



Tennessee Wastewater Systems, Inc.
Docket 15-00025
February 2016 Report Overview

Systems subject to Notice of Violations and other Corrective Orders:

Starr Crest I (NOV) – Repairs made; awaiting inspection by TDEC

Starr Crest II (NOV) – Repairs made; awaiting inspection by TDEC –Petition has been filed with TRA for approval of financing arrangements between TWSI and the homeowners in the community.

Smoky Village (NOV) – Repairs made; awaiting inspection by TDEC – Part of the 14-00136 docket awaiting determination.

Townsend Square (NOV) – Repairs made; awaiting inspection by TDEC

Swan Harbor (NOV) – Repairs made; awaiting inspection by TDEC

Summit View – Part of the 14-00136 Docket – Approved construction plans and modified SOP issued by TDEC

Cedar Hill – Part of the 14-00136 Docket

Maple Green (NOV) – Part of the 14-00136 Docket

Jeff Ridsen

From: HAWKMS Agent [agent@hawkms.com]
Sent: Monday, February 1, 2016 11:36 AM
To: Charles.Hyatt@adenus.com; Brian.Carter@adenus.com; Roy.Denney@adenus.com;
John.Czahoroski@adenus.com
Cc: jeff.ridsen@adenus.com; bob.pickney@adenus.com; matt.pickney@adenus.com
Subject: TRA KPI Compliance Report for 2/1/2016 11:35:07 AM

TRA Flow KPI Report for 1/31/2016

Tracy Nichols	Permitted	Expected	Actual	% of Expected	AvgFlow	% o
Cedar Hill DCP	75000	18036	0	0.00	1603.50	
Maple Green DCP	74000	39048	38830	0.99	50190.67	

Tony Smith	Permitted	Expected	Actual	% of Expected	AvgFlow	% o
Swan Harbour RSF	15800	1575	1125	0.71	1221.37	
Tall Oaks RSF	45000	11900	17600	1.48	16750.67	

Jeremy Stewart	Permitted	Expected	Actual	% of Expected	AvgFlow	% o
Starr Crest I RSF	8000	2275	2775	1.22	1416.23	
Starr Crest II BC	28000	23450	24268	1.03	17376.00	
Summit View RSF	8000	5775	7700	1.33	4392.67	

Stone Hanson	Permitted	Expected	Actual	% of Expected	AvgFlow	% o
Townsend Town Square RSF	3640	3640	-1	0.00	436.13	



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

January 5, 2016

Mr. Charles Hyatt, President
Tennessee Wastewater Systems, Inc.
e-copy: Charles.Hyatt@adenus.com
851 Aviation Parkway
Smyrna, TN 37167

**Re: State Operating Permit No. SOP-15007
TN Wastewater Systems - Clovercroft Lookaway Farms Subdivision
Franklin, Williamson County, Tennessee**

Dear Mr. Hyatt:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed State Operating Permit. The continuance and/or reissuance of this Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the technical secretary of the Water Resources Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

If you have questions, please contact the Nashville Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Hari Akunuri at (615) 532-0650 or by E-mail at Hari.Akunuri@tn.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Brad C. Harris".

Brad C. Harris, P.E.
Manager, Land-based Systems

Enclosure

cc/ec: Land-based Systems File
Nashville Environmental Field Office
Ms. Patsy Fulton, Utility Rate Specialist, Tennessee Regulatory Authority, Patsy.Fulton@tn.gov
Ms. Michelle Ramsey, Utilities Division, Tennessee Regulatory Authority, michelle.ramsey@tn.gov
Mr. Brian Carter, Maintenance Manager, Adenus Operations LLC, brian.carter@adenus.com

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Permit No. SOP-15007

PERMIT
For the operation of Wastewater Treatment Facilities

In accordance with the provision of Tennessee Code Annotated section 69-3-108 and Regulations promulgated pursuant thereto:

PERMISSION IS HEREBY GRANTED TO

TWS, Inc.- Clovercroft Lookaway Farms Subdivision
Franklin, Williamson County, Tennessee

FOR THE OPERATION OF

Septic tanks, effluent collection system, recirculating media filter and fenced drip irrigation system located at latitude 35.930833 and longitude -86.744722 in Williamson County, Tennessee to serve approximately 108 homes in the Clovercroft Lookaway Farms Subdivision. The design capacity of the system is .0324 MGD.

This permit is issued as a result of the application filed on April 14, 2015, in the office of the Tennessee Division of Water Resources. This permit is contingent on the submission and department approval of construction plans, specifications and other data in accordance with rules of the department. Updated plans and specifications must be approved before any further construction activity.

This permit shall become effective on: February 1, 2016

This permit shall expire on: January 31, 2021

Issuance date: January 1, 2016



for Tisha Calabrese Benton
Director

A. GENERAL REQUIREMENTS

The treatment system shall be monitored by the permittee as specified below:

<u>Parameter</u>	<u>Sample Type</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Measurement Frequency</u>
Flow *	Totalizer			Daily
BOD ₅	Grab	45 mg/l	N/A	Once/Year
Ammonia as N	Grab	Report	N/A	Once /Quarter

* Report average daily flow for each calendar month.

Sampling requirements in the table above apply to effluent being discharged to the drip irrigation plots.

This permit allows the operation of a wastewater drip irrigation system. There shall be no discharge of wastewater to any surface stream or any location where it is likely to enter surface waters. There shall be no discharge of wastewater to any open throat sinkhole. In addition, the drip irrigation system shall be operated in a manner preventing the creation of a health hazard or a nuisance.

Instances of ponding or pooling within the drip dispersal area not associated with a recent rainfall event shall be promptly investigated and noted on the Monthly Operations Report. The report shall include details regarding location(s), determined cause(s), the actions taken to eliminate the ponding, and the date the corrective actions were made. Ponding resulting in the discharge of treated wastewater into the Waters of the State or to locations where it is likely to move to Waters of the State shall be considered a violation of your State Operating Permit.

All drip fields shall be fenced sufficiently to prevent or impede unauthorized entry as well as to protect the facility from vandalism. Fencing shall be a minimum of four feet in height. Fencing shall be constructed of durable materials. Gates shall be designed and constructed in a manner to prevent or impede unauthorized entry. All designs are subject to division approval. Fence shall be installed prior to beginning of operation.

