TDEC NASHVILLE FIELD OFFICE RECEIVED

2018 JUN 13 PM 1:06

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF SOLID WASTE MANAGEMENT
WILLIAM R. SNODGRASS TENNESSEE TOWER
312 ROSA L. PARKS AVENUE, 14TH FLOOR
NASHVILLE, TN 37243

SOLID WASTE PART I APPLICATION

1 TYPE OF FACILITY		2 TYPE(S) OF WASTE HANDLED		3 AMT HANDLED	ID# TDEC USE ONLY
☐ CLASS I	SITE ACREAGE	☐ MUNICIPAL	☐ DEMOLITION	30	
☐ CLASS II	5	☐ INDUSTRIAL	☐ MEDICAL	WEIGHT TONS / DAY	FACILITY LOCATION COUNTY
☐ CLASS III	FILL ACREAGE	☐ COMMERCIAL	☐ YARD WASTE	30	Davidson
☒ COMPOST		☒ OTHER (DESCRIBE) SSO		VOLUME CU YARDS / DAY	LATITUDE (DECIMAL DEGREES) -86.892125

4 FACILITY INFORMATION

FULL LEGAL NAME OF FACILITY: Resource Capture

LONGITUDE (DECIMAL DEGREES): 36.210946

PHYSICAL LOCATION ADDRESS (GIVE DIRECTIONS IF NECESSARY): 0 Ashland City HWY Nashville, TN 37218 — CITY — STATE — ZIP

FACILITY MAILING ADDRESS: 3524 Murphy Road. Nashville, TN 37205 — CITY — STATE — ZIP

5 CONTACT PERSONS

	(AREA CODE) + PHONE	EMAIL
FACILITY MANAGER OR SITE OPERATOR: Seema Prasad	615 573 2399	seema@startmail.com
RESPONSIBLE OFFICIAL: Seema Prasad	615 573 2399	seema@startmail.com
RESPONSIBLE OFFICIAL MAILING ADDRESS: 3524 Murphy Road	CITY: Nashville	STATE: TN ZIP: 37205
LANDOWNER NAME: Jack Goodrum.	615 207 7489	goodrumconstruction@comcast.net800
LANDOWNER MAILING ADDRESS: 249 Cargile Lane	CITY: Nashville	STATE: TN ZIP: 37205

LANDOWNER SIGNATURE — LANDOWNER SIGNATURE — LANDOWNER SIGNATURE — DATE: 6/12/18

6 ZONING AUTHORITY

ZONING AUTHORITY NAME	ZONING STATUS	(AREA CODE) + PHONE	EMAIL
Metroplitan Nashville	AR2A	615 862 6590	bill.herbert@nashville.gov
ZONING AUTHORITY MAILING ADDRESS: 800 2nd Ave S	CITY: Nashville	STATE: TN ZIP: 37210	

7 CERTIFICATION REQUIRED

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

SIGNATURE OF RESPONSIBLE OFFICIAL — PRINTED NAME: Seema Prasad

TITLE: Trustee / Founder — DATE: 6-12-18

SIGNATURE OF NOTARY — DATE COMMISSION EXPIRES: May 6, 2019

KATHLEEN TAYLOR KEY — STATE OF TENNESSEE — NOTARY PUBLIC — DAVIDSON COUNTY — MY COMMISSION EXPIRES MAY 6, 2019

(NOTARY SEAL)

CN-1036 (Rev. 10-16) PAGE 1 OF 2 RDA 2202

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF SOLID WASTE MANAGEMENT
WILLIAM R. SNODGRASS TENNESSEE TOWER
312 ROSA L. PARKS AVENUE, 14TH FLOOR
NASHVILLE, TN 37243

SOLID WASTE PERMIT BY RULE NOTIFICATION

1. TYPE OF PERMIT- BY- RULE REQUESTED

ID# TDEC USE ONLY

- [x] COMPOST FACILITY
- [ ] LAND APPLICATION
- [ ] TIRE STORAGE FACILITY
- [ ] CONVENIENCE CENTER
- [ ] PROCESSING FACILITY
- [ ] TRANSFER STATION

2. FACILITY INFORMATION

FULL LEGAL NAME OF FACILITY: Resource Capture

FACILITY LOCATION COUNTY: Davidson

LATITUDE (DECIMAL DEGREES): -86.892125

LONGITUDE (DECIMAL DEGREES): 36.210946

PHYSICAL LOCATION OR ADDRESS OF FACILITY: 0 Ashland City Hwy | CITY: NASHVILLE | STATE: TN | ZIP: 37218

FACILITY MAILING ADDRESS: 3524 Murphy Rd | CITY: Nashville | STATE: TN | ZIP: 37205 | FACILITY EMAIL: seema@startmail.com

FACILITY MANAGER OR SITE OPERATOR: Seema Prasad | PHONE (WITH AREA CODE): 615 573 2399

AFFILIATION OF SITE OPERATOR (IF DIFFERENT FROM PERMITTEE):

3. APPLICANT (PERMITTEE)

APPLICANT NAME: Resource Capture | PHONE (WITH AREA CODE): 615 573 2399 | EMAIL: seema@startmail.com

