan is on and the Thermal oxidiser at temperature. There is no possibility of idling.

If the Thermal Oxidiser goes below a predetermined temperature, the plant goes into shut down mode. In the event of a power failure the main control functions are connected via UPS, at this time a normally closed interlock valve will have closed the only orifice on the plant which is where the waste is collected.

In the unlikely event of an ID fan failure (never had one in 25 years) the plant will again default to shut down mode.

2.2 Macerator/Grinder/Presser

Macerator material (feed stock) is conveyed to the thermal dryer feed hopper. Figure 6 shows a typical Macerator system.



Figure 7. Photo of a typical Macerator/Grinder system.

3. Thermal Dryer

The drying of the feed stock is carried out in a direct heated, parallel flow, rotary turn drum type dryer using a combination of engine exhaust and, if necessary during start-up or unusual operating conditions, engine and, as a last resort, propane.

Feed stock is transported from the dryer feed hopper into the dryer by means of a screw conveyor. Upon entering the dryer inner rotors, the moist feed stock comes into direct contact with the parallel stream of hot

flue gases.

Flare and progression plates ensure intimate contact between the feed stock and flue gas therefore facilitating efficient drying, evaporation and movement of feed stock along the rotor. Once both feed stock and flue gases reach the distal end of the dryer they are discharged from the inner rotors into the outer rotors and return to the entry end of the dryer. Discharging 10% moisture feed feed stock into an expansion chamber. Coarse dry feed stock falls to the bottom of the chamber forming a heap on the feed conveyor located beneath.

The flue gas exhaust, contaminated with light particulate feed stock material, is also discharged from the expansion chamber and outlet to a bank of cyclones where separation occurs. Fine particulate falls to the bottom of each cyclone and is discharged via rotary valves into a common screw conveyor. The screw conveyor discharges the material into the feed conveyor joining the fine feed material and fine product. This conveyor transfers the combined dry feed stock stream into a conveyor feeding an intermediate storage hopper that feeds both Pyrolyzers.

The cooled flue gas stream from the cyclones is directed to the Thermal

Outlets. 7 and 8 shows photos of a typical dryer in operation.



Figure 8. Photo of a typical dryer in operation from first floor level.



Figure 9. Photo of a typical dryer in operation from ground floor level.

4. Pyrolyzer & Volatilization Furnace

Overview

The Pyrolyzer train is fed dried feed stock from a thermal dryer as described in the previous section. The Pyrolyzer train consists of two vertical Pyrolyzers. Per unit, the source of exhaust heat is primarily hot exhaust flue gas from a volatilization furnace located beneath the pyrolysis vessel. These hot flue gases exit the Pyrolyzer Rotors, exit their progress to the nation grade heat exchanger (Thermal Dryer) and during start up Syngas Cooler and Tar Condensers. Supplemental heating of the pyrolysis vessel is being provided by firing a portion of the cleaned syngas. Natural gas (LPG) is available for initial start-up or any start-up where insufficient syngas is available. After passing through the dryers the gas is progressed to the Thermal Outlets.

Product Description

Feed stock is transferred from the dryer to a low bottom screw hopper, which feed an inlet hopper complete with horizontal material feed screw. Material is fed from a gas-tight, strong hopper into the horizontal, centrally aligned, rotary drum Pyrolyzer Rotator by a rotary valve.

As the material passes through the pyrolysis inlet, it undergoes thermal degradation releasing volatile organic syngas compounds that are discharged from the inlet. The crude syngas of PAFs are collected into a common manifold that funnels the syngas to the syngas cleaning system.

The heavier particles, mainly comprising of oil and heat transfer liquid that is a specially designed high temperature de-acceleration chamber where the particles are collected and returned to the vitrification furnace.

The Pyrolyzers must be designed and arranged such that no propensity for harmonic vibrations shall exist under any load condition and shall be complete with all ancillary equipment for safe, reliable and efficient operation, and be of proven design capable of the required continuous, vibrational and transient operation and be suitable for its intended location. The design and materials of construction shall have fully into account the location.

Ash and carbonaceous residue produced by the Pyrolyzers drops off the dust from the de-acceleration chamber some conveyed, together with the main residue collected from the base of the Particulate into a vitrifier, a refractory lined furnace that is recovered and (described below in the syngas cleaning equipment). The heat liberated by burning the tars and oils is sufficient to heat the ash from the Pyrolysis units above their auto-oxidation temperature with enough preheated air to burn off the tars. The char is completely combusted into CO2 and H2O.

Figure 10, 11 and 12 show photos of Pyrolyzers in operation.



Figure 10. Photo A of typical high temperature pyrolysis unit.



Figure 11. Photo B of typical high temperature pyrolysis unit.



Figure 12. Photo of typical low temperature pyrolysis unit.

5. Syngas Cleanup

Particulate Matter (PM) Cleanup

Raw syngas is released from the Pyrolysis Reactors, as described above, and passes through a de-acceleration chamber and then hot cyclones. The cyclones are arranged for parallel flow to ensure maximum PM removal efficiency during start-up and shutdown as the flow varies. PM drops to specially designed hot screw conveyors and flow there is directed to the vitrification furnaces described above.

Syngas Coolers

The partially cleaned, still hot, raw gas flows next through stainless steel tubular syngas coolers. The cooler is in essence a heat exchanger which indirectly transfers heat from syngas to the combustion air heaters.

Pre-Combustion

The syngas from the coolers described above flows to a shell-and-tube heat exchanger cooler that is cooled by an air blower system. Tars are condensed out and drop into heated troughs, the heat source of which is engine exhaust. Hot condensed tar is pumped to the vitrification furnaces described above. The cooled residual gases exit of shell-and-tube engine exhaust flanges to heat the heat exchangers and thereby cause the tars to drop into the heated trough below.

Oil Condensates

The syngas from the air condensers described above flows to a shell & tube heat exchanger/cooler that are cooled by water cooling system. Condensate oils, which also contain condensed water, are collected and is pumped to the ventilation furnace described previously. The condensate collected upon left of cooler, uses engine exhaust flue gas to heat the heat exchangers and thereby cause the oils to drop into the heated trough below.

Vertical Scrubber

From the oil condensers the syngas flows through a high pressure-drop Venturi Scrubber to remove any remaining PM.

Figure 13 and 14 show photos of a typical gas cleanup system in operation.



Figure 13. Photo A of a typical gas cleanup system in operation



Figure 14. Photo B of a typical gas cleanup system in operation

Gas Bladder (Syngas Storage Tank)

The syngas storage tank provides surge capacity of cleaned syngas to level out flow and composition variations. It can fill & empty continuously within a predetermined range. The bladder will operate with an internal pressure of 30 to 40 psia (gauge).

Figure 15 shows a typical gas bladder in operation.

I would suggest using either "Gas Bladder" or "Gasometer" but not both throughout the application.



Figure 15. Picture of typical gas bladder

Stack

The hot gases progress through the stack to the atmosphere after passing through the Thermal Oxidizer (discussed in next section).

6. Thermal Oxidizer

After passing through a scrubber the flue gases enter a Thermal Oxidizer comprising of a rectangular box shaped furnace. The internal dimensions are determined by the flue volume that needs to be heated to 850 °C and maintained for 2 seconds.

Figure 16 shows a typical Thermal Oxidizer in operation. Please refer to the technical specification for more details if required.



Figure 16/Photo of a typical Thermal Oxidizer in operation

7. Surges Engine

Each surges engine shall be a fully packaged unit complete with all associated components and auxiliaries. These engines are of robust design and have been proven on low and medium capacity refuse gas fuels.

The engine package will be complete to allow the engine to start, synchronize, operate continuously at load or part load and shut down.

The engines engine shall be assembled in containers as indicated on the plant layout. The containerized engines shall conform to a sound pressure level of 80 dBA (2020 Noise Regulations (F Factor Level) as measured one meter from the engine at two meter above floor level).

Notwithstanding the engines clean up equipment and systems described in the Surges Clean up Section above, the engines engine exhaust systems shall be designed and installed such that they meet emissions standards as of the Commencement Date.

The Engine coating will be by means of external insulation, they shall be designed and constructed with sufficient margin and spare surface area for the accurate heat rejection study under all operational conditions.

The insulation shall incorporate features to minimize corrosion and erosion on the air and waterborne and suitable provisions for cleaning and cone replacement.

The insulation and all of their component parts shall be of proven design and arranged so as to minimize maintenance work.

Figure 17 and Figure 18 illustrates the containerized engines in production.

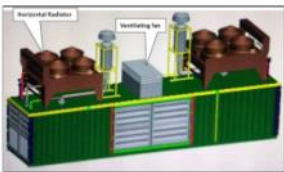


Figure 17/ Illustration A of containerized engines in production

ATTACHMENT H

Material Data Safety Sheets (MSDSs)
Safety Data Sheets (SDSs)

Hydrogen	74-82-6	Not Listed
U.S. - CERCLA/SLHA - Hazardous Substances and their Reportable Quantities		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - CERCLA/SLHA - Radioactive and their Reportable Quantities		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - CERCLA/SLHA - Section 302 Extremely Hazardous Substances (EHS) Risk		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - CERCLA/SLHA - Section 302 Extremely Hazardous Substances (EHS)		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - CERCLA/SLHA - Section 312 - Corrosion Reporting		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - CERCLA/SLHA - Section 312 - RPT Chemical Listing		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
Inventory - United States - Section 310 Inventory (FSCN) - PHN Number to EPA Incident Number (PIN)		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
United States - California		
Superfund		
U.S. - California - Proposition 65 - Carcinogenic List		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - California - Proposition 65 - Developmental Toxicity		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
Hydrogen	1333-74-0	Not Listed
Carbon dioxide	120-00-0	Not Listed
Hydrogen	74-82-6	Not Listed

Product Name: Synthetic Natural Gas

Revision Date: 10/02/2019

Page 10 of 12

Section 10 - Other Information	
Last Revision Date	02/01/2018
Preparation Date	01/01/2014
Key Information	
Unlabeled/Unlabeled of Labeling	The information contained in this Safety Data Sheet (SDS) is believed to be correct since it was obtained from sources we believe are reliable. However, no representation, guarantee or warranty of any kind is made as to its accuracy, reliability for particular applications, hazards connected with the use of the material, or the results to be obtained from the use thereof. User assumes all risks and liability of any use, processing or handling of any material, variations in methods, conditions and equipment used to store, handle, or process the material and hazards connected with the use of the material are solely the responsibility of the user and remain at his sole discretion. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user, and the user has the responsibility to provide a safe work place to examine all aspects of its operation and to observe it or where precautions, in addition to those described herein, are required.
Product Name: Synthetic Natural Gas	
Revision Date: 10/02/2019	
Page 11 of 12	

MATHESON The Gas Professionals	
Safety Data Sheet	
Material Name: Propane - UN 1978 Toxic	MSD ID: 0040810
Section 1 - PRODUCT AND COMPANY IDENTIFICATION	
Material Name Propane - UN 1978 Toxic	
Synonyms PROPYL, PROPANE, METHANE, N-PROPANE, N-PROPYL, METHANE, PROPYL, ETHANE, DL, DM, PROPYL, ETHANE, LIQUEFIED PETROLEUM GAS, LPG, -HPL, NATURAL GAS, -HPL, PROPANE, LIQUEFIED, UN 1978, CNG	
Chemical Family Hydrocarbon, alkane	
Product Description Classification determined in accordance with Compressed Gas Association standards	
Product Use Industrial and Specialty Gas Applications	
Availability in the New Jersey	
Source of the register of the safety data sheet METHANOL TRO, LLC, INC. 100 Lake Carbon Parkway Suite 100 Irving, TX 75039 Contact Information: 800-446-1200 Emergency: 800-446-1200 (24/7) Outside the US: 800-446-1200 (24/7)	
Section 2 - HAZARD IDENTIFICATION	
Classification in accordance with paragraph 42 of the GHS 1907/2008 Flammable Gas - Category 1 Gases Under Pressure - Liquefied gas	
GHS Label Elements Symbol(s)	
	
Signal Word Danger	
Material Description(s) Extremely flammable gas. Cylinders gas under pressure: may explode if heated. May displace oxygen and cause rapid asphyxiation.	
Precautionary Statement(s) Prevention Keep away from heat, sparks, open flames and hot surfaces. No smoking. Response	
Page 1 of 1	Issue date: 2020-01-04 Revision: 1.0 Print date: 2020-01-04



Safety Data Sheet

Material Name: Propane - UN1075 Spacraft

SDS ID: 00248510

Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
Extinguish all ignition sources if safe to do so.
Storage: Protect from sunlight. Store in a well-ventilated place.

Disposal: Disposal of contents/containers in accordance with local/regional/national/international regulations.

Other Hazards: May cause frostbite upon contact when of liquefied gas.

Section 3 - COMPOSITION INFORMATION ON INGREDIENTS

CAS	Component/Parts	Percent
74-80-6	Propane	100

Section 4 - FIRST AID MEASURES

Exhalation: No effects occur, return to environmental area. Close artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. (See immediate medical attention.)
Eye: If breathing or feeling upset, immediately flush with plenty of lukewarm water (100-137°F, 40-48°C) (30-90)F (30-90)F. If warm water is not available, gently wipe affected parts in lukewarm. (See immediate medical attention.)
Skin: If breathing or feeling upset, immediately flush with plenty of lukewarm water (100-137°F, 40-48°C) (30-90)F (30-90)F. If warm water is not available, gently wipe affected parts in lukewarm. (See immediate medical attention.)
Ingestion: Do not induce vomiting. Get medical attention.
Most Important Symptoms & Effects: Asphyxiation, suffocation.
First Aid: No information on significant adverse effects.
Indication of any immediate medical attention and special treatment needed: For information, consult a physician. Treat symptoms as they occur.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media: Suitable extinguishing media include dry chemical, carbon dioxide, large class water spray or fog.
Extinguishing Media: Do not direct spray at source of leak or safety devices, using any agent.
Special Hazards Arising from the Chemical: Severe fire hazard. Severe explosion hazard. Gas mixtures are explosive. The vapor is heavier than air. Vapors or gases may ignite or ignite ignition sources and heat back. Excessive discharge may be generated by fire or ignition resulting in explosion or explosion.
Extinguishing Media: Do not use water.
Fire Fighting Measures: Do not use water.

Page 2 of 3 Issue date: 2022-01-04 Revision: 5.0 Print date: 2022-01-04



Safety Data Sheet

Material Name: Propane - UN1075 Spacraft

SDS ID: 00248510

Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
Extinguish all ignition sources if safe to do so.
Storage: Protect from sunlight. Store in a well-ventilated place.
Disposal: Disposal of contents/containers in accordance with local/regional/national/international regulations.
Other Hazards: May cause frostbite upon contact when of liquefied gas.

Section 3 - COMPOSITION INFORMATION ON INGREDIENTS

CAS	Component/Parts	Percent
74-80-6	Propane	100

Section 4 - FIRST AID MEASURES

Exhalation: No effects occur, return to environmental area. Close artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. (See immediate medical attention.)
Eye: If breathing or feeling upset, immediately flush with plenty of lukewarm water (100-137°F, 40-48°C) (30-90)F (30-90)F. If warm water is not available, gently wipe affected parts in lukewarm. (See immediate medical attention.)
Skin: If breathing or feeling upset, immediately flush with plenty of lukewarm water (100-137°F, 40-48°C) (30-90)F (30-90)F. If warm water is not available, gently wipe affected parts in lukewarm. (See immediate medical attention.)
Ingestion: Do not induce vomiting. Get medical attention.
Most Important Symptoms & Effects: Asphyxiation, suffocation.
First Aid: No information on significant adverse effects.
Indication of any immediate medical attention and special treatment needed: For information, consult a physician. Treat symptoms as they occur.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media: Suitable extinguishing media include dry chemical, carbon dioxide, large class water spray or fog.
Extinguishing Media: Do not direct spray at source of leak or safety devices, using any agent.
Special Hazards Arising from the Chemical: Severe fire hazard. Severe explosion hazard. Gas mixtures are explosive. The vapor is heavier than air. Vapors or gases may ignite or ignite ignition sources and heat back. Excessive discharge may be generated by fire or ignition resulting in explosion or explosion.
Extinguishing Media: Do not use water.
Fire Fighting Measures: Do not use water.

Page 3 of 3 Issue date: 2022-01-04 Revision: 5.0 Print date: 2022-01-04



Safety Data Sheet

Material Name: Propane - UN1075 Spacraft

SDS ID: 00248510

Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
Extinguish all ignition sources if safe to do so.
Storage: Protect from sunlight. Store in a well-ventilated place.
Disposal: Disposal of contents/containers in accordance with local/regional/national/international regulations.
Other Hazards: May cause frostbite upon contact when of liquefied gas.

Section 3 - COMPOSITION INFORMATION ON INGREDIENTS

CAS	Component/Parts	Percent
74-80-6	Propane	100

Section 4 - FIRST AID MEASURES

Exhalation: No effects occur, return to environmental area. Close artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. (See immediate medical attention.)
Eye: If breathing or feeling upset, immediately flush with plenty of lukewarm water (100-137°F, 40-48°C) (30-90)F (30-90)F. If warm water is not available, gently wipe affected parts in lukewarm. (See immediate medical attention.)
Skin: If breathing or feeling upset, immediately flush with plenty of lukewarm water (100-137°F, 40-48°C) (30-90)F (30-90)F. If warm water is not available, gently wipe affected parts in lukewarm. (See immediate medical attention.)
Ingestion: Do not induce vomiting. Get medical attention.
Most Important Symptoms & Effects: Asphyxiation, suffocation.
First Aid: No information on significant adverse effects.
Indication of any immediate medical attention and special treatment needed: For information, consult a physician. Treat symptoms as they occur.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media: Suitable extinguishing media include dry chemical, carbon dioxide, large class water spray or fog.
Extinguishing Media: Do not direct spray at source of leak or safety devices, using any agent.
Special Hazards Arising from the Chemical: Severe fire hazard. Severe explosion hazard. Gas mixtures are explosive. The vapor is heavier than air. Vapors or gases may ignite or ignite ignition sources and heat back. Excessive discharge may be generated by fire or ignition resulting in explosion or explosion.
Extinguishing Media: Do not use water.
Fire Fighting Measures: Do not use water.

Page 4 of 3 Issue date: 2022-01-04 Revision: 5.0 Print date: 2022-01-04

[illegible]

Emission Units Table

[illegible]

Page _____ of _____

Emission Units Table
03/2007

Emission Points Data Summary Sheet

009-00141_IPR_13-3555A_8-20-2024 Page 55

EMISSION POINTS DATA SUMMARY SHEET

[illegible]

The DISBURSE POINTS DATA SUMMARY SHEET provides a comparison of emissions by emission unit. Note that unsequestered emissions and emissions are not typically considered to be negative and must be accounted for on the appropriate DISBURSE UNIT DATA SHEET and on the DISBURSE POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all unsequestered, if negative emissions, plus all other emissions (e.g. unsequestered emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET as well.

² Use all registered polymers. Specify VPOs, including all PVPs. Follow chemical name with Chemical Abstracts Service (CAS) number. US[†] Aeth, CH, CO₂, VPOs, H₂O, and other small molecules. *Journal of Polymer Science: Part A: Polymer Chemistry*, 55, 1057–1070, 2017. © 2017 Wiley Periodicals, Inc.

* One neutron possible unless not with no control equipment operating. If breakers occur for less than 1 hr, that count emissions per hour is minus (e.g. 1 to 100/23 minus 1 hr).

² Indicate method used to determine evidence (see as follows: WD = witness interview; IT = track test (give date of test); CE = engineering evidence; O = other (specify)).

Attachment J

[illegible]¹ Give at spending conditions. Include note.

page 2 of 2

WSP-DAQ Revision 211

58

ATTACHMENT K

Fugitive Emissions Data Summary Sheet

Attachment K
FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that unscrubbed process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, fugitive emissions, plus all other emissions (e.g., unscrubbed emissions).

[illegible][illegible]

If you answered 'NO' to all of the items above, it is not necessary to complete the following table, 'Fugitive Emissions Summary.' It is

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants Chemical Name/CAS	Maximum Potential Uncontrolled Emissions ¹		Maximum Potential Controlled Emissions ¹		Est. Mitig. Unit ¹
		lb/yr	ton/yr	lb/yr	ton/yr	
Haul Road/Dust Emissions Paved Haul Roads						
Unpaved Haul Roads						
Storage Pile Emissions						
Loading/Unloading Operations						
Wastewater Treatment Evaporation & Operations						
Equipment Leaks	Synthetic Natural Gas/7442-6 Propane/75-80-6		50.41			
Cement Clean-up VOC Emissions	There should be some potential similar to the handling of oil and saw. Plan the best and emissions should be identified as well.					
Other						

¹ List all regulated air pollutants. Specialty VOCs, including HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. List Acids, CO, CH₄, VOCs, H₂S, Benzene, Lead, Organic Cl, NO, NO₂, SO₂, all explosive/Greenhouse Gases (including CO₂ and methane) etc. DO NOT list H₂, H₂O, H₂SO₄, and Noble Gases.
² Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then report emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
³ Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then report emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
⁴ Include method used to determine emission rate as follows: MB = material balance, ST = stack test (give date of test), EE = engineering estimate, O = other (specify).

Page 2 of 2

Revision 2/11

ATTACHMENT L

Emission Units Data Sheet

43

Attachment L

EMISSIONS UNIT DATA SHEET

CHEMICAL PROCESS

For chemical processes please fill out this sheet and all supplementary forms (see below) that apply. Please check all supplementary forms that have been completed.

☒ Emergency Unit Summary Sheet
☒ Leak Source Data Sheet
☒ Technology Data Sheet
☒ Reaction Data Sheet
☒ Chemical Process Data Sheet

1. Chemical process area name and equipment ID number (see shown in Equipment List Form)

2. Standard Industrial Classification Codes (SICs) for processes:

3. List raw materials and ☒ attach MSDSs

4. List Products and Maximum Production and ☒ attach MSDSs
Description and CAS Number Maximum Inventory (lb/yr) Maximum Annual (ton/year)

5. Complete the Emergency Unit Summary Sheet for all emergency relief devices.

6. Complete the Leak Source Data Sheet and describe below or attach to appellation the risk detection or maintenance requirements, detection systems, process detection equipment, notification systems in network, planned inspection frequency, and record keeping, and similar pertinent information. If subject to a rule requirement (e.g., 40CFR60, Subpart VV), please list those here.

7. Clearly describe below or attach to application Accident Procedures to be followed in the event of an accident spill or release.

44

Page 1 of 13

Revision 09/2007

Revision: 03/2007Revision: 03/2007Revision: 03/2007

11

10

12. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Weekly, and monthly inspections according to A/E Weekly and Monthly inspections along with any malfunctions, malfunction specifications.	

REPORTING	TESTING
Any malfunctions	For report

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THE PROCESS EQUIPMENT OPERATION OR AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED DIAGNOSTIC TESTING FOR THE PROCESS EQUIPMENT OR AIR POLLUTION CONTROL DEVICE.

13. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty 10%.

NOTE: An AIR POLLUTION CONTROL DEVICE SHEET must be completed for any air pollution device(s) (except emergency relief devices) used to control emissions from this station.

12

Page 11 of 13

Revision 09/2007

DISTILLATION COLUMN DATA SHEET

Identification Number (as assigned on Equipment Log Form)

1. Name and type of equipment			
2. Proposed actual equipment operating schedule (complete approximate times)			
Monday	day/week	week/year	
Monday	day/week	day/week	
3. Number of stages (plates), excluding condenser			
4. Number of feed plates and stage location			
5. Specify details of any reheating, recycling, or stage condensing along with the stage locations			
6. Specify reflux ratio. If reflux R is defined as the ratio of the reflux to the overhead product, given symbolically as R=1, 1.5, where 1 = liquid down column, 0 = distillation product			
7. Specify the fraction of feed which is vaporous, F where F is the vapor fraction of the feed that enters the feed plate continuously as vapor			
8. Type of condenser used: total partial multiple other			
9. For each condenser provide process operating details including all inlet and outlet temperatures, pressures, and compositions			
10. Feed Characteristics			
A. Molar composition			
B. Individual vapor pressure of each component			
C. Total feed stage pressure			
D. Total feed stage temperature			
E. Total mass flow rate of each stream into the system			
11. Overhead Product			
A. Molar composition of components			
B. Vapor pressure of components			
C. Total mass flow rate of all streams leaving the system as overhead products			
12. Bottom Product			
A. Molar composition of all components			
B. Total mass flow rate of all streams leaving the system as bottom products			

13

Page 12 of 13

Revision 09/2007

Superior thermal technologies
www.technotherm.co.za

12. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING

REPORTING	TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THE PROCESS EQUIPMENT OPERATION OR AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED DIAGNOSTIC TESTING FOR THE PROCESS EQUIPMENT OR AIR POLLUTION CONTROL DEVICE.

13. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty 10%.

14

Page 13 of 13

Revision 09/2007

TECHNICAL FILE
(A068-010)

Phase Pyrolyser for Power Plant

PYROLYSER PLANT
(A068-010)

Equipment No. MEDRECYCLER - 010

1131

1131

Redacted Copy – Claim of Confidentiality

Pyrolyser Plant
Equipment No. General-010-001

1131

10

Page 4 of 10

Copyright © 2005

Redacted Copy – Claims of Confidentiality

Pyrolyser Plant

1131

10

García R. et al.

Copyright © 2005

Redacted Copy – Claim of Confidentiality

Pyrolyser Plant

1131

10

Page 6 of 10

Experiments were

[illegible]

TECHNICAL FILE
CONFIDENTIAL
CONFIDENTIAL INFORMATION


SUPERIOR THERMAL TECHNOLOGIES

Redacted Copy – Claim of Confidentiality

[Redacted Content]

TECHNICAL FILE
CONFIDENTIAL
CONFIDENTIAL INFORMATION


SUPERIOR THERMAL TECHNOLOGIES

1131

Redacted Copy – Claim of Confidentiality

[Redacted Content]

TECHNICAL FILE
CONFIDENTIAL
CONFIDENTIAL INFORMATION


SUPERIOR THERMAL TECHNOLOGIES

Regenerative Thermal Oxidiser
Equipment No. 000000000

1131

Redacted Copy – Claim of Confidentiality

[Redacted Content]

000-00141_IPR_13-3055A_8-20-2024 Page 79

Redacted Copy – Claims of Confidentiality

1131

Redacted Copy – Claim of Confidentiality

[illegible]

1131

Copy – Claim of Confidentiality

[illegible]

1131

Redacted Copy – Claims of Confidentiality

Abstract

[illegible]

Page 17 of 18

1131

Redacted Cases – Claims of Confidentiality

Redacted Copy – Claims of Confidentiality

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Page 12 of 16

1131

Redacted Cases – Claims of Confidentiality

Redacted Copy - Claim of Confidentiality

[illegible]

Page 13 of 18

1131

Redacted Copy – Claim of Confidentiality

TechnoTherm
SUPERIOR THERMAL TECHNOLOGIES

1131

Page 10 of 16

Haul Road Fugitives

Current Device ID No. (must match List Form): 410

Equipment Information									
1. Manufacturer/Trade name:					2. Model No.:				
3. Number of units, Gas description (number and type of cylinders), Fuel description (number and type of cylinders), Net weight (kg), Net capacity (liters), Net power (kW), Net flow rate (m³/hr), Net pressure (bar), Net temperature (°C):					4. Unit: Gas Classify System:				
5. Safety Valve:					6. Safety Valve:				
7. Rated Boiler horsepower (hp):	hp				8. Rated Boiler No.:				
9. Date constructed:					10. Date of use modification and explain:				
11. Maximum design heat input per unit:	+10 BTU/hr				12. Peak test input per unit:	+10 BTU/hr			
13. Net rated maximum design input:	N/A LB/hr				14. Proposed Operating Schedule:	Hours/Day 24 Days/Week 7 Weeks/Year 52			
15. Type of firing equipment to be used:	Pulverized coal ☐ Suspended solid ☐ Oil/fuel ☐ Natural Gas burner ☐ Others, specify: ☐				16. Proposed type of burner and orientation:	Vertical ☐ Front fired ☐ Overhead ☐ Tangential ☐ Others, specify: ☐			
17. Type of draft: ☐ Induced ☐ Forced					18. Percent of ash retained in furnace:	%			
19. Will draft be variable? ☐ Yes ☐ No					20. Percent of carbon in flyash:	%			
Stack or Part Data									
21. Inside diameter (or dimensions):	ft/in				22. Gas temperature:	300 °F			
23. Height:	ft/in				24. Stack losses:	This equipment only (Other equipment also included type and rating of equipment used to calculate heat loss due to stack or vent)			
25. Gas flow rate:	ft³/min								
26. Estimated percent of moisture:	%								

[illegible]

37. What quantities of pollutants will be emitted from the boiler before controls?

pollutant	Pounds per Hour before	gross/Net	lb / yr	CO2
CO				
hydrocarbons				
NO _x				
PM ₁₀				
PM _{2.5}				
SO ₂				
SO _x				
VOCs				
Other (specify)				

38. What quantities of pollutants will be emitted from the boiler after controls?

pollutant	Pounds per Hour after	gross/Net	lb / yr	CO2
CO				
hydrocarbons				
NO _x				
PM ₁₀				
PM _{2.5}				
SO ₂				
SO _x				
VOCs				
Other (specify)				

39. How will assets related to the process and control equipment be disposed of?
(Rank 1000 - Low/0)

40. Have you completed an Air Pollution Control Device Emission for the controls used at this Emission Unit, Y?

41. Have you installed the **air pollution rules** at the Emission Points Data Summary Sheet?

[illegible]

1131 Redacted Copy - Claim of Confidentiality

[illegible]

Page 2 of 4 Revision: 03/2003

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.
(2) Complete the Emission Points Data Sheet.

Page 4 of 4 Revision: 03/2007

Driver for Power Plant

D. [REDACTED]

Equip [REDACTED] - 030

TECHNICAL FILE
CONFIDENTIAL

Dryer
Item No. General-030

1131

Page 2 of 12

Dryer
Equipment No. General-030

1131

Page 3 of 12

Equipment No. General-030

1131

Page 4 of 12

Dryer
Equipment No. General-030

1131

Page 5 of 12

Dryer
Equipment No. General-030

1131

Page 6 of 12

Dryer
Item No. General-030

1131

Page 3 of 12

Equipment No. General-030

Dryer
Item No. General-030

Dryer
Item No. General-030

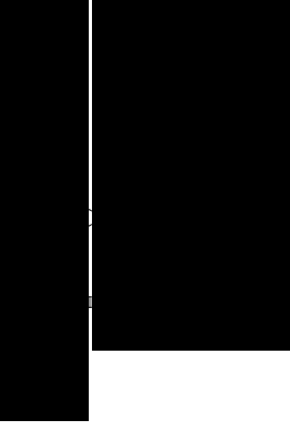
[illegible]

Equipment No. General-030

1131

[illegible]

Page 11 of 12







**Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.
Identification Number (as assigned on Equipment Use Form): 360

1. Name or type and model of proposed affected source: Maxxam Smelter Maxxam Iron Smelter by Techsmith	
2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicate the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.	
3. Name(s) and maximum amount of proposed process material(s) charged per hour: 2,562 T 81hr	
4. Name(s) and maximum amount of proposed material(s) produced per hour: 2,562 T 81hr	
5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants: N/A	
The identification number which appears here shall be entered in the air pollution control device identification number appearing on the LUP form.	

6. Combustion Data (if applicable): (a) Type and amount in appropriate units of fuel(s) to be burned: N/A	
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash: N/A	
(c) Theoretical combustion air requirement (ACF/unit of fuel): N/A @ °F and psia	
(d) Percent excess air: N/A	
(e) Type and BTU/hr of burners and all other firing equipment planned to be used: N/A	
(f) If coal is proposed as a source of fuel, identify supplier and name and give siting of the nearest water body: N/A	
(g) Proposed maximum design heat input: N/A × 10 ⁶ BTU/hr	

7. Projected operating schedule:			
Hours/Day	24	Days/Week	7
		Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:			
g	N/A	°F and	psia
a. NO _x	N/A	lb/hr	N/A grams/ACF
b. SO ₂	N/A	lb/hr	N/A grams/ACF
c. CO	N/A	lb/hr	N/A grams/ACF
d. PM ₁₀	N/A	lb/hr	N/A grams/ACF
e. Hydrocarbons	N/A	lb/hr	N/A grams/ACF
f. VOCs	N/A	lb/hr	N/A grams/ACF
g. Pb	N/A	lb/hr	N/A grams/ACF
h. Specify other(s):			
		lb/hr	grams/ACF
		lb/hr	grams/ACF
		lb/hr	grams/ACF
		lb/hr	grams/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.
(2) Complete the Emission Points Data Sheet.

**Attachment L
EMISSIONS UNIT DATA SHEET
BULK LIQUID TRANSFER OPERATIONS**

Purpose: The following information for each new or modified bulk liquid transfer area or loading rack, as shown on the **Equipment List Form** and other parts of this application. This form is to be used for bulk liquid transfer operations such as oil and non-oil drums, marine vessels, rail tank cars, and ISO tanks.

Identification Number (as assigned on Equipment List Form)	
1. Loading Area Name:	1300
2. Type of cargo vessels accommodated at this rack or transfer point (check as many as apply):	
G Drums	G Marine Vessels 1000 G Rail Tank Cars G Tank Trucks
3. Loading Rack or Transfer Point ID:	600
Number of pumps:	75
Number of liquids loaded:	
Maximum number of marine vessels, tank trucks, tank cars, and/or drums loading at one time:	
4. Does ballasting of marine vessels occur at this loading area?	G Yes G No G Does not apply
5. Describe cleaning location, compounds and procedure for cargo vessels using this transfer point.	
6. Are cargo vessels pressure tested for leaks at this or any other location?	G Yes G No
F YES, describe:	
7. Projected Maximum Operating Schedule (for rack or transfer point as a whole):	
Maximum	Jan - Mar Apr - June July - Sept Oct - Dec
Hours/day	
Days/week	

Page ____ of ____ WVCBP-OMG Revision 03-2007

Weeks/quarter				
8. Bulk Liquid Data (add pages as necessary):				
Pump ID No.				
Liquid Name				
Max. daily throughput (1000 gal/day)				
Max. annual throughput (1000 gal/yr)				
Loading Method ¹				
Max. Fill Rate (gpm/hr)				
Average Fill Time (min/loading)				
Max. Bulk Liquid Temperature (°F)				
True Vapor Pressure ²				
Cargo Vessel Condition ³				
Control Equipment or Method ⁴				
Minimum control efficiency (%)				
Maximum Emission Rate	Loading (lb/hr)			
	Annual (lb/yr)			
Estimation Method ⁵				

¹ SF = Bottom Fill SP = Spray Fill SUB = Submerged Fill

² At maximum liquid temperature

³ B = Ballasted vessel, C = Cleaned, U = Unballasted (dedicated services), O = other (describe)

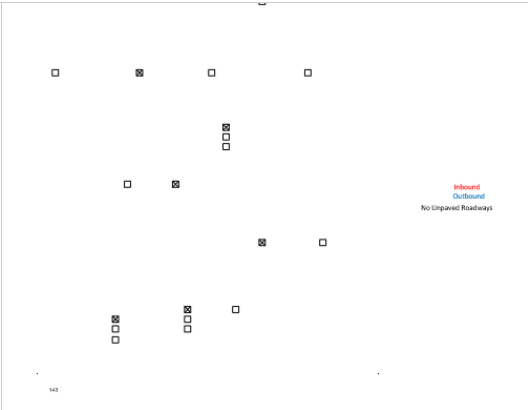
⁴ List as many as apply: **capture, condense, and control systems for Pollution Control Device**
 ZIMMEX CA = Carbon Adsorption SC = Scrubber Absorption/CFA = Compressor-
 Refrigeration/Absorption TD = Thermal Oxidation or Incineration LCA = Lean Oil Absorption/CO =
 Condensate
 CFC = Compression Refrigeration/Condensation VB = Dedicated Vapor Balance (closed system)
 O = other (describe)

⁵ EPA = EPA Emission Factor as stated in AP-42
 MB = Material Balance

Page ____ of ____ WVCBP-OMG Revision 03-2007

TN = Test Measurement based upon test data submitted O = other (describe)	
9. Proposed Monitoring, Recordkeeping, Reporting, and Testing	
Please provide monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please provide testing in order to demonstrate compliance with the proposed emission limits.	
MONITORING	RECORDKEEPING
REPORTING	TESTING
MONITORING: PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THE PROCESS EQUIPMENT OPERATOR/MAINTENANCE CONTROL DEVICE.	
RECORDKEEPING: PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.	
REPORTING: PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.	
TESTING: PLEASE DESCRIBE ANY PROPOSED DIAGNOSTIC TESTING FOR THE PROCESS EQUIPMENT/MAINTENANCE CONTROL DEVICE.	
10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.	

Page ____ of ____ WVCBP-OMG Revision 03-2007



Attachment M
Air Pollution Control Device Sheet
(POLLUTANT SYSTEMS)

Control Device ID No. (must match Emission Units Table): 1000

1. Manufacturer: Endurochem		2. Method: Scheduled Burn	
Model No. To Be Determined		Control Burn	
		Other: _____	
		Stack/Exhaust/Flare	

3. Provide diagram(s) of unit describing capture system with dust arrangement with size of duct, air volume, capacity, horsepower of motor. If applicable, state hood/face velocity and hood/collection efficiency.

4. Method of system used		5. Pressure controlled		6. Non-pressure controlled	
Dust-collector		Air-treated		Non-treated	

7. Estimated collection efficiency (Waste gas destruction efficiency)		8. Dimensions of stack		9. Fuel used in burner	
Estimated: _____		Diameter: 2.36 ft.		Natural Gas	
Minimum guaranteed: 95 %		Height: 40.21 ft.		Fuel Oil, Number _____	
				Other, Specify: Sign Gas	

10. Number of burners: 1

Rating: 12,247 Btu/hr

11. Will preheat be used? Yes No

12. Flare height: 45.21 ft.

13. Flare tip inside diameter: 2.36 ft.

14. Natural gas flow rate to flare pilot flame per pilot light: 0.20 scfm

15. Flare tip outside diameter: 2.36 ft.

16. This automatic de-ignition be used? Yes No

17. If automatic de-ignition be used, describe the method.

18. Is pilot flame equipped with a monitor? Yes No

If yes, what type? Thermocouple Infra-Red

Ultra-Violet Camera with monitoring control room

Other, Describe: _____

19. Hours of unit operation per year: 24 hours per day; 7 days per week

100 Page 1 of 1 Revision: 07/10/2007

Stream Injection

20. Will stream injection be used? Yes No

21. Stream process: Stream Disposal

22. Total stream flow rate: Lb/hr

23. Temperature: °F

24. Velocity: ft/min

25. Number of jet streams: 1

26. Chemical of stream jets: H₂O

27. Design loads for stream injection: 1.0 stream/injection

28. How will stream flow be controlled if stream injection is used? _____

Characteristics of the Waste Gas Stream to be Burned

29. Name	Quantity	Quantity	Source of Material
	Grains of dust/100 ft ³	(Lb/hr, Btu/hr, etc.)	
	Hydrocarbons	THD	
	Cyanide Compounds	THD	
	Aromatics	THD	
CO	THD		
Hydrogen	THD		
Salts (Na, K, etc.)	THD		

30. Calculate total combustible to flow: 00,000 scfm

31. Estimate total flow rate of waste gas: scfm

32. Estimate total flow rate to flow including materials to be burned, carrier gases, auxiliary fuel, etc.: 5,100 Lb/hr or Additive

33. Gross composition of carrier gases: THD Oxygen

34. Temperature of emission stream: 1,100 °F

35. Heating value of emission stream: THD Btu/lb

36. Mass molecular weight of emission stream: MW = THD lb/lb-mole

37. Temperature of raw gas: 217 °F

38. Flare gas flow rate: 11,000 mol/min

39. Flare gas heat content: 180 Btu/lb

40. Flare gas exit velocity: THD scfm

41. Maximum life during emergency for one major piece of equipment or process unit: N/A scfm

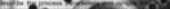
42. Maximum life during emergency for one major piece of equipment or process unit: N/A Btu/min

43. Describe any air pollution control device unit and outlet gas conditioning processes in place, gas loading, gas handling, gas modifications.

44. Describe the collection method of captured system.

45. Have you included **Pollution Control Device** in the Emission Points Data Summary Sheet? Yes

100 Page 2 of 1 Revision: 07/10/2007

6	Planned Monitoring, Recurring	 Schroder is a member of the Schroder Group, which is fully compliant with the principles of responsible investment. Please provide a description of your relationship with the proposed investment bank.
7	MONITORING	RECORDKEEPING Record all specs to the relevant inspection reports with the measurement set on site within 60 days.
8	MONITORING	Monitoring will be accomplished through the project team. The facility personnel will conduct monthly inspections for visible dust emissions and odors. The final inspection shall be made to be reported to be performed by a person employed in a qualified service under a job held by the Visual Inspection of Specific Activities from the Services Section.
9	REPORTING	Report to WYDFP all reports sent to the field.
10	MONITORING	Please list and describe the parameters to be monitored or inspected, including the frequency of monitoring or inspection.
11	RECORDKEEPING	Please describe the recordkeeping system used to maintain records of monitoring or inspection.
12	TESTING	Please describe the testing service.
13	Manufacturer's Guarantee Certificate	-N/A-
14	Manufacturer's Guarantee Control	-N/A-
15		Ionization/scintillation monitor Ionization gill detector Breuer gillia to ionization ZAI
16	Describe all operating ranges and measurement procedures used by the manufacturer to monitor accuracy for statistical purposes	

	Intensitäts/Größe einer ZAE • kein elektrisches Schweißen • Leistung 1-1000 W (220V-Netz) • elektr. gesch. bis 1000 U/min	Anwendung: Zur Schweiß- (Schweiß- oder Laserschweiß) übertragene Schweißgeschwindigkeit. Die Geschwindigkeit ist abhängig von der Leistung und der Größe der ZAE.
	Intensität gibt das Netz ZAE	
	Net-Z • kein elektrisches Schweißen • Leistung 1-1000 W (220V-Netz) • elektr. gesch. bis 1000 U/min	Anwendung: Zur Schweiß- (Schweiß- oder Laserschweiß) übertragene Schweißgeschwindigkeit. Die Geschwindigkeit ist abhängig von der Leistung und der Größe der ZAE.
	Drüsen- physische Intensität ZAE	Anwendung: Zur Schweiß- (Schweiß- oder Laserschweiß) übertragene Schweißgeschwindigkeit. Die Geschwindigkeit ist abhängig von der Leistung und der Größe der ZAE.

[illegible]



Zusatz

2010年10月10日 星期六 10:10:10
 1. 2010年10月10日 星期六 10:10:10
 2. 2010年10月10日 星期六 10:10:10
 3. 2010年10月10日 星期六 10:10:10
 4. 2010年10月10日 星期六 10:10:10



854

Antonio de



1995

Antonio de

Fig. 1. The effect of the concentration of the solution on the rate of the reaction.



Fig. 9

Accepted on

1. **Author:** [Name]
 2. **Title:** [Title]
 3. **Journal:** [Journal]
 4. **Volume:** [Volume]
 5. **Issue:** [Issue]
 6. **Page:** [Page]
 7. **Year:** [Year]

What a Zorro says

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840.

One plant has no...

[illegible]

Of note are the Class A offerings

Type: `DE` (1 x 1), `WR` (Fig. 1)
 (1 x 1 x 1) (4 nodes)
 Type: `DE` (1 x 1), `WR` (Fig. 1)
 (1) (4 nodes)
 Type: `DE` (DE: 2 x 10000 `WR` (Fig. 1)
 (1) x 1 (4 nodes)
 Type: `DE` (1 x 1 - 10 `WR` (Fig. 1)
 (1) x 1 (4 nodes)

Figure 2. **Figure 2** illustrates the relationship between the variables and the dependent variable. The model shows that the independent variables (Age, Gender, Education, Income, and Health) are related to the dependent variable (Healthcare Utilization). The model is represented by the equation: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$, where Y is the dependent variable, X_1 through X_5 are the independent variables, β_0 through β_5 are the coefficients, and ϵ is the error term.

Specifications sheet

2019/03/29

Equipment type:

528

Equipment name:

Scarb

Programs

1123 - MedRxiv preprint doi: <https://doi.org/10.1101/2020.05.14.20094001>; this version posted May 14, 2020. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted MedRxiv a license to display the preprint in perpetuity. It is made available under a CC-BY 4.0 International license.

| | |
|--|----------------------------------|
| Swinge velocity (m/s) | 20 |
| Swinge outward flow (m³/sec) | 2000 |
| | 614,286.721 cfm
15,239.28 cfs |
| Material of construction | stainless steel, painted |
| Inner diameter (mm) | 720 |
| Total height above ground (mm) | 15000 |
| | |
| Height from ground to air inlet (mm) | 2000 |
| Distance installed from air inlet (mm) | 2000 |
| Air diameter installed (mm) | 125 |
| Chain brand | maxon |

Disclaimer: values are subject to change.

Technotherm
SUPERIOR THERMAL TECHNOLOGY

Supertherm (Pty) Ltd vs TICHNOTHERM
 Wooded Office Park - 53 Philip Street, PO Box 100,
 Central Place, Wood 4, Mopani, 1400
 Email: info@supertherm.co.za | Tel: 010 045 5600
 Fax: 0202254444 | Reg No: 2010/000045/07
 All prices ex-manufacturer 2007 ZR 211 4224

www.technotherm.co.za
www.technotherma3.com

1141 – General Operations and Maintenance

Company: Empire Diversified Energy
Address: 600 Veterans Drive
Follansbee WV
USA

Revision: 0001 100

Contents

| | |
|--|---|
| Introduction | 4 |
| Project Overview | 4 |
| Supplier | 4 |
| Plant and Equipment | 4 |
| Operating Philosophy | 5 |
| Shredder Section | 5 |
| Drying Section | 5 |
| HCI Recovery System | 6 |
| Pyrolyser | 6 |
| Syngas Clean-up | 6 |
| Particulate Matter Clean-up | 6 |
| Syngas Coolers | 7 |
| Tar Condensers | 7 |
| Oil Scrubbers | 7 |
| Dosing Scrubbers | 7 |
| Gas Boiler (Syngas Storage Tank) | 7 |
| Thermal Oxidiser | 7 |
| Stack and Flare | 7 |
| Gas Engines | 8 |
| Maintenance | 8 |
| Scheduled Maintenance | 8 |
| General | 8 |
| Maintenance Tasks | 9 |

Revision: 0001 100

Revision: 0001 100

Technotherm

SUPERIOR THERMAL TECHNOLOGY

Supertherm PyLIM to TECHNO THERM

Head Office: P.O. Box 61, Peka Engineering Street,
Convent Road, Block A, Mowbray, 1448
Email: info@technotherm.co.za | Tel: 011 045 3603
Web: www.technotherm.co.za | Fax: 011 045 3603
Alt. Email: sales@technotherm.co.za

www.technotherm.co.za
www.technotherm.co.za

Introduction

Project Overview

The Project is a commercial plant using advanced conversion technology in the nature of a waste acceptance facility using plastics with moisture content of 35% from which a clean syngas is produced and subsequently combusted in reciprocating engine generator sets to produce electricity for export.

The Project comprises of a macerator, rotary thermal dryer, 2 sets of pyrolyzers, 3 sets of syngas clean-up equipment, a hydrochloric acid recovery system, gas holder (syngas accumulator), reciprocating engine generators, thermal oxidiser, a stack and flare. The facility is a 3 tph (withstanding capacity) plastics to renewable energy power plant producing baseload electricity for export to the grid. The Project is operated on a continuous basis and is designed with sufficient plant redundancy to negate any single point total plant failures.

Waste heat is recovered from the exhaust of the engines and the Pyrolyser to dry the plastics once shredded. Site available natural gas provides start-up and standby thermal energy. The plant design and configuration is comprised of equipment that results in low life cycle costs, high operational efficiency and operational flexibility consistent with the results of the design reviews, RAM and HAZOP studies conducted during the project execution.

