State of Tennessee
Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243
Telephone: (615) 532-0554

APC 100

NON-TITLE V PERMIT APPLICATION
FACILITY IDENTIFICATION

Please type or print and submit in duplicate for each emission source. Attach appropriate source description forms.

SITE INFORMATION

1. **Organization's legal name** PHG Energy		For APC use only	APC Company point no.
2. **Site name** (if different from legal name) Covington Waste Water Treatment Plant			APC Log/Permit no.
3. **Site address** (St./Rd./Hwy.) 298 Witherington Drive		County name Tipton	
City or distance to nearest town Covington, TN	Zip code 38019	4. NAICS or SIC code 221117	
5. **Site location** (in lat. /long.)	Latitude 35.620247 decimal degrees	Longitude -89.611795 decimal degrees	

CONTACT INFORMATION (RESPONSIBLE PERSON)

6. **Responsible person/Authorized contact** Tim VanDrew			Phone number with area code 731-571-7940
Mailing address (St./Rd./Hwy.) 3026 Owen Drive Suite 101			Fax number with area code
City Antioch	State TN	Zip code 37013	Email address tim.vandrew@phgenergy.com

CONTACT INFORMATION (TECHNICAL)

7. **Principal technical contact** Tim VanDrew			Phone number with area code 731-571-7940
Mailing address (St./Rd./Hwy.) 3026 Owen Drive, Suite 101			Fax number with area code
City Antioch	State TN	Zip code 37013	Email address tim.vandrew@phgenergy.com

CONTACT INFORMATION (BILLING)

8. **Billing contact** Laney Chitwood			Phone number with area code 615-471-9306
Mailing address (St./Rd./Hwy.) 3026 Owen Drive, Suite 101			Fax number with area code 615-471-9309
City Antioch	State TN	Zip code 37013	Email address ap@phgenergy.com

EMISSION SOURCE INFORMATION

9. **Emission source no.** (number which uniquely identifies this source)
COV-01

10. **Brief description of emission source**
This facility consists of a gasifier which processes wood chips and sewage sludge in a non-emitting process step, producing a fuel gas (called producer gas) which is sent to a thermal oxidizer where it is completely combusted (>1500 F, 1 second residence time). Heat from the hot flue is extracted into hot oil, which is used to drive an organic Rankine cycle (ORC) electric generator. The cooled flue gas then passes through a second, indirect heat exchanger where it is further cooled to 300F. The second heat exchanger has dryer blower fan which sends air heated by the flue gas to a biomass dryer which dehydrates the wood and sludge.

11. **Normal operation:**	Hours/Day 24	Days/Week 7	Weeks/Year 52	Days/Year 365
12. **Percent annual throughput**	Dec. – Feb. 25	March – May 25	June – August 25	Sept. – Nov. 25

(Over)

TYPE OF PERMIT REQUESTED				
13. Operating permit (X)	Date construction started 3-15-2013	Date completed 1-15-2015	Last permit no. 071357F	Emission source reference number 84-0124-01
Construction permit ( )	Last permit no.		Emission source reference number	
If you choose Construction permit, then choose either New Construction, Modification, or Location transfer				
	New Construction ( )	Starting date	Completion date	
	Modification ( )	Date modification started or will start	Date completed or will complete	
	Location transfer ( )	Transfer date	Address of last location	

14. Describe changes that have been made to this equipment or operation since the last construction or operating permit application:

None.

SIGNATURE

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application and any attached application(s) is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

15. Signature (application must be signed before it will be processed)		Date 03/13/2017
Signer's name (type of print) Tim Yandrew	Title Manager, Operations and Service	Phone number with area code 731-571-7940

Table of Pollution Reduction Device or Method Codes

Note: For cyclones, settling chambers, wet scrubbers, and electrostatic precipitators; the efficiency ranges correspond to the following percentages:
High: 95-99+%. Medium: 80-95% And Low: Less than 80%.
If the system has several pieces of connected control equipment, indicate the sequence. For example: 008'010.97%
If none of the below codes fit, use 999 as a code for other and specify in the comments.

No Equipment....000
Activated Carbon Adsorption....048
Afterburner – Direct Flame....021
Afterburner – Direct Flame with Heat Exchanger....022
Afterburner – Catalytic....019
Afterburner – Catalytic with Heat Exchanger....020
Alkalized Alumina....040
Catalytic Oxidation – Flue Gas Desulfurization....039
Cyclone – High Efficiency....007
Cyclone – Medium Efficiency....008
Cyclone – Low Efficiency....009
Dust Suppression by Chemical Stabilizers or Wetting Agents....062
Electrostatic Precipitator – High Efficiency....010
Electrostatic Precipitator – Medium Efficiency....011
Electrostatic Precipitator – Low Efficiency....012
Fabric Filter – High Temperature....016
Fabric Filter – Medium Temperature....017
Fabric Filter – Low Temperature....018
Fabric Filter – Metal Screens (Cotton Gins)....059
Flaring....023
Gas Adsorption Column – Packed....050
Gas Adsorption Column – Tray Type....051
Gas Scrubber (General: Not Classified)....013
Limestone Injection – Dry....041
Limestone Injection – Wet....042
Liquid Filtration System....049
Mist Eliminator – High Velocity....014
Mist Eliminator – Low Velocity....015
Process Change....046
Process Enclosed....054
Process Gas Recovery....060
Settling Chamber – High Efficiency....004
Settling Chamber – Medium Efficiency....005
Settling Chamber – Low Efficiency....006
Spray Tower (Gaseous Control Only)....052
Sulfuric Acid Plant – Contact Process....043
Sulfuric Acid Plant – Double Contact Process....044
Sulfur Plant....045
Vapor Recovery System (Including Condensers, Hooding and Other Enclosures)....047
Venturi Scrubber (Gaseous Control Only)....053
Wet Scrubber – High Efficiency....001
Wet Scrubber – Medium Efficiency....002
Wet Scrubber – Low Efficiency....003
Wet Suppression by Water Sprays....061

Table of Emission Estimation Method Codes

Not application / Emissions are known to be zero....0
Emissions based on source testing....1
Emissions based on material balance using engineering expertise and knowledge of process....2
Emissions calculated using emission factors from EPA publications No. AP-42 Compilation of Air Pollution Emissions Factors....3
Judgment....4
Emissions calculated using a special emission factor different from that in AP-42....5
Other (Specify in comments)....6