RESPONSIBLE OFFICIAL / TITLE: President | PHONE (WITH AREA CODE): Nashville | EMAIL: TN 37205

RESPONSIBLE OFFICIAL MAILING ADDRESS: 3524 Murphy Rd | CITY: Nashville | STATE: TN | ZIP: 37205

LANDOWNER NAME: Goodrum | LANDOWNER MAILING ADDRESS: 249 CARLILE LN | CITY: NASHVILLE, | STATE: TN | ZIP: 37205

LANDOWNER SIGNATURE | LANDOWNER SIGNATURE | LANDOWNER SIGNATURE | DATE: 3/1/18

4. WASTE HANDLING

DESCRIPTION OF ACTIVITIES AND WASTES HANDLED OR PROCESSED: Source separted food waste and small amount of yard waste.

AMOUNT OF WASTE HANDLED, PROCESSED OR STORED:

WEIGHT TONS / DAY	VOLUME YARDS / DAY	STORAGE MAX CU YARDS
up to 30 TPD		30 TONS / 30 CU YARDS

5. CERTIFICATION REQUIRED

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

KATHLEEN TAYLOR KEY STATE OF TENNESSEE NOTARY PUBLIC DAVIDSON COUNTY MY COMMISSION EXPIRES MAY 6, 2019

SIGNATURE OF RESPONSIBLE OFFICIAL | PRINTED NAME: Seema Prasad

TITLE: President | DATE: 3-1-18

SIGNATURE OF NOTARY: Kathleen Taylor Key | DATE COMMISSION EXPIRES: May 6, 2019

(NOTARY SEAL)

FD102116

Permits by Rule Criteria

(a) All permit by rule facilities shall keep any records that are required by these rules and a copy of its permit by rule authorization at the facility or at another location approved by the Department. Notwithstanding any other provision of this rule, except for subparagraph (1)(c) of this rule, and provided they are not excluded pursuant to part (1)(b)3 of this rule, the following classes of activities shall be deemed to have a permit by rule if the conditions listed are met:

i) The operator complies with the notification requirement of subparagraph (b) of this paragraph;

ii) The facility is constructed, operated, maintained, and closed in such a manner as to minimize:

I) The propagation, harborage, or attraction of flies, rodents, or other disease vectors;
Response:

All waste form collection trucks inside of the building where it is processed and stored before being fed into the digester. Vector control programs will be in place to ensure that they are properly managed. A professional vector control contractor will be under contract to set traps and recommend application of other chemicals as part of the program.

II) The potential for explosions or uncontrolled fires;
Response:
The entire plant is managed by an automated control system. System sensors will automatically shut down and send alarms in-case of gas releases or potential fire or explosion. Further any areas classified for such hazards are directly marked and monitored.

III) The potential for releases of solid wastes or solid waste constituents to the environment except in a manner authorized by state and local air pollution control, water pollution control, and/or waste management agencies;
Response:
All waste is controlled inside of the building or specific process equipment. The press water from the digestate is captured and reused in the digester operations. The solid digestate is stored inside an enclosed bunker.

IV) The potential for harm to the public through unauthorized or uncontrolled access;
Response:

The facility is gated and secured with cameras and security alarms.

iii) The facility has an artificial or natural barrier which completely surrounds the facility and a means to control entry, at all times, through the gate or other entrances to the facility;
Response:
A perimeter fence, vegetative barrier and a secured gate are used to control entry to the site. Security cameras and alarms are part of the facility design.

iv) The facility, if open to the public, has clearly visible and legible signs at the points of public access which indicate the hours of operation, the general types of waste materials that either will or will not be accepted, emergency telephone numbers, schedule of charges (if applicable), and other necessary information;
Response:
The facility is not open to the general public. Access will be restricted to contracted haulers, education groups by appointment and facility employees/not-for-profit partners approved by Resource Capture.

v) Trained personnel are always present during operating hours to operate the facility;

Response:

Trained personnel will always be present during the operating hours to operate the facility. 24/7 system monitoring with direct connection is also maintained.

vi) The facility has adequate sanitary facilities, emergency communications (e.g., telephone), and shelter available for personnel;
Response:
The facility will have an office and education center with restrooms, phone and internet lines.

vii) The facility's access road(s) and parking area(s) are constructed so as to be accessible in all weather conditions;
Response:

Yes. The access road and parking area is constructed to be accessible in all weather conditions.

viii) Except for composting facilities utilizing landscaping and land clearing wastes only, all waste handling (including loading and unloading) at the facility is conducted on paved surfaces;
Response:
All waste loading and unloading is conducted inside the facility building.

ix) There is no storage of solid wastes at the facility except in the containers, bins, lined pits or on paved surfaces, designated for such storage;
Response:

The storage of solid waste in the facility is inside designated concrete bunkers.

x) Except for incinerators or energy recovery units, there is no burning of solid wastes at the facility;
Response:

There is no burning of solid waste at the facility.

xi) There is no scavenging of solid wastes at the facility and any salvaging is conducted at safe, designated areas and times;
Response:
No salvaging by the public or commercial customers will be allowed. Recovery of recyclables will occur through the operation of the systems at the facility.