Supplier

Company Name: TECHNO THERM
Physical Address: 86 Rand Road Road,
Rand Vaal, Gauteng
South Africa
Telephone: +27 (0)10 045 3603
Facsimile: +27 (0)10 366 5823
Website: www.technotherm.co.za

Technotherm 010

Technotherm

SUPERIOR THERMAL TECHNOLOGY

Supertherm PyLIM to TECHNO THERM

Head Office: P.O. Box 61, Peka Engineering Street,
Convent Road, Block A, Mowbray, 1448
Email: info@technotherm.co.za | Tel: 011 045 3603
Web: www.technotherm.co.za | Fax: 011 045 3603
Alt. Email: sales@technotherm.co.za

www.technotherm.co.za
www.technotherm.co.za

Plant and Equipment

This instruction manual relates to a WASTE TO ENERGY PLANT Scheme.

The design is for 300°C maximum process temperature.

It essentially comprises of a

- Shredder
- Dryer
- Pyrolyzers
- Hydrochloric acid recovery system
- Gas clean-up system
- Gas temporary storage
- Engines
- Regenerative thermal oxidiser
- Stack and flare

Operating Philosophy

Overall process takes plastics, received by a transporting company, and thermally processes it in a pyrolysis system operating at 500°C - 900°C (1,472°F - 2,162°F). Organic matter from the plastics is evaporated forming a syngas that can directly be used as a fuel source for electrical generating engines. Oil and tar are produced where the oil is recycled through the pyrolysis system to make more syngas, and the tar is used to heat a vitrification system where solids from the process are melted and made into bricks. Exhaust from the engines are sent to a drying unit, where the plastics is dried prior to being reintroduced into the pyrolysis system. All gases are sent to a Thermal Oxidiser operating at 850°C (1,562°F), after which they are conditioned for release to atmosphere via a stack.

Shredder Section

Plastics received at the facility will be in sealed containers about 2 feet square and they are not opened. Each bin has an inventory, so Dispose Green Generation knows what is in the bin prior to being fed into the Pyrolysis System. Plastics in bins are not stored on site but are processed as they arrive after cataloging the wastes.

Technotherm 010

Technotherm

SUPERIOR THERMAL TECHNOLOGY

Supertherm PyLIM to TECHNO THERM

Head Office: P.O. Box 61, Peka Engineering Street,
Convent Road, Block A, Mowbray, 1448
Email: info@technotherm.co.za | Tel: 011 045 3603
Web: www.technotherm.co.za | Fax: 011 045 3603
Alt. Email: sales@technotherm.co.za

www.technotherm.co.za
www.technotherm.co.za

Sealed containers will be fed into the Macerator. In the Macerator, operating under negative pressure, the plastics in sealed containers will be reduced to 25 mm or less.

Drying Section

The drying of the feedstock is carried out in a direct heated, parallel flow, rotary twin drum type dryer using a combination of engine exhaust and, if necessary during start-up or unusual operating conditions, syngas and, as a last resort, natural gas.

Feedstock is transported from the dryer feed hopper into the dryer by means of a screw conveyor. Upon entering the dryer inner rotator, the moist feedstock comes into direct contact with the parallel screen of hot flue gases.

Flare and progression plates ensure intimate contact between the feedstock and flue gas therefore facilitating efficient drying and movement of feedstock along the rotator.

Once both feedstock and flue gases reach the distal end of the dryer they are discharged from the inner concentric rotator into the outer rotator and return to the entry end of the dryer, discharging 10% moisture level feedstock into an expansion chamber. Coarse dry feedstock falls to the bottom of the chamber forming a heap on the conveyor located beneath.

The flue gas exhaust, contaminated with light particulate feedstock material, is also discharged from the expansion chamber and ducted to a bank of cyclones where separation occurs. Fine particulate falls to the bottom of each cyclone and is discharged via rotary valves into a common screw conveyor. The screw conveyor discharges the fine product into the conveyor joining the dryer exit material and fine product. The conveyor transfers the combined dry feedstock streams onto a conveyor feeding an intermediate storage hopper that feeds both pyrolyzers.

RCS Recovery System

This system is fed with dried feedstock from a thermal dryer via a live bottom screw hopper. Material is fed from a gas-tight, storage hopper into the horizontal pre-parallel rotator by a rotary screw. The feedstock passes through a pre-polymerizer flue-drier where it is

Technotherm 010

Technotherm

SUPERIOR THERMAL TECHNOLOGY

Supertherm PHILLIP to TECHNOOTHERM

Head Office: P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61
Contact: P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61
Tel: (011) 441 3441
Fax: (011) 441 3441
E-mail: info@technotherm.co.za
Web: www.technotherm.co.za

www.technotherm.co.za
www.technotherm.co.za

Sorted to an inert environment to allow gradual release of Chlorine. The gas is removed and condensed to form hydrochloric acid where after it is treated.

Pyrolyser

The pyrolyser train is fed dried and partially reconstructed feedstock from the HCl recovery system as described in the previous section. The pyrolysis train consists of two identical pyrolysers. Per unit, the source of indirect heat is primarily hot exhaust flue gas from a furnace located beneath the pyrolysis retort. These hot flue gases exit the pyrolysis retorts and then progress to the medium grade heat applications (Thermal dryer and during start up syngas cooler and tar condenser). Supplemental heating of the pyrolysis retort is being provided by firing a portion of the cleaned syngas. Natural gas is available for initial start-up or any start-up where insufficient syngas is available. After passing through the dryers the flue gas is progressed to the thermal oxidiser.

As the material passes through the pyrolysis retort, it undergoes thermal degradation releasing volatile organic syngas compounds that is discharged from the retort. The crude syngas off takes are collected into a common manifold that transfers the syngas to the syngas cleaning system.

The heavier particles, mainly comprising of ash and fixed carbon, collect in a specially designed high temperature de-acceleration chamber where the particles are collected and returned to the furnace for energy recovery.

Ash and carbonaceous residue produced by the pyrolysers drops off the dust from the de-acceleration de-acceleration chamber screw conveyors, together with the main residue collected from the base of the pyrolyser into a refractory lined furnace fired by recovered tars (described below in the syngas cleaning equipment). The heat liberated by burning the tars and oils is sufficient to heat the ash from the pyrolysis units above their elastic temperature with excess, preheated air to burn off the tars. The  is completely combusted into CO₂ and H₂O.

Technotherm 2018

Technotherm

SUPERIOR THERMAL TECHNOLOGY

Supertherm PHILLIP to TECHNOOTHERM

Head Office: P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61
Contact: P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61
Tel: (011) 441 3441
Fax: (011) 441 3441
E-mail: info@technotherm.co.za
Web: www.technotherm.co.za

www.technotherm.co.za
www.technotherm.co.za

Syngas Clean-up

Particulate Matter Clean-up

Raw syngas is removed from the pyrolysis retorts, as described above, and passes through a de-acceleration chamber and then hot cyclones. The cyclones are arranged for parallel flow to ensure maximum PM removal efficiency during start-up and shutdown as the flue varies. PM drops to specially designed hot screw conveyors and from there is directed to the vitrification furnaces described above.

Syngas Coolers

The partially cleaned, still hot, flue gas flows next through stainless steel tubular syngas coolers. The cooler is in essence a heat exchanger which indirectly transfers heat from syngas to the combustion air heaters.

Tar Condensers

The syngas from the coolers described above flows to a stainless-steel shell & tube heat exchanger/cooler that is cooled by an air blower system. Tars are condensed out and drop into heated troughs, the heat source of which is engine exhaust. Hot condensed tar is pumped to the vitrification furnaces described above. The common isolated spare set of coolers uses engine exhaust flue gas to heat the heat exchangers and thereby cause the tars to drop into the heated trough below.

Oil Scrubbers

The syngas from the tar condensers described above flows to a scrubber with interconnected oil and water separator.

Dosing Scrubbers

From the oil scrubber the syngas flows through a high pressure drop venturi scrubber which is kept at a set pH to neutralise the gas before progressing to temporary storage.

Technotherm 2018

Technotherm

SUPERIOR THERMAL TECHNOLOGY

Supertherm PHILLIP to TECHNOOTHERM

Head Office: P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61
Contact: P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61, P.O. Box 61
Tel: (011) 441 3441
Fax: (011) 441 3441
E-mail: info@technotherm.co.za
Web: www.technotherm.co.za

www.technotherm.co.za
www.technotherm.co.za

Gas Bladder (Syngas Storage Tank)

The syngas storage tank provides surge capacity of cleaned syngas to level out flow and composition variations. The bladder is contained within a demarcated area. The bladder will operate with an internal pressure of 30 to 40 mBar gauge.

Thermal Oxidiser

All flue gases enter a thermal oxidiser comprising of a rectangular box shaped furnace. The internal dimensions are determined by the total volume that needs to be raised to 850°C and maintained for 2 seconds.

Stack and Flare

The stack and flare comprises of the following:

1. Induced Draft Fan
2. Flare Stack (combined with plant stack) and
3. Plant Stack (5 m above nearest building x 720 mm dia.)

The treated hot gases progress through the stack and disperses into the atmosphere after passing through the thermal oxidiser.

Gas Engines

Each syngas engine is a fully packaged unit complete with all associated components and auxiliaries. These engines are of robust design and have been proven on low and medium calorific value gas fuels.

The engine package allows the engine to start, synchronise, operate continuously at base or part load and shut down.

The syngas engines are situated in containers as indicated on the plant layout and engine cooling will occur by means of external radiators.

Technotherm 2018

Technotherm

SUPERIOR THERMAL TECHNOLOGY

Supertherm PyLYM to TECHNOOTHERM

Head Office: P.O. Box 62, Paddy's Impoundment Street,
Carrickfergus, Bally & Warrington, L48
Email: info@technotherm.co.uk | Tel: 0151 945 3440
Web: www.technotherm.co.uk | Fax: 0151 945 3440
UK: 0151 945 3440 | Fax: 0151 945 3440
EU: 0151 945 3440 | Fax: 0151 945 3440

www.technotherm.co.uk
www.technotherm.co.uk

Maintenance

Scheduled Maintenance

It is assumed that the plant will be subject to the same general routine maintenance discipline, in respect of cleanliness, readiness corrosion control etc., as the other plant and equipment in the factory.

General

- Work to be done must be cleared with the operator or his designee before commencement.
- Ensure the area is clear and free of contamination.
- Inspect labels and warning signs location, clear visibility and damage. Repair / replace if necessary.
- Inspect the equipment for any signs of build up or deposits.
- Check that all fasteners and mounting hardware is in place.
- Always stand to the side when observing interior or opening the Pyrolyser to avoid sudden exposure to heat.
- Frequent visual inspection of the equipment should be done. Any leaks in piping, tanks, equipment casings, covers and all associated equipment or hose connections must be reported.
- If any fault occurs, analyse and permanently remove the cause. Do not remain on temporary repair.
- Immediately report any signs of abnormal equipment operation or unusual instrument readings.

Technotherm Ltd

Technotherm

SUPERIOR THERMAL TECHNOLOGY

Supertherm PyLYM to TECHNOOTHERM

Head Office: P.O. Box 62, Paddy's Impoundment Street,
Carrickfergus, Bally & Warrington, L48
Email: info@technotherm.co.uk | Tel: 0151 945 3440
Web: www.technotherm.co.uk | Fax: 0151 945 3440
UK: 0151 945 3440 | Fax: 0151 945 3440
EU: 0151 945 3440 | Fax: 0151 945 3440

www.technotherm.co.uk
www.technotherm.co.uk

- After maintenance, ensure that all bolts, fittings, guards and other fasteners are correctly tightened.
- Metal parts must be painted to avoid corrosion. Where painting is not possible suitable oil or grease must be utilised.

Maintenance Tasks

The maintenance schedule specifies the frequency of the inspections and checks that are expected under normal operating conditions. In the event that the prevailing conditions are abnormal, appropriate adjustments could be expected.

Weekly Maintenance

- Check seal integrity on front and rear pre-Pyrolyser and Pyrolyser bellows
- Check seal integrity on knife gate valves
- Check limit switches and/or proxy switches ensuring holding bolts are tight
- Check roller arms on limit switches are secure
- Check thermocouples are secure
- Check for uneven movement / misalignment of mechanisms
- Check temperature controller and over temperature controller for proper operation
- Check relief rollers are tight and no excessive wear is taking place
- Grease wheels with high temperature graphite grease
- Listen for undue mechanical noise from the installation, investigate and repair if necessary
- Check all seals and gaskets for possible leaks on the hydraulic system.
- Check that all bearings are properly greased and operating correctly.

Monthly Maintenance

- Repeat weekly scheduled maintenance
- Check all bolts are tight, tighten if necessary

Technotherm Ltd

Technotherm

SUPERIOR THERMAL TECHNOLOGY

Supertherm PyLYM to TECHNOOTHERM

Head Office: P.O. Box 62, Paddy's Impoundment Street,
Carrickfergus, Bally & Warrington, L48
Email: info@technotherm.co.uk | Tel: 0151 945 3440
Web: www.technotherm.co.uk | Fax: 0151 945 3440
UK: 0151 945 3440 | Fax: 0151 945 3440
EU: 0151 945 3440 | Fax: 0151 945 3440

www.technotherm.co.uk
www.technotherm.co.uk

- Ensure all guards, covers, brackets are in place and secure.
- Visually inspect modules and insulation blankets are properly in position and secure, repair / replace if necessary.
- Check ducts for foreign materials causing obstruction.
- Check structural steelwork for signs of corrosion and paint damage. Metal parts must be painted to avoid corrosion.
- Check blower impeller by hand to ensure free rotation. Check that there is no fouling between rotating and stationary components.
- Check that all blower fasteners are secure and that all components are in good order at the coding section.
- Ensure that the blower guard is in place and secure.
- Keep electric motors' air inlets and outlets free and clean. The air blown out by the motor shall not enter again. The distance between the air inlet and the wall must be approximately 1/4 of the inlet opening diameter.
- Check relief mechanism main track roller for alignment
- Check all pre-Pyrolyser and Pyrolyser in feed system for any possible obstructions and charge clearances
- Check knife gate valves and proxy switch positions
- Check all pre-Pyrolyser and Pyrolyser front and rear door seal
- Check all booster fan clearance and rotation direction

Three Monthly Maintenance

- Repeat Monthly Maintenance
- Clean booster fan and clean all interconnecting pipes

Six Monthly Maintenance

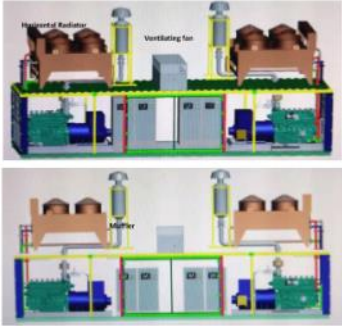
- Repeat Three Monthly Maintenance
- Booster fan Maintenance

Technotherm Ltd

[illegible]009-00141 IPR 13-3555A 8-20-2024 Page 125

- 000000





Page 1

10



Container size: (L*W*H) 11.5m*2.2m*2.45m

3 containers in total

10

Attachment M Air Pollution Control Device Sheet (WET COLLECTING SYSTEM-SCRUBBERS)

Control Device ID No. (Must match Emission Units Table)

| Equipment Information | |
|---|--|
| 1. Manufacturer: Poly Processing
Model No. P-5 5" Scrubber | 2. Method: Packaged Bed
Sizing System
Mechanical
Other: Gravity |
| 3. Provide diagram(s) of unit describing capture systems with dust arrangement and rate of dust, air volume, capacity, horsepower of motor, if applicable, state hood face velocity and hood collection efficiency. | |
| 4. Provide a scale diagram of the scrubber showing its construction. Please include packing type and size, spray configurations, baffle plates, and mist eliminators. | |
| 5. What type of liquid absorbent system or system will be used? Submit a schematic diagram showing thickness, mesh, and material of construction. | |
| 6. Describe the scrubber's construction material.
Polyethylene (HDPE) with 1/2" PVC internal and exterior piping. Water with NaOH is added to the vessel above the air tank. Fresh gas from the HCl tank passes through the gas diffuser where HCl fumes are neutralized before the scrubbed gas is vented from the top. | |
| 7. What will be the power requirements of the collector?
Type: NA HP | Input scrubbing liquid (gpm): NA HP |
| 8. What type of fan(s) will be used?
Type of fan blade: None
Also specify in the column for each fan to be used. | Number of blades: None
Diameter of blade: None in. |
| 9. Estimated gas pressure drop at maximum flow rate: | inches H ₂ O |
| 10. Scrubbing Liquid | |
| Composition | Weight % |
| 1. Water | 99 |
| 2. NaOH | 1 |
| 3. | |
| 4. | |
| 11. Scrubbing Liquid Characteristics | 12. Liquid pressure to scrubber: 8.25 PSIA |
| 13. Pressure drop through scrubber: 0 in. H ₂ O | 14. Liquid flow rate to scrubber:
☐ Design maximum: 1,000 gallons
☒ Average expected: 500 gallons |
| 15. Scrubbing system to be used: Gravity liquid to collection | |
| 16. Over the expected acidic content of the liquid:
No expected solids will be present. The system will convert HCl gas vapors will react with NaOH to form water (H ₂ O) and salt (NaCl). Water will be changed and will before NaCl concentration reaches saturation. | |

10

Page 1 of 1

Revision: 01/10/2007

16. If the input is to be recirculated, describe any treatment performed:

| | |
|---|---|
| 19. Data for Venturi Scrubber:
Throat Diameter: NA
Duct Area: NA
Throat Velocity: NA
Flow: NA | 20. Data for Packed Towers:
Type of Packing: NA
Superficial Gas Velocity through Bed: |
|---|---|

Gas Stream Characteristics

| | |
|---|---|
| 21. Gas flow into the collector:
Inlet: ACF @ 20 °F and 14.7 PSIA | 22. Gas stream temperature:
Inlet: unknown °F
Outlet: unknown °F |
| 23. Gas flow rate:
Design Massflow: 110 ACFM
Average Expansion: 0.1 | 24. Particulate Grain Loading in grains/acf:
Inlet: NA
Outlet: NA |

25. Emission rate of each pollutant (specify) in and out of collector:

| Pollutant | in | out | GU1 | Guaranteed Minimum Collector Efficiency |
|-----------|----------|------------|-----------|---|
| | lb/hr | grains/acf | lb/hr | grains/acf |
| A101 | 0.015/lb | 0.0015/lb | 0.0015/lb | 99 |
| B | | | | |
| C | | | | |
| D | | | | |
| E | | | | |

26. Type of pollutant(s) controlled: SO_x Oxide

27. By what method were the uncontrolled emissions calculated? Oxide: 101

28. By what method were the uncontrolled emissions calculated? Material Balance Stack Test

29. Dimensions of stack: Height: 4' 2" ft Diameter: 1' 1" ft

30. Supply an equilibrium curve and/or solubility data (at various temperatures) for the proposed system.

31. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 100 percent of design rating of collector.

Particulate Distribution

32. Complete the table:

| Particulate Size Range (microns) | Weight % for Size Range | Fraction Efficiency of Collector |
|----------------------------------|------------------------------------|----------------------------------|
| 0-2 | NA, upper or lower limit emissions | Weight % for Size Range |
| 2-4 | | |
| 4-6 | | |
| 6-8 | | |
| 8-10 | | |
| 10-12 | | |
| 12-16 | | |
| 16-20 | | |
| 20-30 | | |
| 30-40 | | |
| 40-50 | | |
| 50-60 | | |
| 60-70 | | |
| 70-80 | | |
| 80-90 | | |
| 90-100 | | |
| >100 | | |

33. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification).

34. Describe the collection material disposal system.
"Uncontrolled 101 gas will become a solid form that will be disposed of in accordance with local, state (PADEP), and federal regulations."

35. Have you included **and Collecting (Scrubber) Control Device** in the Emissions Profile Data Summary Sheet? Yes

36. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.
RECORDKEEPING:

REPORTING:

TESTING:

37. **Manufacturer's Guaranteed Capture Efficiency for each air pollutant**
Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
Please describe the proposed recordkeeping that will accompany the monitoring.
Please describe any proposed emissions testing for this process equipment or air pollution control device.
Please describe any proposed emissions testing for this process equipment or air pollution control device.

38. **Manufacturer's Guaranteed Control Efficiency for each air pollutant**
in ppm.

39. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

Furnish the following information for each new or modified bulk liquid transfer area or loading rack, as shown on the **Equipment List Form** and other parts of this application. This form is to be used for bulk liquid transfer operations such as to and from drums, marine vessels, rail tank cars, and tank trucks.

Furnish the following information for each new or modified bulk liquid transfer area or loading rack, as shown on the **Equipment List Form** and other parts of this application. This form is to be used for bulk liquid transfer operations such as to and from drums, marine vessels, rail tank cars, and tank trucks.

| | | | | | | | | | | | |
|--|-----------|------------|-------------|-----------|--|--|--|--|--|--|--|
| Identification Number (as assigned on Department Lot Form) _____ | | | | | | | | | | | |
| 1. Loading Area Name: <u>1300</u> | | | | | | | | | | | |
| 2. Type of cargo vessels accommodated on this rack or transfer point (check as many as apply): | | | | | | | | | | | |
| ☐ G Drums ☐ G Marine Vessels ☐ 1000 G Rail Tank Cars ☐ G Tank Trucks | | | | | | | | | | | |
| 3. Loading Rack or Transfer Point <u>D-600</u> | | | | | | | | | | | |
| Number of pumps <u>75</u> | | | | | | | | | | | |
| Number of liquids loaded _____ | | | | | | | | | | | |
| Maximum number of marine vessels, tank trucks, tank cars, or drums loading at one time _____ | | | | | | | | | | | |
| 4. Does loading of marine vessels occur at this loading area? | | | | | | | | | | | |
| ☐ Yes ☐ No ☐ Does not apply | | | | | | | | | | | |
| 5. Describe cleaning location, compounds and pressures for cargo vessels using this transfer point: _____ | | | | | | | | | | | |
| 6. Are cargo vessels pressure tested for leaks at this or any other location? | | | | | | | | | | | |
| ☐ Yes ☐ No | | | | | | | | | | | |
| IF YES, describe: _____ | | | | | | | | | | | |
| 7. Projected Maximum Operating Schedule for this rack or transfer point (as a whole): | | | | | | | | | | | |
| Maximum | Jan - Mar | Apr - June | July - Sept | Oct - Dec | | | | | | | |
| hours/day | | | | | | | | | | | |
| days/week | | | | | | | | | | | |

page __ of __ WQSP-DAQ Revision 03-2007

1274

| | | | | | |
|--|-------------------|--|------------------------------|--|--|
| Week/Quarter | | | | | |
| 8. Bulk Liquid Data (add pages as necessary) | | | | | |
| Pump ID No. | | | | | |
| Liquid Name | | | | | |
| Max. daily through (1000 gal/day) | | | | | |
| Max. annual through (1000 gal/yr) | | | | | |
| Loading Method ¹ | | | | | |
| Max. Fill Rate (gal/min) | | | | | |
| Average Fill Time (min/Loading) | | | | | |
| Max. Bulk Liquid Temperature (°F) | | | | | |
| True Vapor Pressure ² | | | | | |
| Cargo Vessel Conditions ³ | | | | | |
| Control Equipment or Method ⁴ | | | | | |
| Minimum control efficiency (%) | | | | | |
| Maximum Loading (lb/hr) | | | | | |
| Rate Annual (lb/yr) | | | | | |
| Estimation Method ⁵ | | | | | |
| SP = Bottom Pail | SP = Sprayer Fill | SLB = Submerged Pail | | | |
| 9. Air Maximum Use (add pages as necessary) | | | | | |
| R = Ballasted Vessel, C = Cleaned, U = Uncleaned (dedicated vessels), O = Other (describe) | | | | | |
| ¹ List as many as apply and combine as appropriate for Pesticide Control Category: | | | | | |
| Adsorption: Carbon Absorption | | BC = Biofilter | LW = Loss of Adsorbent/Clean | | |
| Chemical Absorption | | TD = Thermal Destruction or Incineration | LW = Loss of Adsorbent/Clean | | |
| SOL = Solvent/Nonflame/Concentration | | GR = Gasoline Vapor Balance (solvent system) | O = Other (describe) | | |
| EPA's EPA Emission Factor as stated in AP-42 | | | | | |
| LW = Loss to Balance | | | | | |

page __ of __ WVDSP-DAQ Revision 03-2007

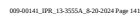
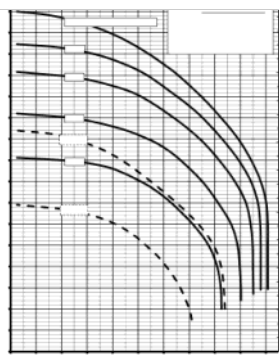
823