All drip lines shall be buried and maintained 6 to 10 inches below the ground surface.

The site shall be inspected by the certified operator or his/her designee, at a minimum, once per fourteen days (default) OR in accordance with an operating and maintenance inspection schedule in the permit administrative file record. The default inspection frequency will apply if an operating and maintenance inspection schedule is not submitted to be a part of the permit administrative file record. The operating and maintenance inspection schedule shall at a minimum evaluate the following via onsite visits or telemetry monitoring or a combination of the two:

- the condition of the treatment facility security controls (doors, fencing, gates, etc.),
- the condition of the drip area security controls (doors, fencing, gates, etc.),
- the condition of the site signage,
- the operational status of the mechanical parts of the treatment system (pumps, filters, telemetry equipment, etc.)
- the condition of the UV bulbs (if applicable)

Submission of the schedule, or revisions to the schedule, may be submitted to the division electronically. The schedule shall be submitted on or before the effective date of the permit. The permittee is responsible for maintaining evidence that the schedule, or revisions, have been submitted to the division.

B. MONITORING PROCEDURES

1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

Effluent to drip irrigation plots.

2. Test Procedures

Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136.

C. DEFINITIONS

The "daily maximum concentration" is a limitation on the average concentration, in milligrams per liter, of the discharge during any calendar day.

The "*monthly average concentration*", other than for *E. coli* bacteria, is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

A "grab sample" is a single influent or effluent sample collected at a particular time.

For the purpose of this permit, "*continuous monitoring*" means collection of samples using a probe and a recorder with at least one data point per dosing cycle.

A "quarter" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

D. REPORTING

1. Monitoring Results

Monitoring results shall be recorded monthly OR in accordance with the operating and maintenance inspection schedule in the permit administrative file record and submitted quarterly. The quarterly report shall detail the following:

Submittals shall be postmarked no later than 15 days after the completion of the reporting period. A copy should be retained for the permittee's files. Operation reports and any communication regarding compliance with the conditions of this permit must be sent to:

Division of Water Resources
Nashville Environmental Field Office
711 R.S. Gass Boulevard
Nashville, TN 37216

The first operation report is due on the 15th of the month following the quarter containing the permit effective date. Until the construction of the treatment system is complete and the treatment system is placed into operation, operational reports shall report “monitoring not required”.

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in 0400-40-05-.07(2)(h)2, the results of such monitoring shall be included in the calculation and reporting of the values required in the Quarterly Operation Report. Such increased frequency shall also be indicated.

3. Falsifying Reports

Knowingly making any false statement on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 69-3-115 of the Tennessee Water Quality Control Act.

4. Signatory Requirement

All reports or information submitted to the commissioner shall be signed and certified by the persons identified in Rules 0400-40-05-.05(6)(a-c).

E. SCHEDULE OF COMPLIANCE

Full operational level shall be attained after the construction of the treatment system is complete and the treatment system is placed into operation.

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

The permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Resources (the "Director") no later than 180 days prior to the expiration date.

2. Right of Entry

The permittee shall allow the Director, or authorized representatives, upon the notification of permittee and presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;

b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and

c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

All reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Resources.

4. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to

achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

The monitoring frequency stated in this permit shall not be construed as specifying a minimum level of operator attention to the facility. It is anticipated that visits to the treatment facility by the operator will occur at intervals frequent enough to assure proper operation and maintenance, but in no case less than one visit every fourteen days OR in accordance with an operating and maintenance inspection schedule in the permit administrative file record. If monitoring reports, division's inspection reports, or other information indicates a problem with the facility, the permittee may be subject to enforcement action and/or the permit may be modified to include increased parameter monitoring, increased monitoring frequency or other requirements as deemed necessary by the division to correct the problem. The permittee shall ensure that the certified operator is in charge of the facility and observes the operation of the system frequently enough to ensure its proper operation and maintenance regardless of the monitoring frequency stated in the permit

Dilution water shall not be added to comply with effluent requirements.

The drip dispersal area shall not be used for vehicular traffic or vehicular parking. Dozers, trucks, tractors, and other heavy vehicles shall not be allowed to run over the drip dispersal area lines or other parts of the system.

5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

6. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

7. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in section 69-3-108 (h) The Tennessee Water Quality Control Act as amended.

b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

3. Change of Ownership

This permit may be transferred to another person by the permittee if:

a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

Any permit noncompliance constitutes a violation of applicable State laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the appropriate Division environmental assistance center within 24 hours from the time the permittee becomes aware of the circumstances. (The environmental field office should be contacted for names and phone numbers of emergency response personnel.)

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

- i. A description of the discharge and cause of noncompliance;
- ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- iii. The steps being taken to reduce, eliminate, and prevent recurrence of the non-complying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Quarterly Operation Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

3. Overflow

a. "**Overflow**" means the unintended discharge to land or waters of Tennessee of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls.

b. Overflows are prohibited.

c. The permittee shall operate the collection system so as to avoid overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic overflows (greater than 5 events per year) or would otherwise overload any portion of the system.

d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the

Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic overflow point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to a Monthly Operating Report submitted to the local TDEC Environmental Field Office on a quarterly basis. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

e. In the event that more than 5 overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Resources EFO staff to petition for a waiver based on mitigating evidence.

4. Upset

a. "*Upset*" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- i. An upset occurred and that the permittee can identify the cause(s) of the upset;
- ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
- iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and
- iv. The permittee complied with any remedial measures required under "Adverse Impact."

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have

been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. Bypass

a. "**Bypass**" is the intentional diversion of wastewater away from any portion of a treatment facility. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypasses are prohibited unless all of the following 3 conditions are met:

i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There are no feasible alternatives to bypass, such as the construction and use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass, which occurred during normal periods of equipment downtime or preventative maintenance;

iii. The permittee submits notice of an unanticipated bypass to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the director, if possible, at least 10 days before the date of the bypass.

c. Bypasses not exceeding permit limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 6.b.iii, above.

7. Washout

a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.

b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.

D. LIABILITIES

1. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law.

**PART III
OTHER REQUIREMENTS**

A. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a Biological Natural System certified wastewater treatment operator and collection system shall be operated under the supervision of a the grade I certified collection system operator in accordance with the Water Environmental Health Act of 1984.