xii) Wind dispersal of solid wastes at or from the facility is adequately controlled, including the daily collection and proper disposal of windblown litter and other loose, unconfined solid wastes;
Response:

All the solid waste operations are conducted inside an enclosed building.

xiii) All liquids which either drain from solid wastes or are created by washdown of equipment at the facility go to either:
I) A wastewater treatment facility permitted to receive such wastewaters under T.C.A. §§ 69-3-101 et seq. (Tennessee Water Quality Control Act, or
II) Other methods approved by the Commissioner.
Response:

A large percentage of press water from the solid waste will be reused in digester operations and remaining will be sold as liquid fertilizer.

xiv) The facility receives no special wastes unless:
I) Such receipt has been specifically approved in writing by the Department, and

II) Special procedures and/or equipment are utilized to adequately confine and segregate the special wastes;

Response:

The facility is designed to receive food waste, source separated organic waste and yard waste only.

xv) The operator can demonstrate, at the request of the Commissioner, that alternative arrangements (e.g., contracts with other facilities) for the proper processing or disposal of the solid wastes his facility handles are available in the event his facility cannot operate;

Response:

If the facility is closed or not operational, then waste will be directed or transferred to a properly permitted solid waste facility..

xvi) The facility has properly maintained and located fire suppression equipment (e.g., fire extinguishers, water hoses) continuously available in sufficient quantities to control accidental fires that may occur;

Response:

The facility is equipped with fire protection system as required by the local building code.

xvii) All waste residues resulting from processing activities at the facility are managed in accordance with this Chapter or Chapter 0400-12-01 (Hazardous Waste Management), whichever is applicable, and/or with any other applicable state or federal regulations governing waste management;

Response:

All residues from the waste processing at this facility are disposed in accordance with applicable laws/codes.

xviii) The facility is finally closed by removal of all solid wastes and solid waste residues for proper disposal. The operator must notify the Division Director in writing of his completion of closure of the facility. Such notification must include a certification by the operator that the facility has been closed by removal of all the solid waste and residues. Within 21 days of the receipt of such notice the Division Director shall inspect the facility to verify that closure has been completed. Within 10 days of such verification, the Commissioner shall approve the closure in writing to the operator. Closure shall not be considered final and complete until such approval has been made.

Response:

This procedure will be followed in case of permanent shut down.

xix) New solid waste processing facilities shall not be located in wetlands, unless the owner or operator makes the applicable demonstrations to the Commissioner as referenced at subparagraph (2)(p) of Rule 0400-11-01- .04.

Response:

The facility is not located on a wetland.

xx) The facility must not be located in a 100-year floodplain unless it is demonstrated to the satisfaction of the Commissioner that:

I) Location in the floodplain will not restrict the flow of the 100-year flood nor reduce the temporary water storage capacity of the floodplain.

Response:

The facility will not be located in the 100-year floodplain.

II) The facility is designed, constructed, operated, and maintained to prevent washout of any solid waste.

Response:

The solid waste handling is done inside an enclosed building and hence preventing any washout.

xxi) The facility does not:

I) Cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife; or

II) Result in the destruction or adverse modification of the critical habitat of endangered or threatened species.

Response:

The facility doesn't harm any living organism. It is designed and operated to have minimal emissions.

xxii) The owner/operator may not store solid waste until the processing equipment has been installed on-site and is ready for use.

Response:

Solid waste will not be stored until the processing equipment has been installed.

xxiii) The owner/operator of a solid waste processing facility which has a solid waste storage capacity of 1000 cubic yards or greater shall file with the Commissioner a performance bond or equivalent cash or securities, payable to the State of Tennessee. Such financial assurance is intended to ensure that adequate financial resources are available to the Commissioner to insure the proper operation, closure, and post closure care of the facility. The types of financial assurance instruments that are acceptable are those specified in subparagraph (3)(d) of Rule 0400-11-01- .03. Such financial assurance shall meet the criteria set forth in T.C.A. § 68-211-116(a) and at subparagraph (3)(b) of Rule 0400-11-01-.03.

Response:

The storage capacity of this facility is equivalent to 3 days of facility throughput and less than 500 cubic yards.

xxiv) The owners or operators proposing a new solid waste processing facility that handles putrescible wastes located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used only by piston-type aircraft must include in the permit-by-rule notification a demonstration that the facility does not pose a bird hazard to aircraft. The owners or operators proposing a new solid waste processing facility that handles putrescible wastes located within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the appropriate Federal Aviation Administration (FAA) office.

Response:

The waste processing operations are done indoors.

Resource Capture, LLC
Anaerobic Digestion and Renewable Natural Gas Project

1. Overview

Resource Capture, LLC ("ReCap") was created to design, construct, finance and operate a state-of-the-art Anaerobic Digestion and Renewable Energy ("AD-RNG") facility to process organic waste generated in the Nashville Metro region and generate high-value renewable energy and agricultural products.

ReCap is owned by Seema Prasad, a Nashville-based restauranteur and entrepreneur who understands the intersection between the environment, energy and technology and the critical need for waste conversion infrastructure in Nashville.