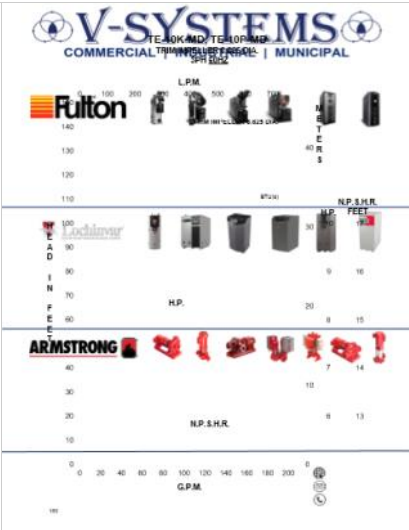
|  V-SYSTEMS  | |
|---|----------------------|
| 1717 10th Street, Suite 100 • San Francisco, CA 94103
COMMERCIAL INDUSTRIAL MUNICIPAL | |
| 1. Proposed Monitoring, Reallocating, Reporting, and Testing
Please describe how the proposed monitoring, reallocating or testing is intended to demonstrate compliance with the applicable regulatory requirements. Please provide details in order to demonstrate compliance with the proposed minimum tests. | |
| MONITORING | RECORDKEEPING |
| REPORTING | TESTING |
| REMARKS: PLEASE LIST AND DESCRIBE THE PROPOSED PARAMETERS AND VALUES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS FACILITY. EQUIPMENT OPERATIONS SHALL BE CONTROLLED TO AVOID EXCEEDING THE PROPOSED LIMITS. | |
| RECORDKEEPING: PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING. | |
| REPORTING: PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING. | |
| TEST TEST: PLEASE DESCRIBE ANY PROPOSED OPERATIONS TESTING FOR THE PROPOSED EQUIPMENT AND ALL PARAMETERS. | |
| Notes: The Office has set operating ranges and maintenance procedures required by Manufacture to maintain warranty. | |

page 1 of 1 WFOER/MSI Review (3/2007)

524



[illegible]



V-SYSTEMS
COMMERCIAL | INDUSTRIAL | MUNICIPAL

SALES • SERVICE • RENTAL

Water Pumps

CRANE PUMPS & SYSTEMS

- Centrifugal & Vertical Turbine
- Submersible, Propeller, 42 Foot DI
- True Churn Fuel (42 & 47 DI)
- Size Range: 1/2 to 2000 HP

Water Pumps

- Centrifugal & Vertical Turbine
- Submersible, Propeller, 42 Foot DI
- True Churn Fuel (42 & 47 DI)
- Size Range: 1/2 to 2000 HP

Additional Offerings

- Powerhead and Motors
- Ancillary Equipment
- Custom Engineered Systems

SPRO THERM

Thermal Fluid Circuits

- High-Differential Temperature Pumps
- Non-Endsuring Boilers
- Polymeric
- Rubber Tanks, Storage Tanks
- Ancillary Equipment
- Custom Engineered Systems

ENERVEX

- Centrifugal & Vertical Turbine
- Submersible, Propeller, 42 Foot DI
- True Churn Fuel (42 & 47 DI)
- Size Range: 1/2 to 2000 HP

Security

Fire Pumps, Commercial

- Diesel, Electric & Gas
- Centrifugal
- Submersible
- True Churn Fuel

Fire Pumps, Commercial

- Diesel, Electric & Gas
- Centrifugal
- Submersible
- True Churn Fuel

Performance Range

- Up to 1000 GPM
- Up to 1000 PSI
- Up to 1000 HP

Additional Offerings

- Powerhead and Motors
- Ancillary Equipment
- Custom Engineered Systems

Your One Stop for all your HVAC, Plumbing, Fire Protection, Sales & Service Needs

V-SYSTEMS
COMMERCIAL | INDUSTRIAL | MUNICIPAL

Wessels

Products Water Feed Units, Concrete Pump Systems, Oil Systems, Vacuum Systems, and Flush Tanks

Performance 1/2 to 100 HP

TCH

Products Trenching, Backfilling, and Pumping Systems

Performance 1/2 to 100 HP

Relax

Products Relaxation and Wellness Systems

Performance 1/2 to 100 HP

Club Car

Products Club Car Vehicles for Rental

Performance 1/2 to 100 HP

Your One Stop for all your HVAC, Plumbing, Fire Protection, Sales & Service Needs

Capabilities

- **Emergency Repair:** We fix all electro-mechanical devices. We have field tech service and in-house staff that will repair all forms of equipment.
- **Water Jet:** We have a water jet for cutting all types of material in almost any shape.
- **Design Engineering:** Senior mechanical designers. Each is ready to provide support from concept to build, installation and reuse of the solution to your manufacturing or operational bottleneck.
- **Electrical Engineering:** Electrical engineers ready to design electrical solutions, write control programming, and perform data analytics.
- **Robotic Cell Design and Assembly:** Project design & management of all needs and programming related to robot cells.
- **Machining:** We offer a wide variety of precision machining capabilities, including CNC turning and milling, general machining, grinding, and boring mill work. Our machining capabilities may be used for both short-run and sustained production work.
- **Fabrication:** We can meet all your prototyping and production needs with complete sheet metal and welding services that include quick delivery on small quantity prototypes, close tolerance fabrications and high-volume production runs.
- **Assembly:** We can meet your entire contract manufacturing needs with our diverse assembly capabilities and wide range of electrical, mechanical, and electro-mechanical assembly services, ranging from special, one-of-a-kind automation machinery to ongoing, low to medium volume production assembly. Our assembly capability includes turn-key production of build-to-print assembly work, including full management of key suppliers. WTB is capable of handling full production volumes.
- **Painting:** Using high-solids and water based materials, our state-of-the-art paint shop can produce finishes from Class 1A to Mill Spec, including textured finishes color matched to your specifications. Powder coated finishes also available.

102

ATTACHMENT N

Supporting Emission Calculations

103

1. OVERALL EMISSIONS CALCULATIONS ALL DEVICES

Plastic waste has significant variation in form and quantity. It seems the best way to describe it as a heterogeneous mixture of solids and materials. Literature is now showing a Reference to the papers are given at the end of the section. They state a heterogeneous plastic waste composition based on the reported in **Table 2: Heterogeneous Plastic Waste (MW) data by Supplier, etc.** given for comparison purposes.

Table 2: Range of Heterogeneous Properties of Plastics ⁽¹⁾
Plastic Waste Composition Buyer Waste Range (wt, %)

| | |
|-------|-------|
| C | 55.3 |
| HC | 3 |
| O2 | 21.3 |
| N2 | 1.9 |
| S | 0.46 |
| Cl | 4.1 |
| Other | 1.2 |
| Moist | |
| H2O | 21.54 |

HW (Dry B)

Composition of the plastic waste used in the previous report are shown in Table 3. Plastics emissions are also shown for plastic waste by Dethome⁽²⁾ and MW by Technidome⁽³⁾

Table 3: Plastic Composition and Pyrolysis Output

| Component Plastics | Plastics Composition (wt, %) | Pyrolysis Component | Pyrolysis Output (wt, %) | Pyrolysis Output (wt, %) | Pyrolysis Output (wt, %) |
|--------------------|------------------------------|---------------------|--------------------------|--------------------------|--------------------------|
| HD | 22.76 | HD | 1.94 | 2.67 | 4.21 |
| C | 28.50 | CO2 | 19.25 | 16.2 | 14.7 |
| H2 | 18.50 | CO | 20.00 | 17.5 | 16.1 |
| N2 | 2.87 | CH4 | 2.18 | 1.8 | 11.49 |
| CO2 | 1.8 | H2 | 1.10 | 17.8 | 3.47 |
| K2O | 1.22 | C-HW (oil) | 3.87 | | |
| S | 2.87 | C-HW (oil) | 3.87 | | |
| Na2O | 4.24 | N2 | 2.19 | | 3.47 |
| Cl | 4.14 | CO | 1.2 | | |
| HgO | 2.19 | K2O | 1.83 | | |
| Fe2O3 | 1.48 | Na2O | 4.19 | | |
| H2O | 2.83 | HCl | 4.19 | | |
| COH | 4.19 | H2O | 4.19 | | |
| | | HgO | 1.44 | | |
| | | Fe2O3 | 2.19 | | |
| | | H2O | 2.19 | | |
| Total | 100 | | 100 | | |

⁽¹⁾ Rounding errors may apply.

104

Page 1 of 3

Revision: 03/2007Revision: 03/2007

The notes listed below for chemical processes are intended to help the applicant submit a complete application to the G&C. These notes are not intended to be all inclusive. The requirements for a complete application for a permit issued under 45CSR13 are designed to provide enough information for a permit reviewer to begin a technical review. Additional information beyond that identified may be required to complete the technical review of any individual application.

Please keep these points in mind when completing your process description as part of this permit application.

1. Provide a general process overview. This brief, but complete, process description should include chemical registered trademark names of chemical products, intermediates, and/or raw materials to be produced consumed, and the ultimate use(s) of the product(s). A list of the various chemical compounds is helpful.
2. Describe each process step. Include the process chemistry and stoichiometrically balanced reaction equation. material input/output for all components.

3. Assess the three risks in hand when calculating your gross discharge as part of this overall operation. (Note: The gross discharge is the sum of the discharges from all of the processes, including the regulated feedstocks of chemical products, intermediates, and/or raw materials to be produced, consumed, and the diffuse inputs of the products.) A lot of the various process categories in Section 2 are designed to be used in a sequential manner, so that the gross discharge of one process is the material mass balance on all components.
4. Describe the methods and equipment used to handle, store, and/or change use materials.
5. Provide process flow diagrams to illustrate step-by-step details clearly about the process flow relationships and the material flows. (Note: The flow diagrams should be drawn in a way that clearly shows the interrelationships and controls for the process.)
6. Describe the control systems and the monitoring and frequency of audits, and the discharge monitoring and control systems (including emissions of these audits). Include a description of rupture disks, pressure relief devices, and safety containment systems.
7. Discuss any fugitive emissions and the methods used to minimize them.
8. Include the following plans for the process if available:
 - a. emergency response plan for the process, including an emergency plan for all control equipment;
 - b. continuous emissions (on-plot) monitoring plan;
 - c. accident non-rotting plan;
 - d. emergency response plan for the process.

Regulatory Discussion:
The following state and federal air pollution control regulations may be applicable to your chemical process. You should review these regulations carefully to determine if they apply to your process. Please summarize the results of your review in your permit application along with any other regulations you believe are applicable.

- For a review of your permit application along with any other regulations you believe are applicable, please contact the appropriate regulatory agency. The following are the Virginia air pollution control regulations, including the following promulgated rules which may require emissions reductions or control technologies for your chemical process:
- a. 40CSR202 - *Best Available Technology (BAT) for Toxic Air Pollutants (TAPs)*
 - b. 40CSR203 - *VOC emissions control for ozone maintenance in Annapolis, Catlett, Purpura, Weymouth and Woodstock counties.*
 - c. 40CSR204 (Table 45-13A) - *platinum emissions thresholds for generating for certain pollutants.*
- Federal Guidelines for new source major air contaminants are listed in section 1.2 of the 1990 Clean Air Act. There are also subparts of the federal Standards of Performance for new Stationary Sources (NSPS), 40CFR60.1-60.16, and the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) at 40CFR161 and 40CFR169. The Federal Guidelines for new source major air contaminants are listed in section 1.2 of the 1990 Clean Air Act. These areas of the Federal regulations should be consulted carefully to determine applicability to your process.

1. For each pollutant, provide the basis for the emissions estimate and for an emission reduction(s) or control efficiency(ies) claimed.

2. For all batches, respondents provide the following:
- Emissions of each pollutant in pounds per batch, from each process step
 - An emissions-based tonnage of batches required per year
 - The total time for each process step and the duration of the emissions during the process step
 - Total batch time, total emissions per batch (or per day), and annual emissions based on the number of batches requested per year

Page 3 of 13

Revision: 03/2007

List below all emergency relief devices, rupture disks, safety relief valves, and similar openings that will vent only under abnormal conditions.

[illegible]

^c List all emergency relief devices next to the piece of equipment from which they control releases.

Page 4 of 13

Revision: 03/2007

| Source Category | Pollutant | Number of Source Components ^a | Number of Components Monitored by Frequency ^a | Average Value by Vapor Class ^b | Estimated Annual Impairment Rate (10yr) ^c |
|-------------------------------------|-------------------------------|--|--|---|--|
| Asphalt | Light Liquid VOC ^d | | | | |
| | Heavy Liquid VOC ^d | | | | |
| | Non-VOC ^d | | | | |
| Gasoline ^e | Gas VOC | 185 | | 1 | 62.7 |
| | Light Liquid VOC | | | | |
| | Heavy Liquid VOC | | | | |
| | Non-VOC | | | | |
| Safety Netrol solvents ^f | Gas VOC | 2 | | 1 | 0.11 |
| | Non-VOC | | | | |
| Over-saturated Liners ^g | VOC | 0 | | | |
| | Non-VOC | 0 | | | |
| Smelting Operations ^h | VOC | 25 | | 1 | 1.48 |
| | Non-VOC | | | | |
| Composites ⁱ | VOC | 3 | | 2 | 0.17 |
| | Non-VOC | | | | |
| Flaregas ^j | VOC | 440 | | 1 | 35.3 |
| | Non-VOC | | | | |
| Other ^k | VOC | 220 | | 1 | 12.85 |
| | Non-VOC | | | | |

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99

Page 5 of 13

Revised: 05/2007

13. Do not include closed-purge sampling connections.

Revision: 03/2007

[illegible]

Revised: 03/2007

Phase¹ Specific Gravity Vapor

| | | | |
|--|------------------|--|---------|
| 8. Maximum Temperature
°C | | 9. Maximum Pressure
% Max. Set Pressure for venting | |
| °F | | venting
venting | |
| 10. Output Data
Material Name and CAS No. | | Flow Out 1:
gph or gal/hr | |
| Phase | Specific Gravity | Vapor Pressure | Normal |
| | | | Maximum |
| | | | Units |
| 11. Complete the following emission data for equipment connected to a header exhaust system, giving emissions levels <u>below</u> entering header system (i.e. before control equipment).
Check here if not applicable:
Emission Point ID (exhaust point of header system):
Material Name and CAS No. Maximum Potential Emission Rate (lb/hr) Method ** | | | |
| | | | |
| ** MS = material balance; EE = Engineering Estimate; TM = Test Measurement (actual test data); O = other (Explain) | | | |

12. Provide the following information pertaining to each condenser that may be attached to this reactor. Attach additional pages as necessary if more than one condenser is used for this reactor. Complete the Condenser Air Pollution Control Device Sheet if necessary.
Check here if not applicable:

10A. Cooling material
10B. Minimum and Maximum flowrate of cooling material (gal/hr)
10C. Inlet temperature of cooling material (°F)
10D. Outlet temperature of cooling material (°F)
10E. Pressure drop of gas to be condensed from inlet to outlet (psig)
10F. Inlet temperature of gas stream (°F)
10G. Outlet temperature of gas stream (°F)
10H. Number of passes
10I. Cooling surface area

11. Provide the following pertaining to auxiliary equipment that is the fuel (heaters, dryers, etc.):
Check here if not applicable:

11A. Type of fuel and maximum fuel burn rate, per hour:

11B. Provide maximum percent sulfur (S), ash content of fuel, and the energy content using appropriate units:
%S % Ash BTU/lb, sec. #1000, gal
☐ ☐ ☐ (H₂ mm)

11C. Theoretical combustion air requirement in SCFD per unit of fuel (include appropriate unit @ 70°F and 14.7 PSIA)
SCFD_B, SCFD, gal (include unit)

11D. Percent excess air: %

11E. Type, amount, and BTU rating of burners and all other firing equipment that are planned to be used:

11F. Total reactor design heat input: =10⁶ BTU/hr.

| | |
|---|---------------|
| 12. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits. | |
| MONITORING | RECORDKEEPING |
| | |
| REPORTING | TESTING |
| | |
| MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THE PROCESS EQUIPMENT OPERATION OR AIR POLLUTION CONTROL DEVICE. | |
| RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING. | |
| REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING. | |
| TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THE PROCESS EQUIPMENT OR AIR POLLUTION CONTROL DEVICE. | |
| 13. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty limits. | |

NOTE: An AIR POLLUTION CONTROL DEVICE SHEET must be completed for any air pollution device(s) (except emergency relief device(s) used to control emissions from this section).

| | | | |
|---|--|--|-----------------------------------|
| DISTILLATION COLUMN DATA SHEET | | | |
| Identification Number (as assigned on Equipment List Form) | | | |
| 1. Name and type of equipment | | | |
| 2. Proposed actual equipment operating schedule (complete appropriate lines) | | | |
| hours/day | | days/week | weeks/year |
| hours/shift | | shifts/week, shifts/week (shifts/week) | days/year, weeks/year (days/year) |
| 3. Number of stages (plates), excluding condenser | | | |
| 4. Number of feed plates and stage location | | | |
| 5. Specify details of any reboiling, recycling, or stage conditioning along with the stage locations | | | |
| | | | |
| 6. Specify reflux ratio, R (where R is defined as the ratio of the reflux to the overhead product, given symbolically as R/L, where L = liquid down column, D = distillation product) | | | |
| 7. Specify the fraction of feed which is vaporized, F (where F is the molar fraction of the feed that leaves the feed plate continuously as vapor) | | | |
| 7A. Type of condenser used: total partial multiple other | | | |
| 7B. For each condenser provide process operating details including all inlet and outlet temperatures, pressures, and compositions | | | |
| 8. Feed Characteristics | | | |
| A. Molar composition | | | |
| B. Individual vapor pressure of each component | | | |
| C. Total feed stage pressure | | | |
| D. Total feed stage temperature | | | |
| E. Total molar flow rate of each stream into the system | | | |
| 9. Overhead Product | | | |
| A. Molar composition of components | | | |
| B. Vapor pressure of components | | | |
| C. Total molar flow rate of all streams leaving the system as overhead products | | | |
| 10. Bottom Product | | | |
| A. Molar composition of all components | | | |
| B. Total molar flow rate of all streams leaving the system as bottom products | | | |

| | |
|---|---------------|
| 11. General Information | |
| A. Distillation column diameter | |
| B. Distillation column height | |
| C. Type of plates | |
| D. Plate spacing | |
| E. Murphree plate efficiency | |
| F. Any other information necessary to describe the operation of this distillation column. | |
| 12. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits. | |
| MONITORING | RECORDKEEPING |
| | |
| REPORTING | TESTING |
| | |
| MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THE PROCESS EQUIPMENT OPERATION OR AIR POLLUTION CONTROL DEVICE. | |
| RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING. | |
| REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING. | |
| TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THE PROCESS EQUIPMENT OR AIR POLLUTION CONTROL DEVICE. | |
| 13. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty limits. | |

NOTE: An AIR POLLUTION CONTROL DEVICE SHEET must be completed for any air pollution device(s) (except emergency relief device(s) used to control emissions from this distillation column).

Monitoring/Recordkeeping/Reporting/Testing Plans

ATTACHMENT O - MONITORING, RECORDING, REPORTING, AND TESTING PLANS

| Task Type | Emission Data | Pollutant | Requirements | Frequency | Method of Measurement | Regulatory Reference |
|------------------------------|--|---|--|---|---|---|
| Recordkeeping | PM _{2.5} , PM ₁₀ , TSP, SO ₂ , NO ₂ , CO, O ₃ | Control of mobile particulate emissions
VOC and other pollutants | Control of mobile particulate emissions
Temperature monitoring | Daily
Continuous | Visual | 40 CFR 101 Subpart H (H ₂ O)
40 CFR 161 |
| Recordkeeping | Permits
CO ₂ | Storage | Operate and maintain the source in a manner consistent with safety and good air pollution control practices to minimize emissions.
Monitor for temperature. | Continuous during operations
Weekly and monthly
Daily average | Operate the control equipment in accordance with manufacturer's recommendations
operator
operator | N/A |
| Monitoring/
Recordkeeping | Permits
CO ₂ | PM _{2.5} , PM ₁₀ , SO ₂ | Pressure Drop monitoring | hourly
Annual | The pressure drop across the system. PM _{2.5} production rate
Cafeteria Management Plan with monitor CO ₂ levels and sending them to the laboratory for activity meeting | N/A |



Daily Times
www.dailytimes.com

Public Notice



Notice of Application

Notice is given that Triptych Green Generation, LLC has applied to the State Virginia Department of Environmental Protection, Division of Air Quality, for a Modification of Permit 010-0022, for a Plastic Recycling Plant located on 801 Koppers Road near Tollerades, in Shenandoah County, Shenandoah County, Virginia. The latitude and longitude coordinates are: 41.036094 N

The applicant estimates the potential to discharge the following pollutants for Pulaski will be less than 24.0 tons per year (that of MDCs, 34.0 tpy of PM₁₀, 85.0 tpy of CO, 24.0 tpy of NO_x, 2.0 tpy of SO₂ and 38.0 tpy

Notice of completion is placed in print on or about the 15th day of July 2020. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 37th Street SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

DEPT/Quality
Perseus/DWV/gm
Any questions regarding this poster
application should be directed to the
DAG at

(204) 325-0489
 extension 11311
 Ending normal business hours
 (closed this the 10th day of December
 2020)
 By: Elysia Green Gammon, L.L.C.
 General Counsel
 Chief Technology Officer
 1430 Main Street
 Tulsa, OK 74107

2000

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Empire Green Generation, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Modification of Permit #13-3388 for a Plastic Recycling Plant located on 801 Koppers Road, near Polansky, in Brooke County, West Virginia. The latitude and longitude coordinates are: 40.509999 N, 80.805429 W.

The applicant anticipates the potential to discharge the following Regulated Air Pollutants will be less than 24.0 tons per year (tpy) of VOCs, 14.0 tpy of PM, 86.0 tpy of CO, 24.0 tpy of NO_x, 2.0 tpy of HAPs and 24.0 tpy of SO_x.

Startup of operation is planned to begin on or about the 15th day of July 2023. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 801 5th Street, SE, Charleston, WV, 25304, for at least 30 calendar days from the date of publication of this notice. Written comments will also be received via email at DEPAirQualityPermits@wv.gov.

Any questions regarding this permit application should be directed to the DAG at (204) 529-0489, extension 41281, during normal business hours.

Dated this (Day) day of (Month), (2023).

By: Empire Green Generation, LLC
Bernard Brown
Chief Technology Officer
1405 Main Street
Polansky, WV 26037

201

AFFIDAVIT OF PUBLICATION

State of Florida, County of Orange, ss: _____



I, the undersigned, being the duly sworn, deponent and sworn, that I am a duly authorized agency of Orange News, Inc., duly authorized agent of Orange Daily News, a newspaper printed and published in the City of Orlando, County of Orange, State of Florida, and that the within is Page 1 of 1 with the full text of the newspaper notice set forth on the pages that follow, and the same attached.

PUBLICATION DATES:

Day: 6, 2023

ISSUES BY: 1700013 Eastwood Hill Dr

PUBLISHED BY: 123456

ISSUES PLACED: Green Oak Park, Orange Middle School

Publication Fee: \$1.00

Noted: _____

TESTIMONY:

State of Florida

County of Orange

Subscribed to my presence and sworn to before me on this, 12th day of 2023.

Bernard A. Brown

Notary Public

Residential address using written notice communication

Orange Daily News Notice Middle School - Page 1 of 1

ATTACHMENT Q

Business Confidential Claims

202

November 16, 2023

Mr. Edwards Andrews, P.E.
West Virginia Department of Environmental Protection
Division of Air Quality
601 5th Street, SE
Charleston, WV 25304

RE: Empire Green Generation Confidential Business Information

Dear Mr. Andrews,

Please find enclosed Empire Green Generation's submital of Confidential Business Information for the modification application for permit number P13-3886. This claim of confidentiality is due to trade secrets and intellectual property. A redacted version of this submital has been sent to you via email.