B. PLACEMENT OF SIGNS

The permittee shall place a sign at the entrance if the drip area is fenced or all reasonable approaches to the drip irrigation lot. The sign should be clearly visible to the public. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material

**RECLAIMED WASTEWATER
DRIP IRRIGATION
(PERMITTEE'S NAME)
(PERMITTEE'S PHONE NUMBER)
TENNESSEE DIVISION OF WATER
RESOURCES
Nashville Environmental Field Office
PHONE NUMBER: 1-888-891-8332**

No later than sixty (60) days from the effective date of the permit, the permittee shall have the above sign(s) on display in the location specified. New facilities must have the signs installed upon commencing operation.

C. ADDITION OF WASTE LOADS

The permittee may not add wasteloads to the existing treatment system without the knowledge and approval of the division.

D. SEPTIC TANK OPERATION

The proper operation of this treatment system depends, largely, on the efficient use of the septic tank. The solids that accumulate in the tank shall be removed at a frequency that is sufficient to insure that the treatment plant will comply with the discharge requirements of this permit.

E. SEPTAGE MANAGEMENT PRACTICES

The permittee must comply with the provisions of Rule 0400-48-01-.22. If the septage is transported to another POTW for disposal, the permittee shall note the amount of septage wasted in gallons and name of the facility the hauler intends to use for disposal of the septage on the monthly operation report. Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

F. OWNERSHIP OF THE TREATMENT FACILITIES

a. The permittee shall own the treatment facilities (and the land upon which they are constructed) including the land to be utilized for drip or spray irrigation. A perpetual easement (properly recorded) may be accepted in lieu of ownership. If the permittee elects to make the treated wastewater available for reuse (irrigation of a golf course for example) a backup dedicated land application site must be provided or a perpetual easement must be obtained for the property where reuse is to take place. The perpetual easement must allow year-round application of the wastewater except where the permittee has provided (and the division has approved) storage facilities for periods when reuse is not available. Evidence of ownership of the treatment

facility land application site(s) and/or a copy of the perpetual easement(s) must be furnished to the division for approval prior to construction of the wastewater collection and treatment system.

b. Where the treatment facility serves private homes, condominiums, apartments, retirement homes, nursing homes, trailer parks, or any other place where the individuals being served have property ownership, rental agreements, or other agreements that would prevent their being displaced in the event of abandonment or noncompliance of the sewerage system, ownership of the treatment facilities must be by a municipality, a public utility, a wastewater authority, or a privately owned public utility (having a Certificate of Convenience and Necessity from the Tennessee Regulatory Authority), or another public agency.

Attachment 1
STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES-LAND BASED SYSTEMS UNIT
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, Tennessee 37243

MEMORANDUM

TO: Hari Akunuri, DWR-CO

FROM: Allen Rather, DWR- Land Based Systems Unit

DATE: 12/21/2015

SUBJECT: LCSS/SFDS (Class V Injection) Approval
Lookaway Farms Subdivision
Franklin, Williamson County, Tennessee
UIC File WIL 0000165 SOP-15007

The Division of Water Resources has reviewed the submittal of an Application for Authorization to Operate a Class V Underground Injection Well (Large Capacity Septic System/Subsurface Fluid Disposal System) utilizing drip dispersal for the waste water at the Lookaway Farms Subdivision located at Franklin, Williamson County, Tennessee. This Division approves the application dated 4/14/2015.

If at any time the Division learns that a ground water discharge system may be in violation of The Tennessee Water Quality Control Act, the Division shall:

- a. require the injector to apply for an individual permit;
- b. order the injector to take such actions including, where required, closure of the injection well as may be necessary to prevent the violation; or
- c. take enforcement action.

All groundwater discharge activities must operate in such a manner that they do not present a hazard to groundwater.

In accordance with Underground Injection Control (UIC) Rule 0400-45-06-.14 (3) "The owner of a Class V well shall be responsible for notifying the Department of change in ownership." This notification must be made to this Division within thirty (30) days of the change in ownership.

Also note that according to Underground Injection Control (UIC) Rule 0400-45-6-.14 (8)(d) "Upon completion of the well, the owner or operator must certify to the Department that the well has been completed in accordance with the approved construction plan, and must submit any other additional information required". The certification must be submitted to the UIC Program within thirty (30) days upon the completion/closure of the Class V well.

This Division will require a minimum of seven (7) working days advance notice before the construction on the drip system is to begin to allow for a witness from this Division to be present.

No drip emitters are to discharge directly into an open throat or crevice in the subsurface. All drip lines are to be installed on contour.

Our concurrence with your approach does not imply that this procedure is exempt from future changes or restrictions in the Underground Injection Control (UIC) Regulations, or any additional requirements set forth by the Division in order to protect the groundwater of Tennessee.

A copy of this authorization must be kept on site until the development has been completed and must be made available to inspection personnel.

Should you have any questions or comments please feel free to contact me at (615) 532-5819 or allen.rather@tn.gov.

c: file



860 W. Main Street, Suite 600 | P.O. Box 99 Knoxville, Tennessee 37901 | Telephone 865.646.9321

Facsimile Number: 865-637-5249

FAX TRANSMITTAL

TO: Division of Water Resources

FAX NO.: 615-532-0686

FROM: Kevin A. Dean (kdean@fmsllp.com)

DATE: January 13, 2016 Time: _____

RE: In re: Tennessee Wastewater Systems – Summit View Resort
Permit Number SOP-06035
Public Notice Number MMXV-023)
Tennessee Regulatory Authority Docket No. 14-00136

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January 13, 2016

Division of Water Resources
William R. Snodgrass – Tennessee Tower
312 Rosa L. Parks Avenue
11th Floor
Nashville, TN 37243-1102

(Via Email to Water.Permits@tn.gov)
(Via Fax to 615-532-0686)

ATTN: PUBLIC NOTICE COORDINATOR

RE: TN Wastewater Systems – Summit View Resort; Permit Number SOP-06035
(Public Notice Number MMXV-023)

Dear Public Notice Coordinator:

Pursuant to Rule 0400-40-05-.06(11) and (12), on behalf of my client, Summit View Homeowners' Association (the "HOA"), with respect to the above-referenced permit we submit the following written comments and request that the Commissioner hold a public hearing at the Knoxville, Tennessee TDEC field office.