ReCap has selected Zero Waste Energy (ZWE), an integrated project development and technology company in the organics treatment industry headquartered in Pleasant Hill, CA to provide facility design and technology and equipment supply services. ZWE's parent company Bulk Handing Systems (BHS), a leading designer and manufacturer of advanced recycling and waste processing systems.

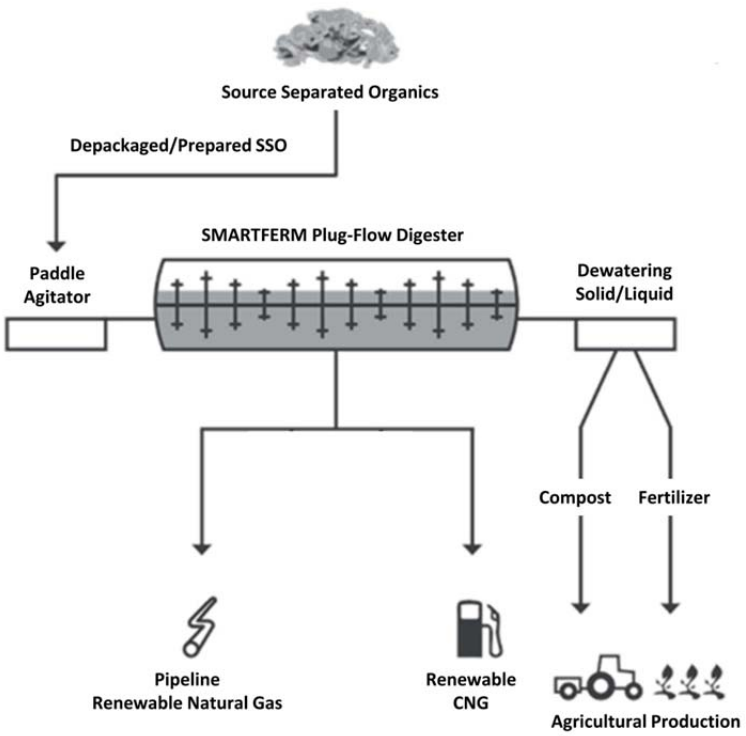
The AD-Renewable Energy project will be located at 4686 Ashland City Highway, approximately 8 miles west-northwest of downtown Nashville, on a parcel zoned as AR2a. The project site will require certain grading, drainage and infrastructure improvements in order to support the construction and operation of the AD-Renewable Energy facility.

The AD-Renewable Energy facility is designed to process up to 20,000 tons per year of source separated organic ("SSO") waste from commercial and agricultural sources. ReCap will contract with waste generators and area waste haulers to ensure a reliable supply of SSO feedstock is delivered to the

facility. All waste handling and processing operations will be conducted indoors or in specialized processing equipment to capture and control odors.

Following reception of SSO waste in the enclosed Receiving Hall building, the materials will be inspected and classified. Accepted waste materials will either be pre-processed in a food depackaging system to liberate organic content or loaded directly into an automated feedstock loading bunker if they are considered clean. From the loading bunker, feedstock will be metered and conveyed to the state-of-the art SMARTFERM plug-flow digester for treatment.

The SMARTFERM plug-flow dry anaerobic digestion system is designed to accept and process SSO seven (7) days per week. All processing occurs in a single biological reactor which accepts waste one side and extracts digestate on the other. During processing, a series of paddles attached to shaft rotates to agitate the material to ensure an even distribution of heat and enhance biogas production. Biogas is a biological by-product of anaerobic digestion, and is comprised primarily of methane and carbon dioxide.



Biogas generated in the SMARTFERM is captured and piped to an upgrading system which separates methane from the biogas to produce a bio-methane product with nearly identical composition and quality characteristics as natural gas and or put through a CHP to produce electricity to power the facility. The bio-methane is a valuable low-carbon renewable energy product which will be injected into the xxxxx pipeline and sold for its energy and environmental attribute value.

The AD-RNG facility will produce a pathogen-free compost digestate which is the residual material that remains following biogas production. The compost digestate is pumped from the digester and processed in a mechanical dewatering station which creates a separation between the liquid and solid fractions. The liquid fraction can be used a liquid fertilizer while the solid fraction can be sold as an organic compost soil amendment for agricultural applications.

2. Project Description

The 8,580 square foot Receiving and Processing building will process organic waste feedstocks that are that are delivered to the AD-RNG Facility, in addition to dewatering digestate following the anaerobic digestion process. The building will maintain a negative air pressure to mitigate the potential for fugitive odor release and exhaust air will be captured and treated in an advanced odor control system.