Sincerely,

Bernard Brown
Chief Operating Officer

Enc:

1,432 West Street, Charleston, WV 25307
304-474-4624

Precautionary Notice — Claims of Confidentiality

The person submitting this information may assert that some or all of the information submitted is entitled to confidential treatment as provided by West Virginia Legislative Rule (WVSCR), entitled "Confidential Information." Information covered by such a claim will be protected from the disclosure of the identity of the submitter and the content and the manner of the procedures, set forth in 45CSR31. These claims to the West Virginia Secretary of State's Office at 304-335-6000 or info@wv.gov to obtain a copy of 45CSR31 in order to ensure that all required procedures are followed.

Information concerning the "types and amounts of air pollutants discharged," as that term is defined in WVSCR 445-31-2.4, shall not be claimed as confidential.

Any claim of confidentiality shall be made in accordance with the requirements of 45CSR31 and must accompany the information at the time it is submitted to the DAQ. **If no claim of confidentiality is made at the time of submission or it is not made in accordance with the requirements of 45CSR31, the DAQ may make the information available to the public without further notice.**

Included below are procedures, and an example form, to be followed in submitting information claimed as confidential. This information is intended to assist a person with making confidential information not be made available to the public or otherwise subject to the provisions of 45CSR31 and to comply with such rule. The procedures are as follows:

1. Indicate clearly the items of information claimed confidential by marking each page with the term "Claimed Confidential" with the date of such claim of confidentiality. "With the exception of documents of a size greater than 9 1/2" x 14", information claimed confidential must be submitted on colored paper.
2. Include a cover document (See below) which justifies the claim of confidentiality in accordance with the specific criteria under WVSCR 445-31-4.1. A sample cover document is attached for your information and use. The cover document will be available for public disclosure and must include the following information:
 - (a) The identity of the person making the submission of information claimed confidential;
 - (b) The nature of the information claimed confidential;
 - (c) The name, address, telephone number, fax number and telephone number of the designer who shall be contacted in accordance with 45CSR31;
 - (d) Identification of each item of information which each page that is submitted as confidential and the justification for each request claimed confidential, including the criteria under WVSCR 445-31-4.1.

Precautionary Notice — Claims of Confidentiality, WVDEP
DAQ Revised March 21, 2018

- (a) The period of time for which confidential treatment is desired (e.g., until a certain date, until the occurrence of a specified event or permanently); and,
 - (f) Signature of a responsible official or an authorized representative of such person.
3. At the same time as the information claimed confidential is submitted to the DAQ on colored paper, a complete set of the information, including the cover document previously required under paragraph 2, must be submitted with the information claimed to be confidential marked or whited out and the words "Redacted Copy — Claim of Confidentiality" marked clearly on each such page, so that the information is suitable for public disclosure. In the case of drawings and blueprints, mark each page with the words Redacted Copy — Claim of Confidentiality, include the title or legend of the drawing, and black or whited out the information claimed confidential. The redacted page may be 8 1/2" x 11" in size.
 4. In the case of a permit application or supplemental information to an application which contains confidential information, DAQ requires the "Redacted Copy — Claim of Confidentiality" pages and the cover document which justifies the claim of confidentiality to be submitted by e-mail as a PDF file to: DEPAirQualityPermitting@wv.gov.
See instructions at: <https://dep.wv.gov/daq/permitting/Pages/air-forms.aspx> OR <https://dep.wv.gov/daq/permitting/Pages/TitleVConfidentialForm.aspx>
 5. "Claimed Confidential" pages **may not be e-mailed** and shall be submitted, in hardcopy, on colored paper and marked as:

WVDEP — DAQ — Permitting
Attn: NSR or Title V Permitting Secretary *
601 5th Street, SE
Charleston, WV 25304

* For a 45CSR31 application, send to NSR Permitting Secretary. For a 45CSR30 application, send to Title V Permitting Secretary. If this is a combined NSR/Title V Permit Application, send one copy to the NSR Permitting Secretary and one copy to the Title V Permitting Secretary.

Precautionary Notice — Claims of Confidentiality, WVDEP
DAQ Revised March 21, 2018

April 8

Sample Cover Document

Confidential Information

This sample form contains each of the ~~typical~~ elements for the cover document required under 45CSR31. The person submitting this document ~~will not be~~ is to provide adequate justification under the "Rationale" section of the form.

| | | | |
|---|--------------------------------------|---|--|
| Company Name | Empire Green Goods | Responsible Official | Barbara Brown |
| Company Address | 1401 Main Street
Fayetteville, WV | Confidential Information
Developer in
State of WV | Name
Title
Address
Phone
Fax |
| Person/Title
Submitting
Confidential
Information | | | |

Empire Green Goods

Reason for Submission of Confidential Information: 45CSR31-4.1.a - a letter from the WV DEP dated 03/21/2023, 11:00:00 AM

004-004-004

| Identification of
Confidential Information | Rationale for Confidential Claim | Confidential
Treatment Time
Period |
|---|--|--|
| | Provide justification that the criteria set forth in § 45CSR31-4.1.a - a letter from the | |
| | | |
| | | |
| | | |

Responsible Official Signature

Responsible Official Title

Date Signed

45CSR31-4.1.a - a letter from the

Chief Operating Officer

11/00/0023

NOTE: Must be signed and dated in BLUE INK.

Procedural Notice - Office of Confidentiality, WVDEP, 600 Maryland Street, 25304

ATTACHMENT R

Authority Form

271

AUTHORITY OF LIMITED LIABILITY COMPANY (LLC)

TO: The West Virginia Department of Environmental Protection, Division of Air Quality

DATE: 20

ATTN: Director

LLC's Federal Employer I.D. Number

The undersigned hereby files with the West Virginia Department of Environmental Protection, Division of Air Quality, a permit application and hereby certifies that the said name is a trade name which we are using in the conduct of an unincorporated business.

Further, we have agreed or certified as follows:

(1) The undersigned is a member and in that capacity may represent the interests of the LLC and may obligate and legally bind all current or future members and the LLC.

(2) The LLC is authorized to do business in the State of West Virginia.

(3) The name and business address of each member:

Member:
Address:

Telephone No.:

Member:
Address:

Telephone No.:

Member:
Address:

Telephone No.:

(4) If any other persons become members of the undersigned or our relations as such be altered in any way or if the business should become incorporated, the undersigned will notify you promptly.

Address:

MEMBER OF LLC (Signature)

Telephone No.:

Frank J. Brown

MEMBER OF LLC (Typed)

LIMITED LIABILITY COMPANY - IS NAME

Limited Liability
WVDEP-004-004-004

272

009-004141_IPR_13-3555A_8-20-2024 Page 169

ATTACHMENT 5

Title V Permit Revision Information
(Not Applicable)

Updated App Status? 2/26/2025

Wednesday, April 9, 2025

1:30 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

RE: Empire & Permit Status

1 message

Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
To: "Andrews, Edward S" <edward.s.andrews@wv.gov>
Cc: Kathy Beckett <Kathy.Beckett@steptoe-johnson.com>

Wed, Feb 26, 2025 at 2:12 PM

Dear Ed,

I have reached out to Empire Green and will let you know what I learn about a followup call.

Thank you,

Kathy

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com
www.steptoe-johnson.com



 Please consider the environment before printing this email

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Wednesday, February 26, 2025 10:06 AM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Empire & Permit Status

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy,

Do you have time for a call either this morning or afternoon to discuss where Empire is at with regards to proposed changes to the sources of their feedstock?

Ed

--

Edward Andrews, P.E.

Engineer

WVDEP/Division of Air Quality

304-414-1244

[601 57th Street, SE](#)

[Charleston, WV 25304](#)

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Update - NHSM? 2/24/2025

Wednesday, April 9, 2025

1:33 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

Update - NHSM determination/application tune-up

1 message

Andrews, Edward S <edward.s.andrews@wv.gov>

Mon, Feb 24, 2025 at 9:28 AM

To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>, Farley Wood <fwood@empirede.com>

Kathy and Farley,

I am hoping everything is going well.

I am planning to get both of you all a call later this week (e.g., Wednesday) and see if there are any additional questions that have come up.

Thanks

Ed

--

Edward Andrews, P.E.
Engineer
WVDEP/Division of Air Quality
304-414-1244
601 57th Street, SE
Charleston, WV 25304

Call invite 2/7/2025

Wednesday, April 9, 2025 1:29 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

RE: Availability for a call?

1 message

Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
To: "Andrews, Edward S" <edward.s.andrews@wv.gov>

Fri, Feb 7, 2025 at 9:51 AM

I will join your link and thank you.

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com
www.steptoe-johnson.com



Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Friday, February 7, 2025 9:50 AM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Re: Availability for a call?

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy,

You are welcome to call my desk number (304-414-1244) or join me on a Google Meet using this link or the invite I just sent to you.

Video call link: <https://meet.google.com/wgz-uatq-rio>
Or dial: (US) +1 650-457-1268 PIN: 893 387 565#
More phone numbers: <https://tel.meet/wgz-uatq-rio?pin=8442326930135>

Ed

On Thu, Feb 6, 2025 at 3:47 PM Kathy Beckett <Kathy.beckett@step toe-johnson.com> wrote:

Dear Ed,

Thank you, we will review.

Kathy

Kathy Beckett

Step toe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
[707 Virginia Street, East, Charleston, WV 25301](https://www.step toe-johnson.com)
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Step toe-Johnson.com
www.step toe-johnson.com



 Please consider the environment before printing this email

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Thursday, February 6, 2025 3:45 PM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Re: Availability for a call?

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

I had just found this site where NC EQ posted their actual determinations.

<https://www.deq.nc.gov/about/divisions/air-quality/air-quality-permitting/non-hazardous-secondary-materials-nhsm-determinations>

Template presentation from ALL4

<https://www.all4inc.com/our-videos/a-template-for-self-implementing-a-non-waste-determination-under-the-non-hazardous-secondary-materials-nhsm-rule/>

I don't think I will find anything regarding plastic but NC has several that look like they are well researched out right.

Ed

On Thu, Feb 6, 2025 at 11:28 AM Kathy Beckett <Kathy.beckett@steptoe-johnson.com> wrote:

I will hold that hour. Stay dry.....

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
[707 Virginia Street, East, Charleston, WV 25301](https://www.steptoe.com)

O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@StepToe-Johnson.com
www.stepToe-johnson.com



Please consider the environment before printing this email

StepToe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>

Sent: Thursday, February 6, 2025 11:26 AM

To: Kathy Beckett <Kathy.beckett@stepToe-johnson.com>

Subject: Re: Availability for a call?

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

I will give you a call tomorrow morning around 10,

Thanks

Ed

On Thu, Feb 6, 2025 at 9:59 AM Kathy Beckett <Kathy.beckett@stepToe-johnson.com> wrote:

Dear Ed,

I am available today from 2:15 on and am open on Friday. Thanks to you as well for all the hard work and shouldering the issues.

Kathy

Kathy Beckett

Step toe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Step toe-Johnson.com
www.step toe-johnson.com



 Please consider the environment before printing this email

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Wednesday, February 5, 2025 9:12 AM
To: Kathy Beckett <Kathy.beckett@step toe-johnson.com>
Subject: Availability for a call?

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy,

Thank-you very much for making yesterday's meeting possible.

I have looked over the application and identified a few areas that might need to be addressed based on our discussion yesterday.

If possible I would like to talk to you about the Empire's NHSM determination. I am available anytime upto 2:30 PM today; anytime on Thursday except from 10 to 11; and all day on Friday.

Thanks,

Ed

--

Edward Andrews, P.E.

Engineer

WVDEP/Division of Air Quality

304-414-1244

[601 57th Street, SE](#)

[Charleston, WV 25304](#)

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any

disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Virtual Mtg 2/7/2025

Wednesday, April 9, 2025 1:26 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

Accepted: Call Kathy Beckett Re: Empire

1 message

Kathy Beckett <Kathy.Beckett@steptoe-johnson.com>
To: Edward S Andrews <edward.s.andrews@wv.gov>

Fri, Feb 7, 2025 at 9:51 AM

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

 **invite.ics**
2K

Re: After Mtg Call 2/6/2025

Wednesday, April 9, 2025 1:25 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

RE: Availability for a call?

1 message

Kathy Beckett <Kathy.beckett@step toe-johnson.com>
To: "Andrews, Edward S" <edward.s.andrews@wv.gov>
Cc: Kathy Beckett <Kathy.Beckett@step toe-johnson.com>

Thu, Feb 6, 2025 at 3:47 PM

Dear Ed,

Thank you, we will review.

Kathy

Kathy Beckett

Step toe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Step toe-Johnson.com
www.step toe-johnson.com



Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Thursday, February 6, 2025 3:45 PM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Re: Availability for a call?

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

I had just found this site where NC EQ posted their actual determinations.

<https://www.deq.nc.gov/about/divisions/air-quality/air-quality-permitting/non-hazardous-secondary-materials-nhsm-determinations>

Template presentation from ALL4

<https://www.all4inc.com/our-videos/a-template-for-self-implementing-a-non-waste-determination-under-the-non-hazardous-secondary-materials-nhsm-rule/>

I don't think I will find anything regarding plastic but NC has several that look like they are well researched out right.

Ed

On Thu, Feb 6, 2025 at 11:28 AM Kathy Beckett <Kathy.beckett@steptoe-johnson.com> wrote:

I will hold that hour. Stay dry.....

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com
www.stepto-johnson.com



Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Thursday, February 6, 2025 11:26 AM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Re: Availability for a call?

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

I will give you a call tomorrow morning around 10,

Thanks

Ed

On Thu, Feb 6, 2025 at 9:59 AM Kathy Beckett <Kathy.beckett@steptoe-johnson.com> wrote:

Dear Ed,

I am available today from 2:15 on and am open on Friday. Thanks to you as well for all the hard work and shouldering the issues.

Kathy

Kathy Beckett
Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588

Overnight

Chase Tower, 17th Floor

707 Virginia Street, East, Charleston, WV 25301

O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@StepToe-Johnson.com

www.stepToe-johnson.com



Please consider the environment before printing this email

StepToe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>

Sent: Wednesday, February 5, 2025 9:12 AM

To: Kathy Beckett <Kathy.beckett@stepToe-johnson.com>

Subject: Availability for a call?

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy,

Thank-you very much for making yesterday's meeting possible.

I have looked over the application and identified a few areas that might need to be addressed based on our discussion yesterday.

If possible I would like to talk to you about the Empire's NHSM determination. I am available anytime upto 2:30 PM today; anytime on Thursday except from 10 to 11; and all day on Friday.

Thanks,

Ed

--

Edward Andrews, P.E.

Engineer

WVDEP/Division of Air Quality

304-414-1244

[601 57th Street, SE](#)

[Charleston, WV 25304](#)

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Mtg Attendees 2/3/2025

Wednesday, April 9, 2025

1:24 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

Empire Diversified Meeting Tomorrow

1 message

Kathy Beckett <Kathy.Beckett@steptoe-johnson.com>

Mon, Feb 3, 2025 at 1:19 PM

To: "Andrews, Edward S" <edward.s.andrews@wv.gov>

Cc: "bbrown@empirede.com" <bbrown@empirede.com>, "fwood@empirede.com" <fwood@empirede.com>, Samantha Phillips Beers <Samantha.Beers@steptoe-johnson.com>, Kathy Beckett <Kathy.Beckett@steptoe-johnson.com>

Dear Ed,

Only Farley Wood and I will be attending the meeting tomorrow at 1:30. Both Bernard and Samantha will need to join virtually. If you would like for me to set up a link for that meeting please let me know.

Kathy

Kathy Beckett

Steptoe & Johnson PLLC

P.O. Box 1588, Charleston, WV 25326-1588

Overnight

Chase Tower, 17th Floor

707 Virginia Street, East, Charleston, WV 25301

O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com

www.steptoe-johnson.com



Please consider the environment before printing this email

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

RE: Feb Mtg 1/28/2025

Wednesday, April 9, 2025 1:23 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

RE: Meeting first week of February?

1 message

Kathy Beckett <Kathy.Beckett@steptoe-johnson.com>

Tue, Jan 28, 2025 at 3:02 PM

To: "Andrews, Edward S" <edward.s.andrews@wv.gov>

Cc: "bbrown@empirede.com" <bbrown@empirede.com>, Kathy Beckett <Kathy.Beckett@steptoe-johnson.com>

Dear Ed,

Thank you for the reminder. Empire Diversified will not need a virtual link for this meeting. I do not have a list of attendees yet, but do not expect that to be more than four people and likely fewer.

Kathy

Kathy Beckett

Steptoe & Johnson PLLC

P.O. Box 1588, Charleston, WV 25326-1588

Overnight

Chase Tower, 17th Floor

707 Virginia Street, East, Charleston, WV 25301

O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com

www.steptoe-johnson.com



Please consider the environment before printing this email

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Tuesday, January 28, 2025 1:48 PM
To: Kathy Beckett <Kathy.Beckett@steptoe-johnson.com>
Subject: Re: Meeting first week of February?

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy,

I'll need a list of individuals who plan to attend the meeting next Tuesday (2/4 - 1:30 PM to 3:00 pm).

Also, I need to know if this needs to be a hybrid (in-person/virtual) meeting or if other individuals need to call in. So that I can make the necessary arrangements.

Thanks

Ed

On Wed, Jan 22, 2025 at 4:54 PM Andrews, Edward S <edward.s.andrews@wv.gov> wrote:

That date/time should work for us.

I will need a list of attendees before the meeting.

Ed

On Wed, Jan 22, 2025 at 3:26 PM Kathy Beckett <Kathy.Beckett@steptoe-johnson.com> wrote:

Dear Ed,

There is a preference for 2/4 at 1:30 – 3:00.

Thank you,

Kathy

Kathy Beckett

Step toe & Johnson PLLC

P.O. Box 1588, Charleston, WV 25326-1588

Overnight

Chase Tower, 17th Floor

707 Virginia Street, East, Charleston, WV 25301

O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Step toe-Johnson.com

www.step toe-johnson.com



Please consider the environment before printing this email

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>

Sent: Wednesday, January 22, 2025 10:16 AM

To: Kathy Beckett <Kathy.Beckett@step toe-johnson.com>

Subject: Re: Meeting first week of February?

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy,

Here are some proposed dates and times.

Tuesday, 2/11, 1:30 to 3 pm.

Tuesday 2/4, 1:30 to 3 pm.

Monday 2/10, 2:30 to 4 pm.

I am assuming this meeting might a little longer than a hour.

Please let me know, which date works best for you and Empire.

Thanks.

Ed

On Tue, Jan 21, 2025 at 6:26 PM Kathy Beckett <Kathy.Beckett@steptoe-johnson.com> wrote:

Dear Ed,

Empire Green would like to meet in early February in person. Is there a date or two you could offer?

Thanks

Kathy

Kathy G. Beckett

Steptoe & Johnson PLLC

(304) 353-8172 desk

(304) 539-8119 cell

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment

is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Re: Jan Call 1/7/2025

Wednesday, April 9, 2025 1:22 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

Re: Empire Green Generation

1 message

Kathy Beckett <Kathy.Beckett@steptoe-johnson.com>
To: Edward S Andrews <edward.s.andrews@wv.gov>

Tue, Jan 7, 2025 at 4:55 PM

Yes, may I call you? I'm not sure if my street will be clear but expect it to be. What number should I call?

Kathy G. Beckett
Steptoe & Johnson PLLC
(304) 353-8172 desk
(304) 539-8119 cell

On Jan 7, 2025, at 4:23 PM, Andrews, Edward S <edward.s.andrews@wv.gov> wrote:

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

How about 9 AM?

Ed

On Tue, Jan 7, 2025 at 4:21 PM Kathy Beckett <Kathy.Beckett@steptoe-johnson.com> wrote:
Yes, I am available. I'm open all day so you may choose a time that spits you.

Kathy G. Beckett
Steptoe & Johnson PLLC
(304) 353-8172 desk
(304) 539-8119 cell

On Jan 7, 2025, at 4:15 PM, Andrews, Edward S <edward.s.andrews@wv.gov> wrote:

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust
edward.s.andrews@wv.gov.

Kathy,

I am following up with you on my suggestion for Empire Green Generation. Would you be available for a quick call tomorrow?

Thanks
Ed

Edward Andrews, P.E.
Engineer
WVDEP/Division of Air Quality
304-414-1244
[601 57th Street, SE](#)
[Charleston, WV 25304](#)

On Wed, Dec 11, 2024 at 8:51 AM Kathy Beckett <Kathy.beckett@steptoe-johnson.com> wrote:

I will pull these up. Thanks!

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
[707 Virginia Street, East, Charleston, WV 25301](#)
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com
www.steptoe-johnson.com

<image001.png>

<image002.gif>

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>

Sent: Wednesday, December 11, 2024 8:49 AM

To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>

Subject: Re: Empire Green Generation

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust
edward.s.andrews@wv.gov.

Kathy,

If you want, pull up 45CSR18 - Section 12.1; 40 CFR 60 Subpart AAAA - 60.1465; 40 CFR 60 Subpart CCCC - 60.2265; and Subpart EEEE - 60.2977 before our call might be

useful this morning.

Thanks

Ed

On Tue, Dec 10, 2024 at 4:32 PM Kathy Beckett <Kathy.beckett@step toe-johnson.com> wrote:

Great! I will be standing by.

Kathy Beckett

Step toe & Johnson PLLC

P.O. Box 1588, Charleston, WV 25326-1588

Overnight

Chase Tower, 17th Floor

[707 Virginia Street, East, Charleston, WV 25301](https://www.step toe-johnson.com)

O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Step toe-Johnson.com

www.step toe-johnson.com



Please consider the environment before printing

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Tuesday, December 10, 2024 4:31 PM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Re: Empire Green Generation

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

I will try to give you a call around 9 tomorrow morning.

On Tue, Dec 10, 2024 at 4:21 PM Kathy Beckett <Kathy.beckett@steptoe-johnson.com> wrote:

Dear Ed,

Thank you. I am at my desk tomorrow morning from 8:30 – 12:00 if you would like to discuss. Let me know if there is a time that works for you. Otherwise I am driving to Bridgeport tomorrow afternoon and could take a call in my car 1:00 – 3:00.

Kathy

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
[707 Virginia Street, East, Charleston, WV 25301](https://www.steptoe-johnson.com)
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com
www.steptoe-johnson.com



 Please consider the environment before printing

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Tuesday, December 10, 2024 3:03 PM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Empire Green Generation

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust
edward.s.andrews@wv.gov.

Kathy,

We had a brief internal meeting regarding how, if possible, to move Empire's application forward.

After this afternoon, please feel free to contact me any other time this week.

Ed

304-444-8084

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the

intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Re: Call 12/11/2025

Wednesday, April 9, 2025 1:21 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

RE: Empire Green Generation

1 message

Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
To: "Andrews, Edward S" <edward.s.andrews@wv.gov>

Wed, Dec 11, 2024 at 8:51 AM

I will pull these up. Thanks!

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com
www.steptoe-johnson.com



Please consider the environment before printing this email

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Wednesday, December 11, 2024 8:49 AM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Re: Empire Green Generation

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy,

If you want, pull up 45CSR18 - Section 12.1; 40 CFR 60 Subpart AAAA - 60.1465; 40 CFR 60 Subpart CCCC - 60.2265; and Subpart EEEE - 60.2977 before our call might be useful this morning.

Thanks

Ed

On Tue, Dec 10, 2024 at 4:32 PM Kathy Beckett <Kathy.beckett@step toe-johnson.com> wrote:

Great! I will be standing by.

Kathy Beckett

Step toe & Johnson PLLC

P.O. Box 1588, Charleston, WV 25326-1588

Overnight

Chase Tower, 17th Floor

[707 Virginia Street, East, Charleston, WV 25301](#)

O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Step toe-Johnson.com

www.step toe-johnson.com



Please consider the environment before printing

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received

this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Tuesday, December 10, 2024 4:31 PM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Re: Empire Green Generation

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

I will try to give you a call around 9 tomorrow morning.