Written Comments – Rule 0400-40-05-.06(11)

1. The proposal for permit number SOP-06035 to increase design capacity from 8,000 gpd to 18,500 gpd is not needed. Since the system at issue was installed in approximately 2007, the first time the 8,000 gpd capacity was allegedly exceeded was September of 2014. And since installation, the 8,000 capacity has only been exceeded on 3 occasions (and only by a small margin); for the most recent quarter whereby records have been made available (3rd Quarter of 2015), the reported use was as follows:

July	9,570 gpd
August	9,018 gpd
September	4,116 gpd

TOTAL 22,704; Monthly average for 3rd quarter 2015 = 7,568 gpd

Several toilets were found to be running continuously in one of the HOA's largest cabins during a portion of July & August of 2015 which likely contributed to the abnormally high usage figures for these months (Steve Mackenzie, the HOA's maintenance director,

has since repaired that problem). Further, the HOA has taken proactive steps to reduce this usage in the 4th quarter of 2015 by installing low-flow shower heads.

2. Overall Cost of this approved "Plan". To date, no cost information has been supplied and the HOA would respectfully request all relevant financial information (including but not limited to cost to the HOA), be provided well in advance of the requested public hearing. It should also be noted that the HOA has been maintaining the landscaping of the drip field at a cost to the HOA of \$1,400 per month for the past 7 years (TWSI has failed to properly maintain this site as a utility provider); the HOA reserves the right to seek repayment of these amounts.
3. The presently installed wastewater system was designed for the appropriate capacity—there is no factual basis or reasonable support for a system modification that increases design capacity to the 18,500 gpd figure listed in the December 14, 2015 Public Notice Number MMXV-023 for Permit Number SOP-06035. Further, Tennessee Wastewater Systems, Inc. ("TWSI") has purchased additional real property adjoining the real property owned by the HOA on which the present system is located—there is no factual basis or reasonable support for the purchase of additional real property (though the HOA fears TWSI's "plan" may be to join other subdivisions in with the HOA).
4. TWSI's "plan" fails to utilize existing drip lines and real property already owned by the HOA. This "plan" demonstrates TWSI's direction which appears to be to build a system with excess capacity that could then be sold by TWSI to other subdivisions by joining them into the proposed system with excess (18,500 gpd) capacity. Further, the only "plans" the HOA has been given consist of six (6) pages titled "Summit View TF Drip Field Treatment Expansion Sevier County, TN" with a reference "SOP #06035". The HOA respectfully requests TWSI supply a full copy of the entire TWSI/Adenus "plan" for review prior to the requested public hearing.
5. TWSI has failed to properly install and/or maintain the HOA's wastewater system since installation in 2007, which has greatly contributed to the issues that have recently arisen, including but not limited to the following:
 - (a) TWSI installed driplines improperly (not performed in accordance with standard design considerations since the drip lines were not installed parallel to the existing terrain contour grades—see attached Exhibit "1");
 - (b) Given the terrain of the HOA (steep mountain slopes), stormwater runoff can sometimes cause siltation to accumulate around the top of the STEP septic tanks and divert storm water over and onto the top of the tanks (again, see Exhibit "1");
 - (c) TWSI's failure to properly maintain the system over the years has led to a majority of the faults in the current system prior to the present alleged overuse.
6. David K. Beverly recently (September 11, 2015) prepared a letter to Mr. George Garden, Chief Engineer for the Division of Water Resources, outlining additional issues with the TWSI "plan". The HOA adopts this letter (copy attached hereto as Exhibit "1") not only for public comments but to further emphasize the additional information needed with respect to the logic and soundness of the TWSI proposal.

Request for Public Hearing -- Rule 0400-40-05-.06(12)

The HOA requests a public hearing given the multiple issues outlined hereinabove with the TWSI "plan" as outlined in the December 14, 2015 Public Notice Number MMXV-023 for Permit Number SOP-06035. The HOA qualifies as an "interested person" under this Rule given TWSI is likely to request the HOA to fund the majority, if not all, of the cost of this "plan" and the majority of the members of the HOA have expressed interest in attending such a hearing. Further, per Rule 0400-40-05-.06(12), "instances of doubt should be resolved in favor of holding the hearing" and the HOA would request that such a hearing be held at the Knoxville, Tennessee TDEC field office to allow as many members of the HOA to attend.

Sincerely,



Arthur G. Seymour, Jr.

Kevin A. Dean

FRANTZ, McCONNELL & SEYMOUR, LLP

KAD/kad
Encls.

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David K. Beverly
CONSULTING ENGINEER

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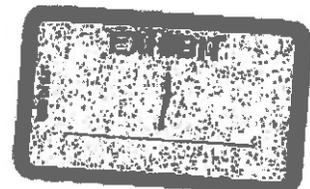
September 11, 2015

Mr. George C Garden, P.E. BCEE
Chief Engineer
Division of Water Resources
Wm R Snodgrass Tennessee Tower, Floor 11
312 Rosa L. Parks Ave.
Nashville, TN 37243

Re: Summit View Resort
Sevier County

Dear Mr. Garden

I appreciate the opportunity to have met you while attending the onsite field visit at Summit View last week on September 4, 2015. Also attending the meeting was Mr. Bob Pickney representing Tennessee Wastewater Systems, Inc (TWSI), Mr. Michael Caudill - TDEC Knoxville Field Office and Mr. Billy Roach - TDEC Soil Scientist. As you know, I had been requested to attend the meeting as an observer on behalf of the Summit View Home Owners Association (HOA) and then to provide a summary report to the HOA of any discussions and conclusions regarding the pending Corrective Action Plan being proposed by TWSI. I have also been requested to render my comments and analysis as it may impact the HOA and the individual home owners. I perceive that my role and responsibility to the HOA is not only to provide professional engineering services but also to provide general consultation and offer suggestions of direction for their considerations. With that as my purpose, I would like to present my thoughts and concerns as I ascertain the problems and issues relating to the failing sewer system. I should qualify my conclusions as being basically obvious from a professional engineering perspective. I offer this qualification because I have only been familiar with the problems of the sewer system failures and been involved with this review process for a couple of weeks. The comments below are based on information I have learned from discussions with the HOA and from observing the discussions at the onsite meeting. That was the reason that I requested from Mr. Pickney to be able to receive copies of any design plans and specifications that were being proposed by TWSI. As you recall, Mr. Pickney told me that it was premature and TWSI would not provide to me any of the materials and documentation that I had requested. I am therefore presenting these comments as I understand the issues that may cause the HOA serious concerns with respect to the logic and soundness of the TWSI proposal.