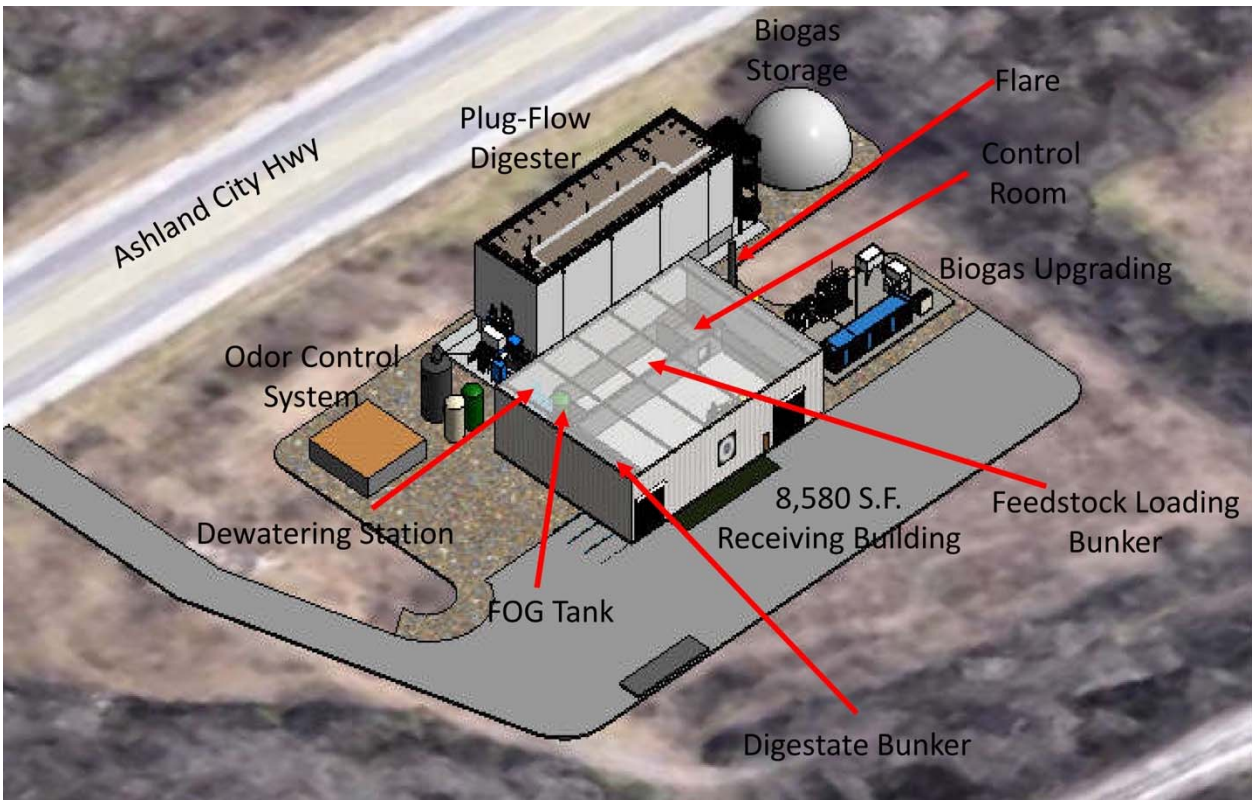
The key activities within AD-Renewabvle Energy Facility will include four steps as described and shown below:

(1) Pre-processing and staging of SSO feedstocks (Receiving Building);

(2) Plug-flow anaerobic digestion;

(3) Electricity & Biogas to bio-methane production (Biogas Storage and Biogas Upgrading); and

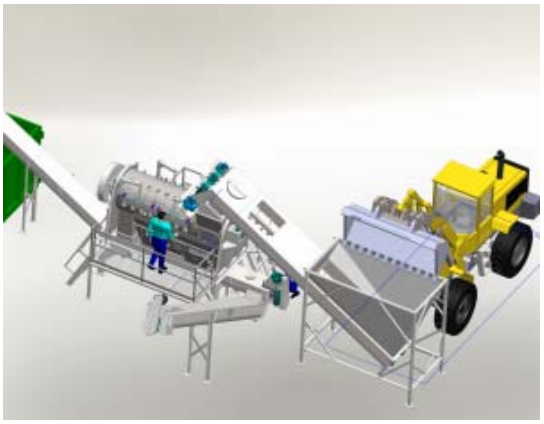
(4) Liquid and solid fertilizer production (Dewatering Station and Digestate Bunker).



<u>Anaerobic Digestion Feedstock</u>

The primary source of feedstock is source separated organics (SSO) collected from commercial and agricultural generators. Commercial SSO consists of both pre- and post-consumer food scraps and food soiled paper/cardboard generated by restaurants, hotels and convention centers. Commercial SSO also includes packaged and spoiled food waste generated by grocery stores. Agricultural SSO may include certain wastes and residues generated by local growers that can be diverted from landfill and beneficially used in anaerobic digestion. In addition to these feedstocks, the AD-RNG is designed to accept, store and process fats, oils and greases (FOG) generated by area restaurants and hotels. At full AD-RNG facility capacity, ReCap will process up to 20,000 tons per year of SSO material, representing a significant diversion of material from landfill and reduction in Greenhouse Gases (GHG).

SSO processed in a SMARTFERM plug-flow anaerobic digestion system typically requires minimal pre-processing to generate an acceptable feedstock product and non-process materials such as plastic bags and cardboard do not impair the biological process. To liberate organics in packaging and reduce the size of larger food waste items, a 20 ton per hour (TPH) food depackager will be operated in the building. The food depackager recovers nearly 99% of the organic content in SSO and yields a hom ogenous organic feedstock that optimizes biogas production.