On Tue, Dec 10, 2024 at 4:21 PM Kathy Beckett <Kathy.beckett@steptoe-johnson.com> wrote:

Dear Ed,

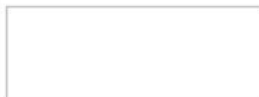
Thank you. I am at my desk tomorrow morning from 8:30 – 12:00 if you would like to discuss. Let me know if there is a time that works for you. Otherwise I am driving to Bridgeport tomorrow afternoon and could take a call in my car 1:00 – 3:00.

Kathy

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
[707 Virginia Street, East, Charleston, WV 25301](#)
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com
www.stepto-johnson.com



 Please consider the environment before printing

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>

Sent: Tuesday, December 10, 2024 3:03 PM

To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>

Subject: Empire Green Generation

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy,

We had a brief internal meeting regarding how, if possible, to move Empire's application forward.

After this afternoon, please feel free to contact me any other time this week.

Ed

304-444-8084

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Re: Call 12/10/2024

Wednesday, April 9, 2025 1:19 PM



Andrews, Edward S <edward.s.andrews@wv.gov>

RE: Empire Green Generation

1 message

Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
To: "Andrews, Edward S" <edward.s.andrews@wv.gov>
Cc: Kathy Beckett <Kathy.Beckett@steptoe-johnson.com>

Tue, Dec 10, 2024 at 4:21 PM

Dear Ed,

Thank you. I am at my desk tomorrow morning from 8:30 – 12:00 if you would like to discuss. Let me know if there is a time that works for you. Otherwise I am driving to Bridgeport tomorrow afternoon and could take a call in my car 1:00 – 3:00.

Kathy

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com
www.steptoe-johnson.com



Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Tuesday, December 10, 2024 3:03 PM
To: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Subject: Empire Green Generation

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy,

We had a brief internal meeting regarding how, if possible, to move Empire's application forward.

After this afternoon, please feel free to contact me any other time this week.

Ed

304-444-8084

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Other Plastic Pyrolysis Units 11/27/2024

Tuesday, January 21, 2025 7:55 AM



Andrews, Edward S <edward.s.andrews@wv.gov>

Other Plastic Pyrolysis Units -

1 message

Andrews, Edward S <edward.s.andrews@wv.gov>

Wed, Nov 27, 2024 at 12:09 PM

To: Katie Wood <katie.wood@tetrattech.com>, Farley Wood <fwood@empirede.com>, Bernard Brown <bbrown@empirede.com>, Kathy Beckett <Kathy.beckett@steptoe-johnson.com>, Samantha Beers <Samantha.beers@steptoe-johnson.com>

Cc: Joseph R Kessler <joseph.r.kessler@wv.gov>, "Boehm, Richard A" <richard.a.boehm@wv.gov>, "Crowder, Laura M" <laura.m.crowder@wv.gov>

I found three different pyrolysis units in Illinois. I have been able to figure out some basic info about two of them. The Channahon ILL (INEOS Joliet) is converting polystyrene back down to a styrene monomer. I am thinking this unit has been exempt from Illinois EPA permitting rules.

The BP Naperville Campus is converting plastic bottles and other polyethylene terephthalate products back into original constituents. The Illinois EPA permitted this unit as a "affected pilot plant".

The third is Plastic Advanced Recycling Corporation in Willowbrook, IL. At a high level, I think (maybe) this one is kind of similar to your proposed process. I will need to dig deep on this one after Thanksgiving.

<https://www.plastic2x.com/parctechnology/>

Also, Illinois passed a law excluding pyrolysis units located in either Willis or Grady Counties from Illinois EPA permitting requirements.

<https://www.ilga.gov/legislation/ilcs/ilcs4.asp?DocName=041500050HTit%2E+VI%2DD&ActID=1585&ChapterID=36&SeqStart=40000000&SeqEnd=41100000>

Enjoy,
Ed

2 attachments



Construction Permit.pdf
713K



eP2FPresentation.pdf
889K



Constructio
n Permit

Bureau of Air Permit Section

File Organization Cover Sheet

| | |
|------------------|------------------------|
| Source Name: | BP Naperville Complex |
| ID No.: | 043065AAG |
| Application No.: | 20010010 |
| Category: | 03K Air Permit - Final |
| Item Date: | 3/4/20 |
| Keyword: | |
| Comment: | |
| Part: | of |

IEPA - DIVISION OF RECORDS MANAGEMENT
RELEASABLE

JUN 25 2020

REVIEWER: RDH



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

3021 NORTH GANNON AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 783-3397

J.B. PRITZNER, GOVERNOR

JOHN J. KIM, DIRECTOR

217/785-1705

CONSTRUCTION PERMIT

PERMITTEE

BP Naperville Campus
Attn: Junling Qiu
150 West Warrenville Road
Naperville, Illinois 60563

Application No.: 20010010

I.D. No.: 043065AAG

Applicant's Designation:

Date Received: January 27, 2020

Subject: Pilot Plant for BP Infinia Technology

Date Issued: March 4, 2020

Location: 150 West Warrenville Road, Naperville, DePage County

This Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a pilot plant for BP Infinia Technology, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Introduction

- a. This permit addresses the construction of a pilot plant for BP Infinia Technology (the "affected pilot plant"). This proprietary solvent-based technology is being developed to enable the recycling of plastic bottles and other items made of polyethylene terephthalate by separating the material back into its original constituents. The plant would be designed to recover solvent for reuse in the process.
- b. For the purpose of this permit, this new pilot plant is referred to as the "affected pilot plant."

2. State Emission Standards

- a. The affected pilot plant is subject to 35 IAC 218.301, which provides that no person shall cause or allow the discharge of more than 3.6 kg/hour (8.0 lbs/hour) of organic material into the atmosphere from any emission unit. If no odor nuisance exists this limitation shall apply only to "photochemically reactive material," as defined by 35 IAC 211.4690.

3. Nonapplicability Provisions

- a. This permit is issued based on this project not constituting a major modification subject to the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR §2.21, or the state rules for Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part 203. This is because the emissions of the

affected pilot plant will not be significant (See Condition 4). In addition, the operation of the affected pilot plant will not increase the utilization of the utility equipment at the plant, which has been operating with "surplus" electricity sent to the grid.

- b. This permit is issued based on the source with the affected pilot plant continuing to be an area source for emissions of hazardous air pollutants (HAPs).
- c. This permit is issued based on the affected pilot plant not being a "pollution control facility," as defined by Section 3.330 of the Illinois Environmental Protection Act. This is because the plant will be developed/operated for research and development of process technology and not for storage or treatment of waste.
- d. This permit is issued based on piping components and process equipment at the affected pilot plant not being subject to requirements of otherwise applicable federal New Source Performance Standards (NSPS), including 40 CFR 60 Subparts VVa, VVb, VVc, VVd, VVe, VVf, VVg, VVh, VVi, VVj, VVk, VVl, VVm, VVn, and VVo, except for certain recordkeeping and reporting requirements of these rules that apply for components and process equipment that are not subject to substantive requirements. This is because the affected pilot plant has a total design capacity for production of chemicals that are potentially subject to these rules that is less than 1 gigagram/year (1,100 tons/year).
- e. This permit is issued based on the affected pilot not including any new tanks for storage of organic liquids that are subject to the NSPS for Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60 Subpart Kb. This is because the affected pilot plant will not include storage vessels with a capacity of 15 cubic meters or more.
- f. This permit is issued based on the affected pilot plant not being subject to the control requirements of 35 IAC 218 Subpart TT, Other Emission Units. This is because the source does not meet the applicability criteria for VOM emissions in 35 IAC 218.980(a) or (b).

4. Operational Requirements

- a. The annual usage of solvents by the affected pilot plant shall not exceed the following limits:

| Type of Solvent | Limit
(tons/calendar year) |
|--------------------------|-------------------------------|
| VOM (including VOM HAPs) | 9.5 |
| Methanol | 8.0 |
| HAPs other than methanol | 1.0 |

- b. At all times, the Permittee shall, to the extent practicable, maintain and operate the affected pilot plant, including the VOM solvent recovery systems that are part of the plant, in a manner consistent with good air pollution control practice.
- c. The consumption of VOM solvent by the affected pilot plant, determined as the difference between the amount of virgin VOM solvent delivered to the plant and the amount of VOM solvent in materials sent off-site for recycling or disposal, shall not exceed 9.0 tons/calendar year.

5. Emissions

- a. The annual emissions of VOM, methanol and HAPs other than methanol of the affected pilot plant shall not exceed the following limits. Compliance with these limits shall be determined based from the usage of these materials, with adjustment allowed for the amounts of these pollutants in materials sent offsite and the amounts of these pollutants consumed by the chemical material that occur in the affected pilot plant.

| Pollutant | Limit
(tons/calendar year) |
|--------------------------|-------------------------------|
| VOM (including VOM HAPs) | 5.4 |
| Methanol | 4.4 |
| HAPs other than methanol | 1.0 |

- b. This permit is issued based on the affected pilot plant having minimal emissions of particulate, including emissions from receiving and preliminary processing of feedstock, i.e., particulate emissions overall of no more than 1.1 tons/year.

6. Operational Monitoring for the Solvent Recovery System(s)

- a. For the solvent recovery system(s) for VOM solvent in the affected plant, the Permittee shall maintain instrumentation for at least one operating parameter that is indicative of the operation and functioning of the system(s). If information from this instrumentation is not automatically recorded, the data measured by these systems shall be manually recorded on at least a daily basis when the affected pilot plant or a particular portion of the plant served by a recovery system is operated.

7. Recordkeeping

- a. The Permittee shall maintain file(s) containing the following information for the affected pilot plant:
 - i. A process flow diagram for the plant that identifies the principle portions of the plant (e.g., the handling of feedstocks, the depolymerization process and the

purification of monomers) and the VOM solvent recovery systems and the portions of the plant that they serve.

- ii. Information for each of the organic solvents used in the plant, including the identity (name or chemical type), whether the solvent is a VOM or contains HAPs, and if the solvent contains HAPs, the HAP content (percent by weight).
- iii. A demonstration of compliance with 35 IAC 218.301 for the individual process emission units in the plant, which demonstration shall either show the emissions of organic material from the unit are not "photochemically reactive material," as defined by 35 IAC 211.4690, or show that maximum hourly organic material emission rate from the unit will not exceed 8.0 pounds/hour, with supporting documentation and calculations.
- iv. A demonstration that the feedstock processed by the affected pilot plant is not a waste as defined by Section 3.535 of the Illinois Environmental Protection Act.
- b. The Permittee shall maintain a log or other records for the affected pilot plant that includes information identifying periods when the plant or portions of the plant are operated.
- c. The Permittee shall maintain a log or other records for the affected pilot plant that address the maintenance and repair of solvent recovery systems.
- d. The Permittee shall maintain records for the usages of solvents by the affected pilot plant to address compliance with Condition 4(a) (tons/month and tons/year), with supporting data calculations.
- e. The Permittee shall maintain records of the following items related to the emissions of pollutant(s) of the affected pilot plant to address compliance with Condition 5(a) if the annual usage of solvent(s) exceeds the respective limit for the pollutant in Condition 5(a). Otherwise, if the usage of the solvent is no more than the limit for the pollutant and the Permittee does not otherwise keep these records, the emissions of pollutant will be assumed to be the same as the usage of the respective solvent.
 - i. Records for amount of the pollutant in the shipments of waste solvent sent offsite, with the date of each shipment, the total weight of the shipment, and the weight of the pollutant in the shipment, with supporting documentation.
 - ii. Records for emissions of the pollutant, determined by subtracting the amount of the pollutant in waste shipments from the usage of the pollutant (tons/month and tons/calendar year), with supporting data calculations.

- iii. If the annual emissions of the pollutant, as determined above, exceeds the applicable limit in Condition 5(a), a determination based on engineering analysis of the net amount of the pollutant that is consumed by the chemical reactions that are involved in processing the feedstock to the affected pilot plant (pound of pollutant consumed /pound of feedstock processed), with supporting documentation. Otherwise, if the Permittee does not keep these records, the emissions of the pollutant will be assumed to be usage of the pollutant less the amount of the pollutant in waste shipments.
- iv. If the Permittee keeps the above records, records for the emissions of the pollutant (tons/month and tons/year), determined by subtracting the net amount of the pollutant consumed in the pilot plant, as calculated in accordance with the factor in Condition 7(e) (iii) from the emissions as determined pursuant to Condition 7(e) (ii), with supporting data calculations.
- f. As solvent(s) that are HAPs or contain HAPs are used in the affected pilot plant, unless and until the Permittee notifies the Illinois EPA that the source has become a major source for HAPs, the Permittee shall keep records for the usage and emissions of HAPs by the source as reasonably necessary to show that the source continues to be an area source for HAP emissions.

8. Notification and Reporting

- a. The Permittee shall notify the Illinois EPA within 30 days of the date that it first processes plastic in the affected pilot plant.
- b. The Permittee shall promptly notify the Illinois EPA of deviations of the affected pilot plant with requirements of this permit. These reports shall contain the following information:
 - i. Identification of the emission unit(s) and/or operation involved.
 - ii. Description of the deviation, including date, time and duration.
 - iii. Probable cause of the deviation.
 - iv. Corrective actions or preventive measures taken.
- c. The Permittee shall notify the Illinois EPA within 30 days of the date that it first begins to use the affected pilot plant for a technology other than the BP Infinia process or similar process(es).

9. Reporting Address

Notifications and reports required by this permit shall be sent to:

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

10. Other Requirements

- a. This permit does not relieve the Permittee of the responsibility to comply with all Local, State and Federal Regulations which are part of the applicable Illinois State Implementation Plan, as well as all other applicable Federal, State and Local requirements.
- b. In particular, this construction permit also does not provide approval(s) as permit(s) would be needed from the Illinois EPA Bureau of Water for construction or other activities at the source related to wastewater from the affected pilot plant.
- c. This permit also does not excuse the Permittee from the obligation to undertake further actions at the source as may be needed to eliminate air pollution, including nuisance due to odors, such as implementation of additional work practices for handling of materials and processing of wastes.

11. Authorization to Operate

The Permittee may operate the affected pilot plant as addressed by this construction permit under this permit until the Clean Air Act Permit Program (CAAPP) permit for the source is revised to address the affected pilot plant. This condition supersedes Standard Condition 6.

If you have any questions on this permit, please contact Amwar Azam at 217/785-1705.

Raymond E. Pilapil

Raymond E. Pilapil
Manager, Permit Section
Bureau of Air

REP:ASA:tan
RA 28



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
P. O. BOX 18506
SPRINGFIELD, ILLINOIS 62794-8506

**STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1089) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

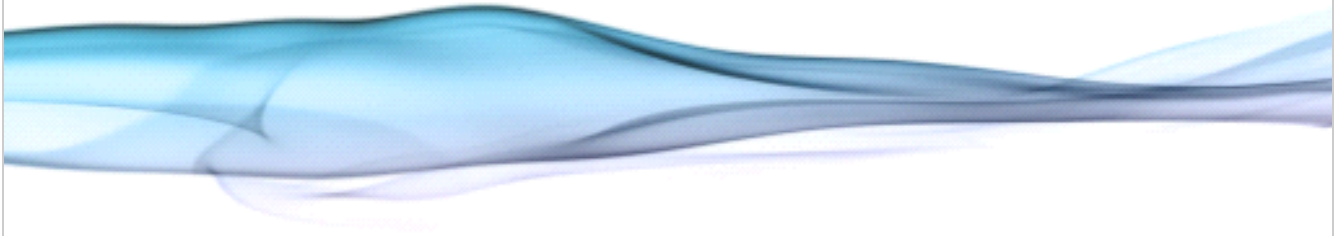
1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.
2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act, and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The Permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:
 - a. to enter the Permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,
 - b. to have access to and copy any records required to be kept under the terms and conditions of this permit,
 - c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,
 - d. to obtain and remove samples of any discharge or emission of pollutants, and
 - e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
 - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,
 - b. does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,
 - c. does not release the Permittee from compliance with the other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,
 - d. does not take into consideration or attest to the structural stability of any units or parts of the project, and

- e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.
b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.
7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:
 - a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or
 - b. upon finding that any standard or special conditions have been violated, or
 - c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.



Waste Plastic to Fuel

Zero Pollution Conversion Technology



PLASTIC
ADVANCED
RECYCLING
CORP.

Confidential information

Who We Are and What We Do

PARC is a leading pyrolysis technology company that achieved continuous production to convert waste plastics into high quality fuel through patented systems that are financially and environmentally beneficial.

- Reduce** waste plastic streams and mitigate environmental pollution by efficiently converting all types of plastics, including PVC
- Produce** high-quality, ready-to-use fuel for industrial furnace and can be refined into Gasoline and Diesel by refinery
- Create** a sustainable solution to today's most daunting problems: environmental deterioration and energy shortage
- Offer** green jobs that are beneficial to local economy



Hawaii, US



Naples, Italy

Confidential Information

Who We Are and What We Do



- Environmental friendly method to dispose plastic wastes
- Alternative sources of energy
- New profit stream

Confidential Information

Company Overview

- Founded in 1994 and built first plant in Beijing in 1995
- PARC has devoted itself to improving and perfecting its waste-to-fuel technology for 20 years
- Currently have two operational plants in Jiangsu Province, China
A new facility with two units are expected to be installed within 2015
- Independently own three US patents. Certified by ISO 9001

Facility in Nantong, China



Waste Plastic to Fuel

Advantages:

- Continuous operation with high efficiency and capacity
30 tons of waste plastic per day; 10,000 tons per year
- Automatic continuous feeding and discharging system
- New technology pyrolysis reactor
- No sorting is needed;
able to process co-mingled plastics
- System is scaled to need
- Minimum emission
- High output ratio



Confidential Information

5

Waste Plastic to Fuel

Process:

- Feedstock– Plastic packaging, agricultural film, food and beverage containers, etc.

> All types of plastic



- > Single unit of equipment can process 30 tons of waste plastic a day, totaling 10,000 tons a year

- > Types of plastic that have high oil yield: PP, PS, LDPE, HDPE

- Low-temp & pressure **800°F/500 °C** pyrolysis reaction

- Reaction-- solid to liquid and gas

- Filtrated and condensed into mixed fuel

- (optional) Refine into diesel and gasoline



Confidential Information

Waste Plastic to Fuel

Output:

- **Up to 60%** of the output is mixed fuel (depends on feedstock), which can be used in industrial boilers, generators, or can be further refined into diesel and gasoline by the refinery



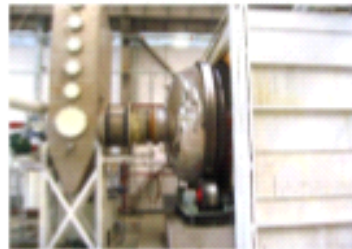
- **17%-32%** is solid residue, which can be used as a heating source similar to lean coal.
- **15%-18%** is combustible gas which is recycled back to the furnace as heat.

Value Proposition

- Reduce plastic waste pollution and tipping fees associated with plastic sourcing.
- Reduce GHG emissions related to incineration and oil extraction.
- Reduce dependency on foreign oil and exposure to volatile oil prices.
- Create additional revenue through mixed fuel sales.
- Create green jobs for local community.
- Create strong environmental stewardship with local community by better waste management practice.



DRYER



FILTER



CONDENSER

Confidential Information



Thank You !



Plastic Advanced Recycling Corporation
Add: 7884 S Quincy St.
Willowbrook, IL 60527, U.S.
Tel: 1-630-655-6976
Fax: 1-630-654-0530
Email: info@plastic2x.com
www.plastic2x.com

Confidential Information

Additional Info Other Units 11/25/2024

Tuesday, January 21, 2025 7:53 AM



Andrews, Edward S <edward.s.andrews@wv.gov>

RE: Kore Infrastructure Permits

1 message

Kathy Beckett <Kathy.beckett@step toe-johnson.com>
To: "Andrews, Edward S" <edward.s.andrews@wv.gov>

Mon, Nov 25, 2024 at 10:08 AM

Thank you. Our education continues.....

Kathy Beckett

Step toe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Step toe-Johnson.com
www.step toe-johnson.com



Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>

Sent: Thursday, November 21, 2024 4:31 PM

To: Farley Wood <fwood@empirede.com>; Bernard Brown <bbrown@empirede.com>; Kathy Beckett <Kathy.beckett@step toe-johnson.com>; Samantha Phillips Beers <Samantha.beers@step toe-johnson.com>

Cc: Crowder, Laura M <laura.m.crowder@wv.gov>; Joseph R Kessler <joseph.r.kessler@wv.gov>; Boehm, Richard

A <richard.a.boehm@wv.gov>

Subject: Kore Infrastructure Permits

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

SCAQMD permitted the pyrolysis unit to only process digested, dewatered sewage sludge biosolids. Also, SCAQMD used the provisions of Rule 441 to permit this facility.

<https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-441.pdf?sfvrsn=4>

Subpart AAAA specifically excludes sewage sludge from the definition of "municipal solid waste or municipal-type waste"/

From what I can tell, the Kore's process is fairly comparable except that the process heater for the pyrolysis unit can only burn natural gas or treated syn gas.

Thanks,

Ed Andrews

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Availability 11/19/2024

Tuesday, January 21, 2025 7:59 AM



Andrews, Edward S <edward.s.andrews@wv.gov>

Re: Possible Dates/Times for a Call

1 message

Andrews, Edward S <edward.s.andrews@wv.gov>
To: Kathy Beckett <Kathy.Beckett@step toe-johnson.com>

Tue, Nov 19, 2024 at 8:47 AM

Joe had to back out on the Wednesday Afternoon Call.

We could still go over our discussion with R3.

Friday, 11/22, is not blocked off. 9-10 and the afternoon is open.

Ed

On Mon, Nov 18, 2024 at 10:29 AM Kathy Beckett <Kathy.Beckett@step toe-johnson.com> wrote:

Funny, I meant to reference Farley Wood but my old air agency brain kicked in.....

Kathy Beckett

Step toe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Step toe-Johnson.com
www.step toe-johnson.com



 Please consider the environment before printing this email

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Kathy Beckett <Kathy.beckett@steptoe-johnson.com>
Sent: Monday, November 18, 2024 10:28 AM
To: Andrews, Edward S <edward.s.andrews@wv.gov>
Cc: Kathy Beckett <Kathy.Beckett@Steptoe-Johnson.com>
Subject: RE: Possible Dates/Times for a Call

Dear Ed,

Dale Farley and Bernard Brown have a preference for meeting on Wednesday. If that works for your team, let us know.

Thank you,
Kathy

Kathy Beckett

Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 17th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8172 F: 304-353-8183 C: 304-539-8119

Kathy.Beckett@Steptoe-Johnson.com
www.stepto-johnson.com



Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Also, In accordance with I.R.S. Circular 230, we advise you that any tax advice in this email is not intended or written to be used, and cannot be used, by any recipient for the avoidance of penalties under federal tax laws. Thank you for your cooperation.

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Friday, November 15, 2024 4:21 PM
To: Kathy Beckett <Kathy.beckett@step toe-johnson.com>
Subject: Possible Dates/Times for a Call

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you trust edward.s.andrews@wv.gov.

Kathy

Here are a few dates & times for a future call with the agency to go over a path to move EGG's modification application forward.

Before Thanksgiving:

Wednesday (11/20) 3 to 4 pm.

Maybe Friday (11/22) 10 to 11 am or 1 to 2 pm (I have not been able to confirm this date with our folks.)

After Thanksgiving:

Tuesday (12/3) 2 to 3 pm. (Reserved)

Backup Option - Wednesday (12/4) afternoon - prefer 2 to 3 pm.

If you could let me know if any these would not work for EGG or your schedule, please let me know.

Thanks,

Ed

Edward Andrews, P.E.