Background Information

1. Apparently the problems involving the failure of the sewer drip field began over a year ago.
2. It is my understanding that the original construction of the drip field was not performed in accordance with standard design considerations since the drip lines were not installed parallel to the existing terrain contour grades.
3. It has been stated that the original sewer collection and treatment system was designed for a combined flow of 8,000 gpd and that operational reports have always indicated an average actual total flow less than the 8,000 gpd design flow. However, TWSI recently performed a special supplemental monitoring for one month which indicated significantly more than the original design flow. As I understand, the reason that was given by TWSI was that the subdivision houses were being utilized as rental homes and thus this type of occupancy had caused an increase in flow. It is my understanding that the houses in this development have always been available as daily and weekend rental homes. This intent and fact is reflected in the formal name of this development, *Summit View Resort*. This being the case, the question is raised as to why the monthly reports have not always reflected the higher flows, at least during peak seasonal use times of the year.
4. As background information, it has been stated that each house in the development does not have its own individual STEP type septic tank; that is, more than one house may be connected into each septic tank. The apparent question is if this is in accordance with all of the TDEC submittals and the original design plans for the sewer system.
5. It was stated that one of the septic tanks serving two of the houses was recently damaged by a fallen tree. The question arises as to the nature and extent of the damage and could this have been a source of surface water infiltration, especially during the monthly monitoring period referenced above since they occurred in the same time frame.
6. This situation presents another consideration with regards to operational monitoring and maintenance. Since the terrain of this development is situated on steep mountain slopes, stormwater runoff can sometimes cause siltation to accumulate around the top of the STEP septic tanks and divert storm water over and onto the top of the tanks. If there are other tank lids that have been damaged or are not properly sealed, then this could be another source of infiltration. The question is are all of the tanks routinely monitored and inspected to avoid this possibility. According to the type of septic tank that has been installed, sometimes the side walls of the tanks themselves can be another source of infiltration, either from leaking tank joints or cracked and damaged walls from settlement due to runoff diversion or inadequate foundation on steep slopes.

Considerations

1. The financial burden that would be imposed on the home owners in this development are tremendous if the proposed remedy presented by TWSI is implemented.
2. Why has the existing sewer system not been properly installed, monitored and reported?
3. Is the construction of an entirely new and redundant sewer system needed or warranted?
4. What alternatives have been explored and considered before concluding that the new system should be constructed?
5. Can the existing system be repaired by properly installing drip lines along the contour?
6. Has temporary storage been considered as a means to buffer peak flow periods?
7. Since the proposed CAP is based on higher flow conditions, has there been adequate and proper monitoring performed to determine the actual flow rate that should be incorporated into the design considerations? Has there been any comparison or correlation with the reported high flows and the actual rental or occupancy rate during the recent supplemental monthly monitoring period referenced above? What does the supplemental monitoring indicate when comparing normal average flows and the amount and time of daily high flow periods? What was the methodology and how was that special supplemental monitoring performed and how was it performed differently from the monitoring that has been performed for the past several years? Should this supplemental monitoring be extended into the upcoming Fall season and holiday time frame in order to have better design data with respect to anticipated high flow rates?
8. Have all sources and rates of flow been evaluated such as infiltration and peak flow periods?
9. Is it proper to expect the home owners to pay for additional property in order to construct additional drip line dispersal area?
10. Are the home owners responsible and liable for the initial improper installation of the sewer effluent disposal system?
11. Should the home owners not have the opportunity to review and evaluate the proposed corrective action plan since they would be responsible for paying for it?
12. Should the home owners not have the opportunity to propose an alternative to the plan being presented by TWSI? Should the home owners not have the opportunity to offer an alternative means to contractually control the operations of a repaired sewer system?

In conclusion and on behalf of the home owners, I would suggest that the HOA should either be directly involved in the plans for the correction of the sewer problems and given the opportunity to offer an alternative for correcting the problem or absolved from the financial responsibility to correct the problems as currently proposed by TWSI.

Please advise the HOA if they could be allowed to meet with TDEC and propose alternative actions to correct the sewer system problems. I know that the home owners enjoy and love their homes in the mountains. I also know that they desire to have an economically functional and environmentally safe sewer system.

Thank You for your considerations

Sincerely

David K. Beverly P.E.

David K. Beverly



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

January 21, 2016

Mr. Charles R. Hyatt, CEO
Adenus Group, LLC
e-copy: Charles.Hyatt@adenus.com
849 Aviation Parkway
Smyrna, TN 37167

**Re: State Operating Permit No. SOP-01028
TN Wastewater Systems - Maple Green Reclamation Facility
Coopertown, Robertson County, Tennessee**

Dear Mr. Hyatt:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed State Operating Permit. The continuance and/or reissuance of this Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the technical secretary of the Water Resources Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

If you have questions, please contact the Nashville Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Hari Akunuri at (615) 532-0650 or by E-mail at Hari.Akunuri@tn.gov.

Sincerely,

Brad C. Harris, P.E.
Manager, Land-based Systems

Enclosure

cc/ec: Water-based Systems File
Nashville Environmental Field Office
Mr. Allen Rather, Environmental Specialist 5, TDEC Division of Water Resources, Allen.rather@tn.gov
Mr. Brian Carter, Maintenance Manager, Adenus Operations LLC, brian.carter@adenus.com
Ms. Michelle Ramsey, Utilities Division, Tennessee Regulatory Authority, michelle.ramsey@tn.gov

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Modification

Permit No. SOP-01028

PERMIT

For the operation of Wastewater Treatment Facilities

In accordance with the provision of Tennessee Code Annotated section 69-3-108 and Regulations promulgated pursuant thereto:

PERMISSION IS HEREBY GRANTED TO

TN Wastewater Systems - Maple Green Reclamation Facility
Coopertown, Robertson County, Tennessee

FOR THE OPERATION OF

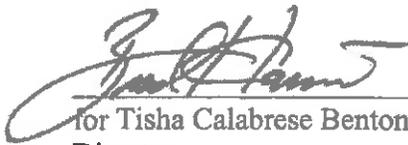
Septic tanks, effluent collection system, to new constructed wetlands and existing drip irrigation system. The entire treatment and drip site is fenced. The system is located at latitude 36.44019 and longitude -86.99603 in Robertson County, Tennessee to serve the Maple Green Reclamation Facility. The design capacity of the system is 0.09 MGD.