Food Waste Depackager

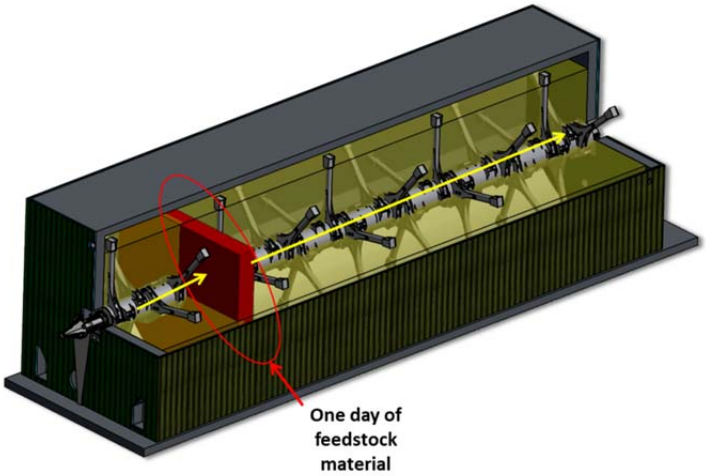
Feedstocks requiring pre-processing in the depackager unit will be blended with other SSO streams and loaded into an automated walking-floor bunker located in the building which will store up to 2 days of feedstock material. The walking floor speed is regulated to meter feedstock to the SMARTTURN digester via a covered conveyor system over a 7 day loading schedule to optimize biogas production.

<u>SMARTTURN Anaerobic Digestion</u>

Feedstock conveyed from the loading bunker will be charged to a specially-designed dual-shaft mixer which further homogenizes the feedstock and has the capability to add stored FOG and digestate press water. Following mixing, the feedstock is hydraulically pumped through a heat exchanger tube

which pre-heats the feedstock while it is pumped to the front of the SMARTFERM digester.

The SMARTFERM plug-flow digester is ideal for dry organic waste containing a high level of impurities. Key components such as the accessible, heated digester floor and robust and powerful paddle stirrers have been patented for the digestion industry to optimize biogas production. SMARTFERM stirrers are characterized by their ability to handle difficult materials and to carry out the even and continuous digestion of varied feedstocks. The dimensions of the paddles and shaft guarantee high stirring efficiency and a virtually unlimited service life - even under the highest seasonal loads. This is achieved by the unique shape of the paddle head which is made of highly wear-resistant steel.



The digestion process inside the digester is based on an anaerobic, thermophilic and completely biological process, classed as High Solids Anaerobic Digestion (HSAD or less commonly so-called Dry-AD. The digester has a process temperature of approximately 131°F and an average dry substance content of >25%. Process temperature will be maintained via a process hot water system supplied by a natural gas hot water boiler. The residence time of the feedstock in the digester is approximately 21 days, but may range from 19 to 36 days depending on the volume of input material processed.

Biogas - primarily consisting of methane and carbon dioxide - is collected in the headspace of the digester and piped to a biogas storage buffer. From the buffer, biogas is nominated to an upgrading system which first removes impurities in the gas such as water and hydrogen sulfide and then selectively captures up to 99% of the available methane in an advanced membrane system.

Recovered methane or “Renewable Natural Gas” quality is monitored to ensure compliance with pipeline standards and then boosted to pipeline pressure prior to injection. ReCap will sell the RNG for the value of the commodity as a fuel in addition to US EPA RINs and potentially California Low Carbon Fuel Standard (LCFS) credits. ReCap is also investigating the sale of the bio-methane to area fleets which have or are converted vehicles to compressed natural gas (CNG) or in the process of planning to do so.

Digestate is the residual by-product of the SMARTFERM AD process and is compliant with US EPA Part 503 which regulates the sanitization and elimination of pathogens in fertilizer and compost products produced from organic feedstocks such as SSO. Digestate will be extracted from the digester by a hydraulic pump and pumped to the Receiving building dewatering station where it will be processed by a vibrating screen that separates the liquid and solid fractions.

Recovered liquids, or "press water" is stored in a concrete tank. Press water can be charged with feedstock at the digester mixer or pumped to truck for use as a liquid fertilizer. Recovered solids are temporarily stored in a bunker located inside the Receiving building and then transferred to compost curing. Both liquid fertilizer and compost products will have a high nutrient value which adds organic matter to soils and aids the growth and productivity of agricultural, landscaping and horticultural applications.

All key operations will be performed indoors or within specialized process equipment and vessels, significantly reducing the potential for fugitive odor and achieve the best available control. Exhaust air captured in the Receiving building will treated in advanced two-step odor control system (OCS). The first treatment step processes exhaust air in an acid scrubber which captures ammonia and soluble volatile organic solids. Following the acid scrubber, exhaust air is treated in a biofilter which uses biological micro-organisms to oxidize the remaining odor-causing contaminants.