Engineer

304-414-1244

Step toe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

Response Lt for R3 11/4/2024

Tuesday, January 21, 2025 7:51 AM



Andrews, Edward S <edward.s.andrews@wv.gov>

Response to Letter from West Virginia, Division of Air Quality from October 23, 2024

1 message

R3 ECAD ADMIN <R3_ECAD_ADMIN@epa.gov>

Mon, Nov 4, 2024 at 8:51 AM

To: "Crowder, Laura M" <Laura.M.Crowder@wv.gov>

Cc: "aearley@fairshake-els.org" <aearley@fairshake-els.org>, "frank.rocchio@oveadvocates.org"

<frank.rocchio@oveadvocates.org>, "bbrown@empirede.com" <bbrown@empirede.com>, "fwood@empirede.com"

<fwood@empirede.com>, "Joseph.r.kessler@wv.gov" <Joseph.r.kessler@wv.gov>, "edward.s.andrews@wv.gov"

<edward.s.andrews@wv.gov>

Dear Ms. Crowder:

The attached is in response to your letter dated October 23, 2024 regarding West Virginia Division of Air Quality's previous request for a regulatory interpretation of Empire Green Generation LLC (Empire) proposal at their facility located in Follansbee, WV. Steve Ott will be following up with a meeting invitation to further discuss the status of EPA's regulatory interpretation.

Regards,



Eva Weinelt

Administrative Specialist

Enforcement and Compliance Assurance Division

US EPA Mid-Atlantic Region

Phone 215-814-2197

Email weinelt.eva@epa.gov



2 attachments



image001.jpg
6K

 **RE - WV Regulatory Interpretation Request.pdf**
128K

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 26



RE - WV
Regulator...



REGION 3
PHILADELPHIA, PA 19103

October 28, 2024

VIA ELECTRONIC MAIL
RETURN RECEIPT REQUESTED

Ms. Laura Crowder
Director
West Virginia, Division of Air Quality
601 37th Street SE
Charleston, WV 25304

Dear Ms. Crowder:

We received your letter dated October 23rd, 2024 regarding West Virginia Division of Air Quality's previous request for a regulatory interpretation of Empire Green Generation LLC (Empire) proposal to modify their existing permit to replace the use of medical waste with plastic as a feedstock in a pyrolytic conversion process at their facility located in Follensbee, WV.

As noted in your letter, Region 3 has been working to obtain sufficient information to develop an adequate and accurate response. Region 3 has sent Empire an Information Request Letter on August 1, 2024 and met with EPA's Office of Enforcement and Compliance Assurance (OECA) and Office of Air Quality Planning and Standards (OAQPS) several times to discuss the proposal.

While we acknowledge West Virginia DAQ is eager to complete the modification application, Region 3 believes that more information is needed for a complete response. Additionally, during the July 26, 2024 meeting between WVDAQ and Region 3, WVDAQ indicated that the permit application was incomplete and that the regulatory clock had not started yet and WVDAQ did not provide a deadline during the meeting or initial request for regulatory interpretation sent to Region 3's Air and Radiation Division on March 6, 2023.

Steve Ott of my staff will be following up with a meeting invitation to further discuss the status of EPA's regulatory interpretation.

Sincerely,

KAREN
MELVIN

Digitally signed by
KAREN MELVIN
Date: 2024.11.04
07:25:00 -0500

Karen Melvin, Director
Enforcement and Compliance Assurance Division

cc:

Penny Lassiter, EPA SPPD, lassiter.penny@epa.gov

Cristina Fernandez, EPA Region 3, Fernandez.Cristina@epa.gov

Marycate Opila, EPA Region 3, Opila.Marycate@epa.gov

Gwendolyn Supplee, EPA Region 3, Supplee.Gwendolyn@epa.gov

Diana Felix, EPA OAQPS, Felix.Diana@epa.gov

Andrew Earley, Fair Shake Environmental Legal Services, aearley@fairshake-els.org

Frank Rocchio, Ohio Valley Environmental Advocates, frank.rocchio@oveadvocates.org

Bernard Brown, Empire Green Generation, bbrown@empirede.com

Farley Wood, Empire Green Generation, fwood@empirede.com

Joseph Kessler, WVDAQ, Joseph.r.kessler@wv.gov

Ed Andrews, WVDAQ, Edward.s.Andrews@wv.gov

Kristen Hall, EPA Region 3, hall.kristen@epa.gov

Steve Ott, EPA Region 3, ott.steven@epa.gov

Fair Shake It to R3 10/30/2024

Tuesday, January 21, 2025 7:50 AM



Andrews, Edward S <edward.s.andrews@wv.gov>

Fwd: FW: Empire Green Generation in Follansbee, WV and WVDEP's Regulatory Interpretation Request

1 message

Kessler, Joseph R <joseph.r.kessler@wv.gov>
To: Edward S Andrews <edward.s.andrews@wv.gov>

Wed, Oct 30, 2024 at 9:59 AM

----- Forwarded message -----

From: **Supplee, Gwendolyn** <Supplee.Gwendolyn@epa.gov>

Date: Wed, Oct 30, 2024 at 9:06 AM

Subject: FW: Empire Green Generation in Follansbee, WV and WVDEP's Regulatory Interpretation Request

To: Kessler, Joseph R <joseph.r.kessler@wv.gov>

Hi Joe –

FYI – you may have already received this from Laura, but sending just in case.

Thanks,

-gwen



Gwendolyn K. Supplee (She, her, hers)

Senior Permit Specialist/Life Scientist

U.S. Environmental Protection Agency, Region 3

Permits Branch (3AD10)

Air & Radiation Division

Phone 215-814-2763

Email supplee.gwendolyn@epa.gov

From: Andrew Earley <aeearley@fairshake-els.org>
Sent: Wednesday, October 30, 2024 8:47 AM
To: Fernandez, Cristina (she/her/hers) <Fernandez.Cristina@epa.gov>
Cc: Megan Hunter <mhunter@earthjustice.org>; OVE Advocates <oveadvocates@gmail.com>; Lassiter, Penny <Lassiter.Penny@epa.gov>; Hall, Kristen <hall.kristen@epa.gov>; Opila, MaryCate <Opila.MaryCate@epa.gov>; Ott, Steven <Ott.Steven@epa.gov>; laura.m.crowder@wv.gov; Supplee, Gwendolyn <Supplee.Gwendolyn@epa.gov>
Subject: Empire Green Generation in Follansbee, WV and WVDEP's Regulatory Interpretation Request

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Ms. Fernandez:

Please see attached a letter addressing Empire Green Generation's proposed facility in Follansbee, WV, following our meeting on September 17, 2024. Thank you for your time and attention to this matter. Don't hesitate to reach out if we can be helpful.

Best,

Andrew Earley

WV Staff Attorney

Fair Shake Environmental Legal Services

232 Capitol Street, Ste. 14

[Charleston, WV 25301](#)

aeearley@fairshake-els.org

www.fairshake-els.org

234-255-5397

This e-mail (and any attachments hereto) is intended only for use by the addressee(s) named herein and may contain legally privileged and/or confidential information. If you are not the intended recipient of this e-mail, you are hereby notified that any dissemination, distribution or copying of this e-mail, and any attachments hereto, is strictly prohibited. If you have received this e-mail in error, please (1) notify me by replying to this message; (2) permanently delete the original and any electronic copies of this e-mail and any attachments; and (3) destroy any hard copies of the same. Although this e-mail is not intended to contain any virus or defect, you are responsible for ensuring that no virus or defect exists that may affect your computer. The sender disclaims any responsibility for any loss or damages arising from any virus or defect associated with this e-mail. Thank you.



Letter to EPA re WVDEP Reg Int Req for Empire.pdf
352K



Letter to
EPA re W...



October 30, 2024

Cristina Fernandez
Director, Air and Radiation Division
Region 3, EPA
Fernandez.Cristina@epa.gov

Re: Empire Green Generation Follansbee, West Virginia, WVDEP Regulatory Interpretation Request

Ms. Fernandez:

Thank you for taking the time to meet with Ohio Valley Environmental Advocates and us on September 17, 2024, to discuss West Virginia's regulatory interpretation request regarding the applicability of Section 129 of the Clean Air Act ("CAA") to Empire Green Generation's proposed plastic pyrolysis and combustion facility in Follansbee, West Virginia ("Empire" or "EGG"). We appreciate that EPA offices are looking closely at this facility.

By all appearances, Empire proposes to build a plastic waste incinerator masquerading as a recycling facility to evade CAA Section 129 protections. EPA should look carefully at Empire's claim that it will be producing hydrochloric acid ("HCl") and char for sale, as well as its claims regarding the origins and handling of its plastic feedstock.

This letter provides additional information clarifying why the plastic Empire proposes to accept constitutes solid waste under EPA's Non-Hazardous Secondary Material ("NHSMT") Rule. It also reiterates the concern raised on our call that the liquids and solids leaving Empire's pyrolysis trains for combustion in the vitrifiers should be evaluated to determine whether they are hazardous waste requiring additional permitting under RCRA.

I. Facility Background and WVDEP's Regulatory Interpretation Request

Empire has applied to WVDEP for a permit modification to build a facility that would accept plastic waste from other unidentified entities. Empire's application states

that it would feed the plastic into pyrolysis units—resulting in some amount of syngas, HCl, and char—and burn the resultant solids.

In March 2023, WVDEP submitted a regulatory interpretation request to Region 3 posing the following questions:

1. Should EGG's plastic feedstock be viewed as waste or non-waste?
2. If the plastic feedstock is determined to be fuel or ingredients in accordance with 40 CFR 241.3, then would the EGG pyrolysis trains be exempt from Section 129 of the CAA (e.g. subject to Subpart AAAA, CCCC, or Subpart EEEE)?
3. EGG plans to route the ash and char stream to the vitrifier (process heater) to be oxidized into products of combustion. Would the vitrifier be subject to Subpart CCCC or EEEE?
4. Would the vitrifiers be considered an "energy recovery unit" or a "commercial and industrial solid waste incineration unit" under Subpart CCCC?

As explained below, Empire's "plastic feedstock" meets the definition of a waste, triggering Section 129 requirements for the pyrolysis trains. In addition, EPA should evaluate whether the solids entering the vitrifiers are hazardous wastes triggering additional permitting requirements under RCRA.

II. Empire's "plastic feedstock" is waste

To determine whether the plastic Empire would receive constitutes a waste, we look to 40 CFR 241.3, which establishes the following criteria for a NHSM to be a non-waste when combusted: 1) the NHSM is maintained within the control of the generator and meets the legitimacy criteria in 40 CFR 241.3(d); or the discarded NHSM has undergone sufficient processing and meets the legitimacy criteria in 40 CFR 241.3(d).

The plastics Empire would combust are waste because they (1) are not managed within the control of the generator, and (2) are not sufficiently processed. In addition, the plastics do not meet the legitimacy criteria of the NHSM Rule.

A. The plastic Empire proposes to burn is not managed within the control of the generator

EPA regulations define "within control of the generator," to mean "the non-hazardous secondary material is generated and burned in combustion units at the generating facility; or that the such material is generated and burned in combustion units at different facilities, provided the facility combusting the non-hazardous secondary material is controlled by the generator; or both the generating facility and the

facility combusting the non-hazardous secondary material are under the control of the same person as defined in this section.”¹

Empire readily acknowledges that it would receive plastic waste from third parties.² Further, Empire states it is “in discussion with several entities regarding their waste plastic disposal needs, and willingness to participate in our waste recycling efforts.”³ Empire has not even determined where it will be getting its plastic, but it is clear it will be from third parties. Therefore, Empire cannot assert that the plastic it would burn will be under its control when generated, and Empire cannot meet the first prong of the NHSM Rule to obtain non-waste status for its plastic feedstock.

B. The plastic Empire proposes to burn has not been sufficiently processed.

Empire also cannot meet the second prong of the NHSM Rule because the plastic will not be sufficiently processed prior to entering the pyrolysis trains.⁴ “Processing” means any operations that transform discarded NHSM into a non-waste fuel or non-waste ingredient product.⁵ Processing “includes, but is not limited to, operations necessary to: remove or destroy contaminants; significantly improve the fuel characteristics of the material, e.g., sizing or drying the material in combination with other operations; chemically improve the as-fired energy content; or improve the ingredient characteristics.”⁶ Importantly, “processing” does not include “[m]inimal operations that result only in modifying the size of the material by shredding.”⁷

In its self-determination, Empire does not address “processing,” however, Empire does address this question in its response to EPA’s Section 114 request. When asked “[h]ow is the plastic processed prior to being delivered to EGG?” Empire responds, “processing consists of sizing and consolidation of waste stream.”⁸ As expressly stated in 40 CFR 241.2, operations that only result in modifying the size of the material do not

¹ See 40 CFR 241.2(b).

² See Empire Green Generations Response to Request for Information under Section 114(a) of the Clean Air Act (July 31, 2024) (“Empire’s Section 114 Response”) at 7, available at <https://dep.ny.gov/dep/permitting/Documents/EmpireGreenGenerations-Pollution/Empire%20Green%20Gen%20Reply%20to%20USEPA%20114%20Ltr%20RFT%206-30-24.pdf>.

³ *Id.*

⁴ See 40 CFR 241.2(b)(4).

⁵ See 40 CFR 241.2.

⁶ *Id.*

⁷ *Id.*

⁸ See Empire’s Section 114 Response at 5.

constitute processing under the NHSM rule. Thus, when the plastic waste Empire receives enters the pyrolysis trains, it has not been “sufficiently processed” to be exempt from treatment as a solid waste under the NHSM Rule.⁸

C. Empire cannot show the plastic satisfies all three legitimacy criteria.

Because the discarded plastic Empire would burn is not under its control when it is generated, and that discarded plastic is not sufficiently processed prior to entering Empire’s pyrolysis trains, the NHSM Rule exemption does not apply, and there is no need for EPA to assess whether the plastic meets the legitimacy criteria in 40 CFR 241.3(d). Nonetheless, it is evident that the plastics do not meet the legitimacy criteria.

For NHSM used as a fuel in a combustion unit, the legitimacy criteria requires that the NHSM (1) “be managed as a valuable commodity,” (2) “have a meaningful heating value and be used as a fuel in a combustion unit that recovers energy,” and (3) “contain contaminants or groups of contaminants at levels comparable in concentration to or lower than those in traditional fuel(s) that the combustion unit is designed to burn.”⁹ For NHSM used as an ingredient in a combustion unit, the legitimacy criteria requires that the NHSM (1) “be managed as a valuable commodity,” (2) “provide a useful contribution to the production or manufacturing process,” (3) “be used to produce a valuable product or intermediate,” and (4) “result in products that contain contaminants at levels that are comparable in concentration to or lower than those found in traditional products that are manufactured without the [NHSM].”¹⁰ The NHSM must meet all criteria to obtain the exemption.

The plastics Empire proposes to combust do not contain levels of contaminants comparable to or lower than the traditional fuel the unit is designed to burn. Clear guidance exists on how to determine whether a fuel is comparable.¹¹ An applicant should provide the total concentrations of each contaminant after processing but before

⁸ In its response to EPA’s Section 114 request, Empire claims the pyrolysis is “processing” as defined in 40 CFR 241.2. See Empire’s Section 114 Response at 5. This assertion ignores that pyrolysis units are subject to regulation under Section 129 of the Clean Air Act as combustion units. See e.g., 40 CFR 60.2977. Thus, even if Empire’s pyrolysis unit constitutes the “processing” necessary for the facility to obtain the NHSM Rule exemption, that very “processing” would itself require a Section 129 permit.

⁹ 40 CFR 241.3(d)(1).

¹⁰ 40 CFR 241.3(d)(2).

¹¹ See EPA, Non-Hazardous Secondary Material (NHSM) Regulations 40 CFR Part 241: Guide for Waste/Non-Waste Determinations (May 2021), available at https://www.epa.gov/other/default/files/2021-05/documents/nhsm_guide_5_26_2021.pdf [hereinafter “Guidance”].

combustion.¹² Empire has not done this. Instead, Empire states the syngas it will produce is “derived from the same base material as the traditional fuel” and makes the baseless assertion that its product is “comparable or lower than traditional fuel for contaminants.”¹³

In fact, Empire’s mixed waste stream can be expected to contain additives and contaminants higher than a traditional fuel. Plastics are made by combining fossil fuels with synthetic chemicals—more than 4,200 of these chemicals are known chemicals of concern, meaning they are persistent, bioaccumulative, mobile, and/or toxic, and can be released into air during incineration.¹⁴ Empire’s operations as described suggest a high potential for the release of hydrogen chloride, cadmium, PFAS and other plasticizers, chlorinated and brominated flame retardants, benzene, formaldehyde, mercury, arsenic, dioxins, and brominated dioxins (to name a few).¹⁵ Exposure to this pollution is known to increase the risk of cancer, birth defects, reproductive system damage, developmental issues, cardiovascular problems, respiratory impairment, hormonal irregularities, and neurological problems.¹⁶

Thus, Empire cannot meet the legitimacy criterion requiring its feedstock to “contain contaminants or groups of contaminants at levels comparable in concentration to or lower than those in traditional fuel.”

In addition, Empire has not demonstrated, or even believably alleged, that the plastics will “provide a useful contribution to the production or manufacturing process” or “be used to produce a valuable product or intermediate.” EPA should look closely at Empire’s proposal, which seems to be for a solid waste incinerator that would result in some HCl and char—both of questionable market value—and syngas that Empire would use solely to power its incinerator. From all appearances, Empire

¹² *Id.*

¹³ Empire’s Section 114 Response at 3.

¹⁴ Wagner, M., & Moncrief, L. (2024). *State-of-the-science on plastic chemicals: identifying and addressing chemicals and polymers of concern in plastic* at 3, 15. *PlastChem*, available at <https://plastchem-project.org/>

¹⁵ See Empire’s Section 114 Response at 9; see also Environmental Protection Agency. (2023). *Rulemaking Docket: Significant New Use Rules on Certain Chemical Substances*. *Regulations.gov*.

<https://www.regulations.gov/docket/EPA-HCL-CPPCL-2023-0243>; see also Singla, V. (2022). *Issue brief: Recycling Lies*. <https://www.rndc.org/sites/default/files/chemical-recycling-greenwashing-incineration-1b.pdf> at 8.

¹⁶ Landrigan, P. J., et al. (2023). *The Minderoo-Monaco Commission on plastic and Human Health*. *Annals of Global Health*, 99(1), 23. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10038125/>

proposes to run a plastic waste incinerator, but asks EPA to avoid Section 129 application by pointing to waste products that have no genuine market or value.

Accordingly, the plastic Empire would burn cannot meet the legitimacy criteria in the NHSM Rule.

III. The Solids and Liquids Exiting the Pyrolysis Process, that Empire Proposes to Burn, Are Likely Hazardous Wastes

Thus far, this letter has focused on why the plastics Empire would feed into the pyrolysis trains are “waste” triggering Section 129 requirements. In addition, the solids leaving the pyrolysis trains, that Empire generates and then proposes to burn, should be evaluated to assess whether they are hazardous wastes requiring RCRA pre-construction permits. As explained above, plastics contain numerous chemicals of concern that are hazardous to human health and the environment.¹⁴ At least some of these chemicals are likely to be present in the solids resulting from the pyrolysis process.¹⁵ Thus, there is serious concern that Empire is proposing to build a hazardous waste incinerator, and EPA should ensure Empire adheres to all relevant RCRA requirements, including pre-construction permitting.

Conclusion

We appreciate EPA’s close attention to WVDEP’s regulatory interpretation request. As explained above, Empire is proposing to build a waste incinerator. We ask that EPA respond accordingly and issue a determination finding that the plastic Empire receives constitutes waste, thus the facility must be regulated under Section 129 of the CAA. Given the nature of the facility’s feedstock, we further ask that EPA evaluate whether Empire will be generating and incinerating hazardous waste and employ all appropriate regulations for the protection of the community’s health and safety.

Sincerely,

¹⁴ See Wagner, 38, & Monahan, L. (2024) *supra* note 17 at 38, 40, 43.

¹⁵ See Singla, V. (2022) *supra* note 15 at 5 (explaining that one “chemical recycling” facility alone, Agilyx, generated nearly 300,000 pounds of hazardous waste in 2019 alone. “This waste consisted primarily of benzene, along with other toxics such as lead, cadmium, and chromium.”).

Megan M. Hunter, Esq.
Earthjustice
311 South Wacker Drive, Suite 1400
Chicago, IL 60606
mhunter@earthjustice.org
312-800-8331

Andrew Earley, Esq.
Fair Shake Environmental Legal Services
232 Capitol Street, Ste. 14
Charleston, WV 25301
aeasley@fairshake-els.org
234-233-9397
*Counsel for Ohio Valley Environmental
Advocates*

CC: Kristen Hall, Chief, Air Section, Compliance and Enforcement, USEPA Region 3,
hall.kristen@epa.gov
Penny Lassiter, Director of Sector Policies and Programs Division, USEPA,
Lassiter.Penny@epa.gov
Laura Crowder, Director, Division of Air Quality, WVDEP,
laura.m.crowder@wv.gov
Marycate Opila, Acting Associate Director, Branch Chief, Permits Branch,
USEPA Region 3, Opila.Marycate@epa.gov
Gwendolyn Supplee, Permitting Support, USEPA Region 3,
Supplee.Gwendolyn@epa.gov
Steven Ott, Air Inspector, USEPA Region 3, Ott.Steven@epa.gov
Frank A. Rochdo III, President, Ohio Valley Environmental Advocates, Inc.,
oveadvocates@gmail.com

Letter to R3 Re: RIR 10/23/2024

Tuesday, January 21, 2025 7:48 AM



Andrews, Edward S <edward.s.andrews@wv.gov>

WV Regulatory Interpretation Request re Empire Green Generation

1 message

Crowder, Laura M <laura.m.crowder@wv.gov>

Wed, Oct 23, 2024 at 12:18 PM

To: Lassiter.Penny@epa.gov, "Hall, Kristen" <hall.kristen@epa.gov>

Cc: "Fernandez, Cristina" <Fernandez.Cristina@epa.gov>, "Opila, MaryCate" <Opila.MaryCate@epa.gov>, "supplee.gwendolyn@epa.gov" <supplee.gwendolyn@epa.gov>, Felix.Diana@epa.gov, ott.steven@epa.gov, "aearley@fairshake-els.org" <aearley@fairshake-els.org>, "frank.rocchio@oveadvocates.org" <frank.rocchio@oveadvocates.org>, "Bernard Brown, REP" <bbrown@empirede.com>, "Farley R. Wood, P.E." <fwood@empirede.com>, Joseph R Kessler <Joseph.R.Kessler@wv.gov>, "Andrews, Edward S" <edward.s.andrews@wv.gov>

Ms. Lassiter and Ms. Hall,

Attached please find a letter detailing WV DAQ's request that the US EPA finalize the Regulatory Information Request which was sent to EPA in early March, 2024, regarding Empire Green Generation.

Thank you for consideration of this matter and please direct any further questions regarding the specifics of this request to Mr. Ed Andrews (the reviewing engineer) at (304) 926-0499 x41244 or Mr. Joe Kessler, NSR Program Manager, at (304) 926-0499 x41271.

Sincerely,

Laura M. Crowder

Director

WV Division of Air Quality

601 57th Street, SE

Charleston, WV 25304

Phone: 304-414-1253

Email: Laura.M.Crowder@wv.gov



WV EPA Reg Interpretation Req re Empire Green Generation 2024-10-23.pdf

392K



WV EPA
Reg Inter...



west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV, 25303
204-926-6429

Harold D. Ward, Cabinet Secretary
dep.wv.gov

October 23, 2024

Kristin Hall, Chief, Air Section,
USEPA Region III, Enforcement & Compliance Division

Penny Lawiter, Director of Sector Policies and Programs Division
(SPPD) USEPA

RE: Regulatory Interpretation Request
Empire Green Generation LLC
Facility ID: 009-00141
Permit No. R13-3555A
Follansbee, WV

Dear Ms. Hall and Ms. Lawiter:

On December 5, 2023, the West Virginia Division of Air Quality (WVDAQ) received a permit application (R13-3555A) from Empire Green Generation (EGG) proposing to modify their existing permit to replace the use of medical waste with plastic as a feedstock in a pyrolytic conversion process. On March 6, 2024, the WVDAQ sent a letter to Christina Fernandez, Director, USEPA, Region III Air and Radiation Division, requesting a regulatory interpretation regarding whether all streams that exit the pyrolysis process need to be evaluated under 40 CFR 241 to determine applicability under 40 CFR 60, Subpart CCCC (see the previously submitted letter and other relevant documents for full details on the request and the process in question). Since that letter was sent, there have been multiple interactions between the WVDAQ, USEPA, and EGG as detailed in the following list:

- 4/30/2024 - USEPA Region III requested a 40 CFR 241 Determination concerning the definition of relevant material as waste/non-waste;
- 5/3/2024 - EGG provided the WVDAQ information concerning the 40 CFR 241 Determination.