This permit is issued as a result of the application filed on September 8, 2015, in the office of the Tennessee Division of Water Resources. This permit is contingent on the submission and department approval of construction plans, specifications and other data in accordance with rules of the department. Updated plans and specifications must be approved before any further construction activity.

This permit shall become effective on: March 1, 2016

This permit shall expire on: June 30, 2018

Issuance date: February 1, 2016



for Tisha Calabrese Benton
Director

A. GENERAL REQUIREMENTS

Prior to commencement of construction, a subsurface investigation of the proposed site must be performed by a Geotechnical Consultant in conformance with ASTM D5777.

The treatment system shall be monitored by the permittee as specified below:

<u>Parameter</u>	<u>Sample Type</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Measurement Frequency</u>
Influent Flow*	Totalizer			Daily
Effluent Flow *	Totalizer			Daily
BOD ₅	Grab	45 mg/l	N/A	Once/Quarter
Each 2 nd Cell Level	Measurement % of design depth	Report	N/A	Daily

* Report average daily flow for each calendar month.

The treatment system shall be monitored by the permittee as specified below for a period of five years:

<u>Parameter</u>	<u>Sample Type</u>	<u>Measurement Frequency</u>
Total Nitrogen	Grab	1/Quarter
pH and D.O. Each 2 nd Cell	Grab (Handheld)	See note
Rainfall	Continuous	Monthly See note

Note: Reading of pH or DO at the time of other quarterly samples. Reading may be from calibrated handheld meter.

Note: Rainfall data may be reported from regional NOAA sites.

Sampling requirements in the table above apply to effluent being discharged to the drip irrigation plots.

 This permit allows the operation of a wastewater drip irrigation system. There shall be no discharge of wastewater to any surface stream or any location where it is likely to enter surface waters. There shall be no discharge of wastewater to any open throat sinkhole. In addition, the drip irrigation system shall be operated in a manner preventing the creation of a health hazard or a nuisance.

Instances of ponding or pooling within the drip dispersal area not associated with a recent rainfall event shall be promptly investigated and noted on the Monthly Operations Report. The report shall include details regarding location(s), determined cause(s), the actions taken to eliminate the ponding, and the date the corrective actions were made. Ponding resulting in the discharge of treated wastewater into the Waters of the State or to locations where it is likely to move to Waters of the State shall be considered a violation of your State Operating Permit.

All drip fields shall be fenced sufficiently to prevent or impede unauthorized entry as well as to protect the facility from vandalism. Fencing shall be a minimum of four feet in height. Fencing shall be constructed of durable materials. Gates shall be designed and constructed in a manner to prevent or impede unauthorized entry. All designs are subject to division approval. Fence shall be installed prior to beginning of operation.

The site shall be inspected by the certified operator or his/her designee, at a minimum, once per fourteen days (default) OR in accordance with an operating and maintenance inspection schedule in the permit administrative file record. The default inspection frequency will apply if an operating and maintenance inspection schedule is not submitted to be a part of the permit administrative file record. The operating and maintenance inspection schedule shall at a minimum evaluate the following via onsite visits or telemetry monitoring or a combination of the two:

- the condition of the treatment facility security controls (doors, fencing, gates, etc.),
- the condition of the drip area security controls (doors, fencing, gates, etc.),
- the condition of the site signage,
- the operational status of the mechanical parts of the treatment system (pumps, filters, telemetry equipment, etc.)

Submission of the schedule, or revisions to the schedule, may be submitted to the division electronically. The schedule shall be submitted on or before the effective date of the permit. The permittee is responsible for maintaining evidence that the schedule, or revisions, have been submitted to the division.

B. MONITORING PROCEDURES

1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

Effluent to drip irrigation plots.

2. Test Procedures

Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136.

C. DEFINITIONS

The "daily maximum concentration" is a limitation on the average concentration, in milligrams per liter, of the discharge during any calendar day.

The "*monthly average concentration*", is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

A "grab sample" is a single influent or effluent sample collected at a particular time.

For the purpose of this permit, "*continuous monitoring*" means collection of samples using a probe and a recorder with at least one data point per dosing cycle.

A "quarter" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

D. REPORTING

1. Monitoring Results

Monitoring results shall be submitted quarterly. The quarterly report shall detail the following:

Submittals shall be postmarked no later than 15 days after the completion of the reporting period. A copy should be retained for the permittee's files. Operation reports and any communication regarding compliance with the conditions of this permit must be sent to:

Division of Water Resources
Nashville Environmental Field Office
711 R.S. Gass Boulevard
Nashville, TN 37216

The first operation report is due on the 15th of the month following the quarter containing the permit effective date.

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in 0400-40-05-.07(2)(h)2,

the results of such monitoring shall be included in the calculation and reporting of the values required in the Quarterly Operation Report. Such increased frequency shall also be indicated.

3. Falsifying Reports

Knowingly making any false statement on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 69-3-115 of the Tennessee Water Quality Control Act.

4. Signatory Requirement

All reports or information submitted to the commissioner shall be signed and certified by the persons identified in Rules 0400-40-05-.05(6)(a-c).

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

The permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Resources (the "Director") no later than 180 days prior to the expiration date.

2. Right of Entry

The permittee shall allow the Director, or authorized representatives, upon the notification of permittee and presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;

b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and

c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

All reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Resources.

4. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

The monitoring frequency stated in this permit shall not be construed as specifying a minimum level of operator attention to the facility. It is anticipated that visits to the treatment facility by the operator will occur at intervals frequent enough to assure proper operation and maintenance, but in no case less than one visit every fourteen days OR in accordance with an operating and maintenance inspection schedule in the permit administrative file record. If monitoring reports, division's inspection reports, or other information indicates a problem with the facility, the permittee may be subject to enforcement action and/or the permit may be modified to include increased parameter monitoring, increased monitoring frequency or other requirements as deemed necessary by the division to correct the problem. The permittee shall ensure that the certified operator is in charge of the facility and observes the operation of the system frequently enough to ensure its proper operation and maintenance regardless of the monitoring frequency stated in the permit

Dilution water shall not be added to comply with effluent requirements.