3. Project Benefits

ReCap's development of the AD-RNG facility will mark a paradigm change for how waste is managed in Metro Nashville. Instead of being viewed as waste that must be landfilled, organics will be managed as a resource to produce sustainable products that not only benefit Nashville, but the environment as well. The table below summarizes the benefits that will accrue for every 100 tons of source separated organics diverted from landfill and processed in the AD-RNG:

Process Parameter	Performance and Benefits
Landfill Diversion/Feedstock	**100 Tons**
Biogas Yield	500,000 cubic feet
Methane Yield	295,000 cubic feet
Renewable Natural Gas	279 MMBtu
Renewable CNG	2100 Diesel Equivalent Gallons
Sanitized Compost	8 tons
Sanitized Liquid Fertilizer	16,500 gallons
Carbon Reduction	-67 $MTCO_2e$

NOTES

1) THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS AND /OR MAPS PREPARED BY OTHERS. THE SURVEYOR MAKES NO GUARENTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE BEFORE ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAT THREE (3) NOR MORE THAN TEN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-800-351-1111.

2) THE LOCATION AND/OR EXISTENCE OF UTILITY SERVICE LINES TO THE PROPERTY SURVEYED ARE UNKNOWN AND ARE NOT SHOWN.

3) UPON REVIEWING FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, 47037C0209H, DATED APRIL 5, 2017. IT HAS BEEN DETERMINED THE LIMITS OF THE DETAIL STUDY DO NOT REACH THE SUBJECT PROPERTY (FLOOD ZONE "X").

4) THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

5) ALL DISTANCES WERE MEASURED WITH E.D.M. EQUIPMENT AND HAVE BEEN ADJUSTED FOR TEMPERATURE.

6) TOPOGRAPHIC INFORMATION WAS DERIVED BY RANDOM SHOTS PER FIELD SURVEY; CONTOUR INTERVAL IS 1'. DATUM BASED ON GPS SURVEY METHODS AND PROCEDURES. VERTICAL DATUM IS NAVD 88.

7) THE SURVEYOR'S LIABILITY FOR THIS DOCUMENT SHALL BE LIMITED TO THE ORIGINAL PURCHASER AND DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITIES WITHOUT AN EXPRESSED RE-CERTIFICATION BY THE SURVEYOR WHOSE SIGNATURE APPEARS UPON THIS SURVEY.

8) BASIS OF BEARING TAKEN FROM GLOBALLY POSITIONED SATELLITE MONUMENTS AND TRANSLATED TO THE TENNESSEE STATE PLANE COORDINATE SYSTEM NAD83 AS ESTABLISHED FOR THIS SURVEY.

9) PARCEL NUMBERS SHOWN THUS (00) REFER TO COUNTY TAX MAP 68.

TREE TABLE

NO.	SIZE	TYPE
1	12"	TREE
2	18"	ELM
3	12"	ELM
4	12"	HACKBERRY
5	18"	ELM
6	12"	HACKBERRY
7	48"	OAK
8	30"	OAK
9	24"	OAK
10	48"	OAK
11	48"	OAK
12	21"	OAK
13	21"	WALNUT
14	24"	ASH
15	18"	OAK X2
16	18"	POPLAR
17	12"	OAK
18	18"	TREE
19	21"	OAK
20	18"	WALNUT
21	15"	WALNUT
22	18"	OAK
23	18"	OAK

PROPERTY OWNER INFORMATION

GOODRUM, WILLIAM M. ET AL (27.00)
0 ASHLAND CITY HIGHWAY
NASHVILLE, TN 37218
TAX MAP 68, PARCEL 27.00
QC-20171205-0123392, R.O.D.C.

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	CHD BEARING	CHORD
C1	06°16'13"	5677.86'	621.36'	S 84°39'16" E	621.05'

DISTRICT BULK RESTRICTIONS

THE REQUIRED SETBACKS FOR THE SUBJECT PROPERTY (ZONED AR2A) SHOWN BELOW WERE OBTAINED FROM THE METRO ZONING ORDINANCES TABLES. PRIOR TO ANY NEW DESIGN OR CONSTRUCTION, THESE SETBACKS SHOULD BE VERIFIED WITH THE METRO PLANNING COMMISSION, FOR THE FINAL DETERMINATION.

SINGLE- TWO FAMILY
FRONT SETBACK = 40'
REAR SETBACKS = 20'
SIDE SETBACKS = 20'