Promoting a healthy environment.

- 5/7/2024 - WVDAQ forwarded EGG's 40 CFR 241 Determination to USEPA Region III;
- 6/26/2024 - Virtual Meeting regarding EGG's Regulatory Request between WVDAQ and USEPA Region III;
- 7/3/2024 - USEPA Region III requests the contact information of EGG's Responsible Official;
- 7/3/2024 - DAQ provided the contact information of EGG's Responsible Official to USEPA Region III;
- 7/11/2024 - USEPA Region III provided the WVDAQ a draft list of questions for a Section 114(a) Request for Information (RFI) USEPA was intending to submit to EGG;
- 7/18/2024 - WVDAQ provided USEPA Region III a list of comments/suggestions regarding the draft list of questions;
- 8/1/2024 - USEPA Region III sent EGG a Section 114(a) RFI;
- 8/30/2024 - EGG provides a response to USEPA Region III's Section 114(a) RFI; and
- 9/17/2024 - EPA hosted a virtual Listening Session with interested parties concerning the proposed modification.

As can be seen from the list above, WVDAQ and EGG have been diligent and timely in responding to all requests from USEPA concerning the regulatory request first made in early March of 2024. The WVDAQ now believes USEPA has all relevant information to make a determination as requested in the March letter and strongly requests that USEPA conclude its review of this matter and finalize the determination as soon as possible. The WVDAQ believes that further delay could, with respect to R13-3555A, result in both an unfair burden to the applicant and an impediment to the WVDAQ in carrying out its policy mandate - as given under WV State Code [§22-5-1] - to provide "...for the timely processing of permit applications. ..." Thank you for consideration of this matter and please direct any further questions regarding the specifics of this request to Mr. Ed Andrews (the reviewing engineer) at (304) 926-0499 x41244 or Mr. Joe Kessler, NSR Program Manager, at (304) 926-0499 x41271.

Sincerely,

Laura M.
Crowder

Laura M. Crowder
Director



cc: Cristina Fernandez, Director, EPA Region III, Air and Radiation Division
Fernandez.Cristina@epa.gov
MaryCate Opila, Acting Associate Director, Branch Chief, Permits Branch, USEPA
Region III, Opila.Marycate@epa.gov
Gwendolyn Supplee, Permitting Support, USEPA Region III
Supplee.Gwendolyn@epa.gov
Diana Felix, OAQPS, USEPA
Felix.Diana@epa.gov
Steven Ott, Air Inspector, USEPA Region III,
ott.Steven@epa.gov
Andrew Earley, Esq., Fair Shake Environmental Legal Services
earley@fairshake-els.org
Frank Rocchio, President, Ohio Valley Environmental Advocates, Inc
frank.rocchio@oveadvocates.org
Bernard Brown, Chief Operating Officer, Empire Green Generation, LLC
bbrown@empireda.com
Farley Wood, P.E., Vice-President of Engineering, Empire Green Generation, LLC
fwood@empireda.com
Joseph Kessler, NER Program Manager, WVDAQ
Joseph.r.kessler@wv.gov
Ed Andrews, Engineer, WVDAQ
Edward.s.Andrews@wv.gov

Response to 114 Request 8/30/2024

Tuesday, January 21, 2025 7:45 AM



Andrews, Edward S <edward.s.andrews@wv.gov>

Fwd: Empire Green Generation Section 114 Request

1 message

Crowder, Laura M <laura.m.crowder@wv.gov>

Fri, Aug 30, 2024 at 1:22 PM

To: Beverly D McKeone <beverly.d.mckeone@wv.gov>, "Andrews, Edward S" <edward.s.andrews@wv.gov>

----- Forwarded message -----

From: **Bernard Brown, REP** <bbrown@empirede.com>

Date: Fri, Aug 30, 2024 at 11:53 AM

Subject: RE: Empire Green Generation Section 114 Request

To: Matlin, Martin <Matlin.Martin@epa.gov>

CC: jesse.d.adkins@wv.gov <jesse.d.adkins@wv.gov>, laura.m.crowder@wv.gov <laura.m.crowder@wv.gov>, Ott, Steven <Ott.Steven@epa.gov>, Hall, Kristen <hall.kristen@epa.gov>, Farley R. Wood, P.E. <fwood@empirede.com>

Mr. Matlin and Mr. Ott,

Please find our attached response. If you have any questions regarding our response, please feel to contact myself or Farley Wood.

Sincerely,



Bernard Brown, REP
Chief Operating Officer

Main Office: (304) 935-5851

Mobile: 916-544-1900

Call Me On Teams!

bbrown@empirede.com

www.empirediversifiedenergy.com

From: Matlin, Martin <Matlin.Martin@epa.gov>

Sent: Thursday, August 1, 2024 10:58 AM

To: Bernard Brown, REP <bbrown@empirede.com>
Cc: jesse.d.adkins@wv.gov; laura.m.crowder@wv.gov; Ott, Steven <Ott.Steven@epa.gov>; Hall, Kristen <hall.kristen@epa.gov>; Farley R. Wood, P.E. <fwood@empirede.com>
Subject: RE: Empire Green Generation Section 114 Request

Thank you for the confirmation, Mr. Brown.

Martin Matlin, Acting Section Chief
Air Section (3ED21)
U.S. EPA Region III
Four Penn Center – [1600 John F. Kennedy Blvd.](#)
(215) 814-5789

From: Bernard Brown, REP <bbrown@empirede.com>
Sent: Thursday, August 01, 2024 1:56 PM
To: Matlin, Martin <Matlin.Martin@epa.gov>
Cc: jesse.d.adkins@wv.gov; laura.m.crowder@wv.gov; Ott, Steven <Ott.Steven@epa.gov>; Hall, Kristen <hall.kristen@epa.gov>; Farley R. Wood, P.E. <fwood@empirede.com>
Subject: RE: Empire Green Generation Section 114 Request

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

We are in receipt of this document and will respond accordingly.

Respectfully,



Bernard Brown, REP
Chief Operating Officer

Main Office: (304) 935-5851
Mobile: 916-544-1900
Call Me On Teams!

bbrown@empirede.com
www.empirediversifiedenergy.com

From: Matlin, Martin <Matlin.Martin@epa.gov>
Sent: Thursday, August 1, 2024 10:51 AM
To: Bernard Brown, REP <bbrown@empirede.com>
Cc: jesse.d.adkins@wv.gov; laura.m.crowder@wv.gov; Ott, Steven <Ott.Steven@epa.gov>; Hall, Kristen <hall.kristen@epa.gov>
Subject: Empire Green Generation Section 114 Request

You don't often get email from matlin.martin@epa.gov. [Learn why this is important](#)

Dear Mr. Brown,

In the attached document, EPA is requesting information under Section 114 of the Clean Air Act. The response is due electronically no later than **September 2, 2024**. Detailed submission instructions can be found in the attached document. Should you have any questions please reach out to Steve Ott, Enforcement and Compliance Assurance Division, at (215) 814-2267 or ott.steven@epa.gov.

Thank you,
Martin Matlin

Martin Matlin, Acting Section Chief
Air Section (3ED21)
U.S. EPA Region III
Four Penn Center – [1600 John F. Kennedy Blvd.](#)
(215) 814-5789

External Email. Please make sure you trust this sender before clicking on any links or opening attachments. [Learn why this is important](#)

External Email. Please make sure you trust this sender before clicking on any links or opening attachments. [Learn why this is important](#)



Empire Green Gen Rely to USEPA 114 Ltr RFI 8-30-24.pdf
3094K



Empire
Green Ge...



REGION 3
PHILADELPHIA, PA 19103

July 31, 2024

VIA ELECTRONIC MAIL
RETURN RECEIPT REQUESTED

Bernard Brown
Chief Technology Officer
Empire Green Generation, LLC
801 Koppers Rd
Follensbee, WV 26037
bbrown@empirede.com

Request for information under § 114(a) of the Clean Air Act, 42 U.S.C. § 7414(a)

Dear Mr. Brown:

The United States Environmental Protection Agency (EPA), Region 3 hereby requires Empire Green Generation, LLC (Empire Green Generation or the Facility), located at 801 Koppers Rd, Follensbee, WV to provide certain information as part of an EPA investigation to determine the Facility's compliance with applicable standards and requirements under the federal Clean Air Act, 42 U.S.C. §7401 et seq., (CAA or the Act).

Pursuant to Section 114(a) of the CAA, 42 U.S.C. §7414(a), the Administrator of EPA is authorized to require any person who owns and/or operates an emission source to establish and maintain records, make reports, and provide such information as he/she may reasonably require for the purposes of determining whether such person is in violation of any provision of the Act. In order for EPA to determine whether a violation has occurred, you are hereby required, pursuant to Section 114(a) of the CAA, to provide responses to the following questions and requests for information regarding your facility. Therefore, you are hereby required to respond to questions and requests for information in Appendix B (see Appendix A for instructions and definitions). All information submitted in response to this request must be certified as true, correct, accurate, and complete by an individual with sufficient knowledge and authority to make such representations on behalf of Empire Green Generation. On the last page of your response(s) to this questionnaire, please include the certification contained in Appendix C.

The EPA issues this Request for Information under Section 114(a) of the CAA, 42 U.S.C. § 7414(a). Under Section 114(a), Part A – Air Quality and Emission Limitations, 42 U.S.C. §§ 7414 – Recordkeeping, Inspection, Monitoring, and Entry, the Administrator of the EPA may require any person who is subject

to the CAA to perform tests and provide information necessary to determine whether the person is acting or has acted in compliance with the CAA and the regulations promulgated thereunder. The Administrator has delegated this authority to the undersigned Division Director, of the Enforcement and Compliance Assurance Division, in EPA Region 3.

In order for the EPA to determine whether a violation has occurred, you are hereby required, pursuant to Section 114(a) of the CAA, to provide responses to the questions and requests for information in Appendix B to this letter. Failure to provide the required information may result in the issuance of an Order requiring compliance with the requirements, or the initiation of a civil action pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b). In addition, Section 113(c)(2) of the Act provides that any person who knowingly makes any false statement, representation, or certification in, or omits material information from any document required pursuant to this Act shall upon conviction be punished by a fine pursuant to Title 18 of the United States Code, or by imprisonment for not more than two years, or both. The information you provide may be used by EPA in administrative, civil, and criminal proceedings.

EPA requires Empire Green Generation to submit the requested information electronically no later than thirty (30) calendar days from the date of your receipt of this letter. You may submit your response using one of the following options: A) via email to ott.steven@epa.gov or B) by requesting a link from ott.steven@epa.gov for a secure EPA file transfer site where you may upload your response. Please note, the EPA cannot receive compressed files (.zip) via email. If you wish to submit compressed files, please select option B above. If you prefer not to send documents that you have claimed as confidential business information (CBI) to the EPA by email, please send them as electronic files through the EPA's secure file transfer site (option B). Prior to submitting your response, please send an email to ott.steven@epa.gov indicating which option you have selected to submit your response to this request.

Failure to provide all the requested information, and in the format requested, may result in additional inquiries, and may result in the initiation of a civil action pursuant to Section 305(b) of the CAA, 42 U.S.C. § 7324(b). It is important that your responses be clear, accurate, organized, and complete. We will regard any submitted information that is misleading, false, incomplete, or submitted without regard to its accuracy as a violation of the CAA and/or criminal statutes.

You must submit all requested information under an authorized signature with the following certification (provided in Appendix C):

"I certify under penalty of law that I have examined and am familiar with the information in the enclosed documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to Section 113(c)(2) of the Clean Air Act, 42 U.S.C. § 7413(c)(2), and 18 U.S.C. §§ 1001 and 1341."

Finally, you are entitled to assert a business confidentiality claim covering all or part of the information you provide in response to this Request for Information, in accordance with the procedures described in the Confidentiality of Business Information ("CBI") regulations, 40 C.F.R. Part 2, Subpart B. However, no CBI claim may be made with respect to emissions data as defined at 40 C.F.R. § 2.301(a)(2). You must specify the page, paragraph, and sentence when identifying the information subject to your CBI claim. Appendix D of this Request for Information specifies the assertion and substantiation requirements for business confidentiality claims. The EPA may, without further notice, provide the public with any information not subject to a CBI claim.

Please submit the requested information electronically within 30 calendar days of your receipt of this letter. You may do so via email to Steve Ott, Enforcement and Compliance Assurance Division, U.S. Environmental Protection Agency Region 3, at ott.steven@epa.gov. Please note that the EPA email server will allow attachments up to 20 MB. Alternatively, you may want to provide documents in response to this Request for Information by way of a secure file sharing site. Please let us know how you want to proceed.

This request is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks the collection of information from specific individuals or entities as part of an administrative action or investigation.

If you have any questions regarding this information request, please contact Steve Ott, of the Enforcement and Compliance Assurance Division at (215) 814-2267 or ott.steven@epa.gov. Additionally, please visit the small business resources information sheet for assistance and information at <https://www.epa.gov/compliance/small-business-resources-information-sheet>.

Sincerely,

KAREN
MELVIN

Digitally signed by
KAREN MELVIN
Date: 2024.05.07
13:55:08 -0400

Karen Melvin
Director
Enforcement and Compliance Assurance Division

Enclosures:

Appendix A: Instructions and Definitions
Appendix B: Request for Information
Appendix C: Statement of Certification
Appendix D: Confidential Business Information

cc: Jesse Adkins, WVDEP, jesse.d.adkins@wv.gov
Laura Crowder, WVDEP, laura.m.crowder@wv.gov

Appendix A

INSTRUCTIONS AND DEFINITIONS

A. Instructions

1. Please provide a separate narrative response to each question and subpart of a question set forth in this Information Request. Please provide the requested non-narrative information in spreadsheet format, preferably in Excel.
2. Indicate on each document produced in response to this Information Request, or in some other reasonable manner, the number of the question to which it corresponds.
3. Provide as much information possible to completely answer each question. This includes all supporting documentation, such as performance test reports, inspection records, memorandums, facility records, etc. Failure to completely respond to any questions may increase the time necessary to determine compliance with all applicable regulations.
4. For each document provided in response to these questions, provide an accurate and legible copy, which can be used to determine completeness of this request. For any information submitted electronically, clearly label to which question(s) the data is responsive.
5. When a response is provided in the form of a number, specify the units of measure of the number in a precise manner.
6. Where documents or information necessary for a response are neither in your possession nor available to you, indicate in your response why such documents or information is not available or in your possession and identify any source that either possesses or is likely to possess such information.

B. Definitions

1. All terms used in the Information Request will have their ordinary meaning unless such terms are defined in the Act, 42 U.S.C Section 7410 or 40 C.F.R. Part 60, Part 61, or Part 63. The terms "Facility" and "EGG" shall mean the Empire Green Generation, LLC facility, located at 801 Koppers Rd, Follansbee, WV.
2. EPA Region 3 includes the states of Maryland, Pennsylvania, Virginia, West Virginia, Delaware, and the District of Columbia.
3. Except for in question 4, processing shall maintain its ordinary meaning.

Appendix B

REQUEST FOR INFORMATION

1. Provide a plot plan or map of facility.
2. Provide a process diagram and corresponding description of the facility.
3. Identify what type(s) of materials EGG intends to process, and:
 - a. If plastic will be material processed, identify the percentage of each plastic type intended to be processed (i.e., HDPE, PVC, ABS, PET, etc).
 - b. What is the anticipated amount of plastic processed daily?
 - c. What is the maximum possible daily capacity of material? Provide calculations.
 - d. What are the caloric values of each plastic type being processed?
 - e. How is the plastic processed prior to being delivered to EGG?
 - f. Does EGG plan to process medical waste as permitted by the WVDEP under Permit R13-3333?
4. Does EGG consider pyrolysis to be "processing" as defined in 40 CFR 241.2? Provide supporting evidence.
5. For each pyrolysis unit provide the following:
 - a. Make/model of the pyrolysis unit.
 - b. Will there be batch processing or continuous processing of plastics?
6. What is the oxygen content inside of the pyrolysis unit during normal operations? Please use either ppm or percentage of air.
 - a. How will the oxygen content be controlled?
 - b. How will the oxygen content be monitored?
 - c. How will oxygen be purged during start-up operations?
7. Provide calculations for the conversion of plastic (tons) to hydrochloric acid (gallons, tons, and concentration).
 - a. Describe how, and where in the process, the hydrochloric acid will be separated from other gases in the process.
 - b. Will water be added to the produced hydrochloric acid to change the final volume or concentration?
 - c. If water is added, will it be sourced from well/municipal water or derived from the pyrolysis/combustion process?
 - d. Will a scrubber be used to remove any residual acid forming gas, prior to the generator sets? If so provide make, model, capacity, and what type of scrubbing media material will be used.

8. How will the generated hydrochloric acid be stored and offloaded (drums, truck, or rail)?
- Provide details regarding truck/rail transfers, if applicable, and how emissions will be controlled?
 - Does EGG currently have a buyer(s) for the produced hydrochloric acid?
 - What are the specifications required by the buyer(s) such as %Hydrochloric Acid, purity?
 - How will EGG determine if the buyer specification is met or not, please identify the analytic method(s) and type of instruments to be used?
 - Who is/are the buyer(s)?
 - What will EGG do with any off-spec HCL?
9. For each product of pyrolysis (oils, solids, tars, and syngas) provide a safety data sheet.
- What is the expected chlorine content, by weight and percentage, found in solid and liquid streams.
 - Provide calculations for the conversion of plastic (tons) to each product, include expected yield of oil, solids, tars, and syngas.
10. For any syngas storage onsite provide:
- Volume of storage vessel(s)
 - Type of storage vessel i.e. floating roof tank, totes, etc.
 - Pressure the gas will be stored at.
 - If stored as pressurized gas, where does the pressure relief device for the storage vessel vent to?
11. Provide waste determination(s) from each company/entity in which EGG intends to obtain plastics to process.
- If EGG and its recycling partners are mutually held by a parent company/entity, describe the relation.
12. Pursuant to 40 CFR part 241 provide a non-hazardous secondary materials determination for all plastics intended to be processed.
13. Pursuant to 40 CFR part 241 provide a non-hazardous secondary materials determination for all products of pyrolysis prior to gas cleanup.
14. Pursuant to 40 CFR part 241 provide a non-hazardous secondary materials determination for all products of pyrolysis prior to gas cleanup.

15. For each generator set, provide the following information in an excel sheet:

- a. Make/model
- b. Make/model of the engine.
- c. Serial No of each engine.
- d. Type of engine.
- e. Fuel type of each engine.
- f. Power output rating of the engine.
- g. Make/model and capacity of electric generators.
- h. Will generated electricity be used onsite or sold to the local electrical grid?

16. For each vitrifier (process heater), provide the following:

- a. Internal and external dimensions in feet/inches
- b. Describe the process by which the vitrifier will be used and how the generated heat will interact with the process material.
- c. Make/Model/Heat Input Rating of the burners for each vitrifier, also please specify heat input rating by type of fuel.
- d. Please note or identify any other streams entering the vitrifier?
- e. What streams are leaving the vitrifier? Please describe the make-up of these streams and where any of these streams are considered and/or to be a waste.

17. For the dryer, provide the following:

- a. Source of the heat energy for the dryer.
- b. Make/model/fuel type/heat input capacity of burner(s) if equipped.

18. For the gas cleaning trains, please provide the following:

- a. Please describe how the different streams (tars, oils, hydrochloric acid, solids (char), and synthetic gas) are going to be separated using the gas cleaning trains/equipment.
- b. Please identify the type(s) of equipment going to be used in the gas cleaning trains.
- c. Please identify the operating conditions needed to perform the desired separations.
- d. Please identify any additional inlet streams that are necessary to perform the desired separations.
- e. Please identify all outlet streams to include any wastewater.

Appendix C

STATEMENT OF CERTIFICATION

This Certification is for signature by the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or another executive with authority to perform similar policy or decision-making functions of the corporation.

Empire Green Generation is submitting the enclosed documents in response to the U.S. Environmental Protection Agency's ("EPA") request for information, issued pursuant to Section 114(a) of the Clean Air Act, to determine whether the facility is in compliance with the Clean Air Act.

I certify that I am fully authorized by Empire Green Generation to provide the above information on its behalf to EPA.

I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in the enclosed documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true, correct, accurate and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to Section 113(c)(2) of the Clean Air Act, 42 U.S.C. § 7413(c)(2), and 18 U.S.C. §§ 1001 and 1341.

Date: _____

Name (Printed): _____

Signature: _____

Title: _____

Appendix D

CONFIDENTIAL BUSINESS INFORMATION

You may assert a business confidentiality claim covering all or part of the information you provide in response to this information request for any business information entitled to confidential treatment under section 114(c) of the Clean Air Act (the Act), 42 U.S.C. § 7414(c), and 40 C.F.R. Part 2, Subpart B (which governs treatment of CBI under both the CAA and RCRA). Under section 114(c) of the Act, you are entitled to confidential treatment of information that would divulge methods or processes entitled to protection as trade secrets. Under 40 C.F.R. Part 2, Subpart B, business confidentiality means "the concept of trade secrecy and other related legal concepts which give (or may give) a business the right to preserve the confidentiality of business information and to limit its use or disclosure by others in order that the business may obtain or retain business advantages it derives from its rights in the information." 40 C.F.R. § 2.201(e).

Information covered by a claim of business confidentiality will be disclosed by the EPA only to the extent, and by means of the procedures, set forth in section 114(c) of the Act and 40 C.F.R. §§ 2.201-2.311. If you fail to furnish a business confidentiality claim with your response to this information request, the EPA will construe your failure as a waiver of that claim, and the information may be made available to the public without further notice to you. See 40 C.F.R. § 2.203(c).

Pursuant to Section 114 of the Act and 40 C.F.R. § 2.301(h), the EPA possesses the authority to disclose to any authorized representative of the United States information which might otherwise be entitled to confidential treatment. In order to assist in its review and analysis, and in accordance with the requirements of 40 C.F.R. § 2.301(h)(2), the EPA may disclose information provided in response to this and other information requests to any person under contract or subcontract to the United States government to perform work in support of EPA in connection with the Act or regulations which implement the Act. In accordance with the requirements of 40 C.F.R. § 2.301(h)(3), the EPA may also disclose such information to State and/or local governmental agencies which have duties or responsibilities under the Act, or under regulations which implement the Act.

To assert a business confidentiality claim, you must place on (or attach to) all information you desire to assert as business confidential either a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential" at the time you submit your response to this information request.

Please be specific by page (including Bates Stamp, if applicable), paragraph, and sentence when identifying the information subject to your claim. Where your claim, as originally made or as modified by your response to this letter, does not include all information on a page, please attach a copy of each such page with brackets around the text that you claim to be CBI. Please note that if a page, document, group, or class of documents claimed by you to be CBI contains a significant amount of information which our Office of Regional Counsel determines is not CBI, your CBI claim regarding that page, document, group, or class of documents may be denied. You should indicate if you desire confidential treatment only until a certain date or until the occurrence of a certain event. All confidentiality claims

are subject to EPA verification. If the EPA reviews your CBI claim(s) then the EPA may send notice to your business and ask you to submit additional information to substantiate the CBI claim(s). See 40 C.F.R. § 2.204(e).

The criteria the EPA will use in determining whether material you claim as business confidential is entitled to confidential treatment are set forth at 40 C.F.R. § 2.208(a)-(d), as well as the U.S. Supreme Court's decision in *Food Marketing Institute v. Argus Leader Media* (Argus), 139 S. Ct. 2336 (2019), which evaluated the definition of "confidential" as used in Exemption 4 of the Freedom of Information Act, 5 U.S.C. § 552. In the Argus decision, the Court held that at least where "[1] commercial or financial information is both customarily and actually treated as private by its owner and [2] provided to the government under an assurance of privacy, the information is 'confidential' within the meaning of Exemption 4." Argus, 139 S. Ct. at 2366.

Emission data, as defined at 40 C.F.R. § 2.301(a)(2), is expressly not entitled to confidential treatment under 40 C.F.R. Part 2, Subpart B. See 42 U.S.C. § 7414(c); 40 C.F.R. § 2.301(e).