The drip dispersal area shall not be used for vehicular traffic or vehicular parking. Dozers, trucks, tractors, and other heavy vehicles shall not be allowed to run over the drip dispersal area lines or other parts of the system.

5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

6. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

7. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in section 69-3-108 (h) The Tennessee Water Quality Control Act as amended.

b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

3. Change of Ownership

This permit may be transferred to another person by the permittee if:

a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

Any permit noncompliance constitutes a violation of applicable State laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the appropriate Division environmental assistance center within 24 hours from the time the permittee becomes aware of the circumstances. (The environmental field office should be contacted for names and phone numbers of emergency response personnel.)

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

- i. A description of the discharge and cause of noncompliance;
- ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- iii. The steps being taken to reduce, eliminate, and prevent recurrence of the non complying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Quarterly Operation Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

3. Overflow

a. "**Overflow**" means the unintended discharge to land or waters of Tennessee of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls.

b. Overflows are prohibited.

c. The permittee shall operate the collection system so as to avoid overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic overflows (greater than 5 events per year) or would otherwise overload any portion of the system.

d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic overflow point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to a Monthly Operating Report submitted to the local TDEC Environmental Field Office on a quarterly basis. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

e. In the event that more than 5 overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Resources EFO staff to petition for a waiver based on mitigating evidence.

4. Upset

a. "**Upset**" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An upset occurred and that the permittee can identify the cause(s) of the upset;

ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

- iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and
- iv. The permittee complied with any remedial measures required under "Adverse Impact."

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. Bypass

a. "**Bypass**" is the intentional diversion of wastewater away from any portion of a treatment facility. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypasses are prohibited unless all of the following 3 conditions are met:

i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There are no feasible alternatives to bypass, such as the construction and use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass, which occurred during normal periods of equipment downtime or preventative maintenance;

iii. The permittee submits notice of an unanticipated bypass to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the director, if possible, at least 10 days before the date of the bypass.

c. Bypasses not exceeding permit limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 6.b.iii, above.

7. Washout

a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.

b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.

D. LIABILITIES

1. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law.

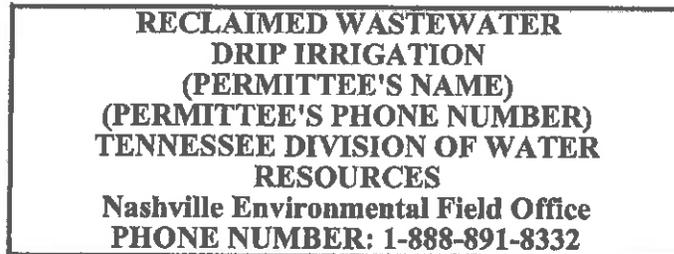
PART III OTHER REQUIREMENTS

A. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a Biological Natural System certified wastewater treatment operator and collection system shall be operated under the supervision of a the grade I certified collection system operator in accordance with the Water Environmental Health Act of 1984.

B. PLACEMENT OF SIGNS

The permittee shall place a sign at the entrance if the drip area is fenced or all reasonable approaches to the drip irrigation lot. The sign should be clearly visible to the public. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material



C. ADDITION OF WASTE LOADS

The permittee may not add wasteloads to the existing treatment system without the knowledge and approval of the division.

D. SEPTIC TANK OPERATION

The proper operation of this treatment system depends, largely, on the efficient use of the septic tank. The solids that accumulate in the tank shall be removed at a frequency that is sufficient to insure that the treatment plant will comply with the discharge requirements of this permit.

E. SEPTAGE MANAGEMENT PRACTICES

The permittee must comply with the provisions of Rule 0400-48-01-.22. If the septage is transported to another POTW for disposal, the permittee shall note the amount of septage wasted in gallons and name of the facility the hauler intends to use for disposal of the septage on the monthly operation report. Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

F. OWNERSHIP OF THE TREATMENT FACILITIES

a. The permittee shall own the treatment facilities (and the land upon which they are constructed) including the land to be utilized for drip or spray irrigation. A perpetual easement (properly recorded) may be accepted in lieu of ownership. If the permittee elects to make the treated wastewater available for reuse (irrigation of a golf course for example) a backup dedicated land application site must be provided or a perpetual easement must be obtained for the property where reuse is to take place. The perpetual easement must allow year-round application of the wastewater except where the permittee has provided (and the division has approved) storage facilities for periods when reuse is not available. Evidence of ownership of the treatment

facility land application site(s) and/or a copy of the perpetual easement(s) must be furnished to the division for approval prior to construction of the wastewater collection and treatment system.

b. Where the treatment facility serves private homes, condominiums, apartments, retirement homes, nursing homes, trailer parks, or any other place where the individuals being served have property ownership, rental agreements, or other agreements that would prevent their being displaced in the even of abandonment or noncompliance of the sewerage system, ownership of the treatment facilities must be by a municipality, a public utility, a wastewater authority, or a privately owned public utility (having a Certificate of Convenience and Necessity from the Tennessee Regulatory Authority), or another public agency.

G. COMPLIANCE SCHEDULE:

The design capacity of the system is 0.09 MGD based on available soil assimilation capacity of 90,000 gpd on a treatment capacity of 60,000 gpd rated wetland system up to a maximum of 0.09 MGD. Construction of the third 30,000 gpd wetland treatment system with accompanying approved drip emitter disposal system must be completed one (1) year after the average daily flows attain 85% of the 0.06 MGD. Plans and specifications for the additional wetland must have been approved and evidence of ownership of the property and system by TN Wastewater Systems be demonstrated.

The permit holder shall keep the Division informed of construction progress including start of construction, liner installation, as well as final inspection and start-up approval. The plans as approved do not include complete system piping between collection system discharge to wetland, to disc filter to the existing dosing system, or surveyed property lines, boundaries and map and parcel numbers. This information shall be provided to the Division as part of record drawings within 3 months of initiation of operation of the system, as well as, other features of “as constructed” documentation in accordance with generally accepted engineering standards.

Rationale
Permit modification
TN Wastewater Systems – Maple Green Reclamation Facility
SOP-01028
October 2015

The TN Wastewater Systems submitted an application for modification on September 3, 2015, to remedy a failed lagoon with a Free Water Surface (FWS) constructed wetlands treatment system designed in accordance with the Tennessee State *Sewerage Design Criteria* and the *Water Environment Federation, Manual of Practice No. FD-16, Natural Systems for Wastewater Treatment* (Third Edition). FWS systems are rare in Tennessee and additional monitoring will be required to ensure proper development of the treatment capacity.