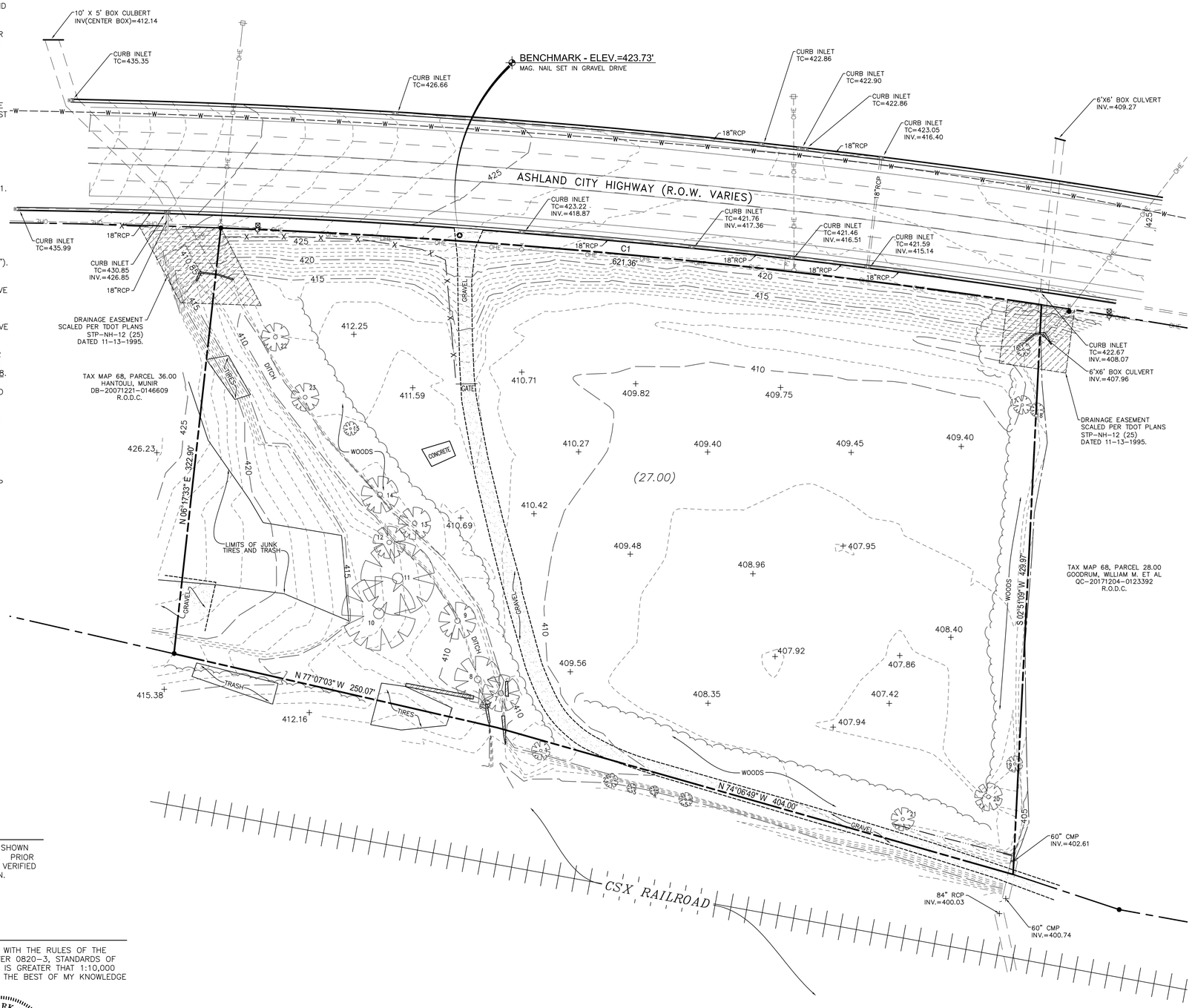
MULTI-FAMILY-NON-RESIDENTIAL
FRONT SETBACK = 40'
REAR SETBACKS = 20'
SIDE SETBACKS = 30'

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS IS A CATEGORY I SURVEY IN COMPLIANCE WITH THE RULES OF THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS, CHAPTER 0820-3, STANDARDS OF PRACTICE, THAT THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY IS GREATER THAT 1:10,000 AS SHOWN HEREON AND THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PREPARED BY:
DONLON LAND SURVEYING, LLC
TIMOTHY MARK DONLON
8120 SAWYER BROWN RD.
SUITE 110 A
NASHVILLE, TN 37221
TEL. (615) 673-9116, FAX (615) 673-9117
mdonlonris@bellsouth.net
http://www.DonlonLandSurveying.com/

TIMOTHY MARK DONLON
REGISTERED LAND SURVEYOR
AGRICULTURE COMMERCE
TENNESSEE No. 2297



TENNESSEE STATE PLANE

GRAPHIC SCALE
40 0 20 40 80
1"=40'

AREA

238,682.10 SQ. FT.
OR 5.48 ACRES

LEGEND:

- POWER POLE
- LIGHT POLE
- GUY WIRE
- STORM CURB INLET
- ELECTRIC METER
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN OUT
- SIGN
- MAILBOX
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- CMF CONCRETE MONUMENT FOUND
- IPF IRON PIN FOUND
- IPS IRON PIN SET
- CONCRETE
- WALL
- PROPERTY ADJOINER
- RIGHT OF WAY LINE
- PROPERTY LINE
- EDGE OF CONCRETE
- FENCE
- EDGE OF GRAVEL
- BUILDING OVERHANG
- WATER LINE
- SANITARY SEWER LINE
- GAS LINE
- OVERHEAD ELECTRIC
- STORM DRAINAGE PIPE
- MAJOR CONTOUR
- MINOR CONTOUR
- EDGE OF WOODS
- EASEMENT LINE

BOUNDARY & TOPOGRAPHIC SURVEY OF TAX MAP 68 PARCEL 27.00

DAVIDSON COUNTY, TENNESSEE

PREPARED FOR:
SEEMA PRASAD
0 ASHLAND CITY HIGHWAY
NASHVILLE, TN 37218
MARCH 12, 2018

218015 PRASAD