The division is granting your request and imposes the following monitoring requirements for a period of 5 five years or one complete permit cycle. This data is necessary for evaluation of the treatment ability of this experimental system for use in future permit considerations. A five year period has been chosen for the monitoring since the complete vegetation and stabilization of the wetland performance is generally agreed to take at least three years. While the system is not considered “experimental”, per se, it is based entirely on empirical results and its performance needs to be monitored, tracked and adjusted until stable. The fact that the system will be assuming the load from an established system only emphasizes the importance of monitoring the system’s construction, operation and establishment.

The limit table is expanded to include additional monitoring and reporting requirements for:

1. Influent totalized flow on a monthly basis
2. Total Nitrogen each quarter:
3. Reading of each 2nd cell pH or D.O. once/quarter:
4. Daily record of each 2nd cell level
5. Daily rainfall totals

Influent totalized flow in addition to effluent flow monitoring is required due to the difficulty of monitoring flows at this location and the difficulty of readily monitoring water flows to customers from which wastewater flows could be estimated. Readings of Total Nitrogen are an indication of the establishment and viability of biological communities removing nutrients and the overall health of the biota. pH and Dissolved Oxygen in the effluent are indicative of minimum oxygen transfer rates and sufficient safety factor or the robust character of the natural treatment system. Water levels in the cells are critical to the natural system treatment performance and design parameters. Since the system will not be visited each day, remote level measurement is critical to monitoring the systems for proper operation and reducing damage during cold weather due to freezing and during hot weather due to potential deleterious aquatic plant exposure to hot and dry conditions. Daily rainfall totals are advisable for the evaluation of the demonstrated hydraulic capacity of the existing follow-on dispersal areas. The natural

wetlands present a potentially low cost treatment alternative for secondary treatment of domestic wastewater, but the relatively large footprint presents potentially wide fluctuations in critical wetland water levels due to high evaporation and precipitation rates.

The design capacity of the system is 0.03 MGD per wetland system up to a maximum of 3 wetlands or 0.09 MGD. When two wetlands are constructed in accordance with the approved plans and specifications, the wetland system is authorized to treat 0.060 MGD. Construction of the third wetland treatment system with accompanying approved drip emitter disposal system must be completed one (1) year after the average daily flows during the school year attain 85% of the 0.06 MGD.

Attachment 1

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES-WATER SUPPLY BRANCH
GROUND WATER MANAGEMENT SECTION
9th Floor, 401 Church Street
Nashville, Tennessee 37243-1649

MEMORANDUM

TO: Hari Akumuri, WPC-CO

FROM: Allen Rather, DWS- Ground Water Management Section

DATE: 10/21/2015

SUBJECT: LCSS/SFDS (Class V Injection) Approval
Maple Green Reclamation Facility
Coopertown, Robertson County, Tennessee
UIC File ROB 0000033 SOP-01028

The Division of Water Resources has reviewed the submittal of an Application for Authorization to Operate a Class V Underground Injection Well (Large Capacity Septic System/Subsurface Fluid Disposal System) utilizing conventional disposal for the waste water at the Maple Green Reclamation Facility located at Coopertown, Robertson County, Tennessee. This Division approves the application dated 9/08/2015.

If at any time the Division learns that a ground water discharge system may be in violation of The Tennessee Water Quality Control Act, the Division shall:

- a. require the injector to apply for an individual permit;
- b. order the injector to take such actions including, where required, closure of the injection well as may be necessary to prevent the violation; or
- c. take enforcement action.

All groundwater discharge activities must operate in such a manner that they do not present a hazard to groundwater.

Adenus shall also conduct a monthly visual inspection of the complete drip field looking for any signs of failure.

In accordance with Underground Injection Control (UIC) Rule 1200-4-6-.14 (3) "The owner of a Class V well shall be responsible for notifying the Department of change in ownership." This notification must be made to this Division within thirty (30) days of the change in ownership.

Also note that according to Underground Injection Control (UIC) Rule 1200-4-6-.14 (8)(d) "Upon completion of the well, the owner or operator must certify to the Department that the well has been completed in accordance with the approved construction plan, and must submit any other additional information required". The certification must be submitted to the UIC Program within thirty (30) days upon the completion/closure of the Class V well.

This Division will require a minimum of seven (7) working days advance notice before the construction on the drip system is to begin to allow for a witness from this Division to be present.

No drip emitters are to discharge directly into an open throat or crevice in the subsurface. All drip lines are to be installed on contour.

Our concurrence with your approach does not imply that this procedure is exempt from future changes or restrictions in the Underground Injection Control (UIC) Regulations, or any additional requirements set forth by the Division in order to protect the groundwater of Tennessee.

A copy of this authorization must be kept on site until the development has been completed and must be made available to inspection personnel.

Should you have any questions or comments please feel free to contact me at (615) 532-5819 or allen.rather@tn.gov.

c: file



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

January 20, 2016

Mr. Roy Denney, P.E.
CTO Adenus Group, LLC
e-copy: roy.denney@adenus.com
849 Aviation Pkwy.
Smyrna, TN 37167

Subject: County: Robertson
Wastewater Project Number: 14-0471 R
Project: Maple Green Reclamation Facility- Free Surface Wetlands

Dear Mr. Denney:

The Tennessee Department of Environment and Conservation, Division of Water Resources, acknowledges the receipt of 4 sets of construction documents on September 8, 2015.

The project consists of replacing the damaged deep cell lagoon with two free surface wetlands systems. The design capacity of the system is 0.03 MGD per 30,000 gpd rated wetland system up to a maximum of 0.09 MGD. The initial system shall consist of two wetlands systems. The land allocated for dispersal of treated wastewater is rated at 90,000 gpd. Construction of the third wetland treatment system with accompanying approved drip emitter disposal system must be completed and placed in service one (1) year after the average daily flows during the academic portion of the year attain 85% of 0.06 MGD or 51,000 gpd. Plans and specifications if changed from those approved coincident with this permit must be submitted and approved in time to meet the above schedule. TN Wastewater Systems must also demonstrate evidence of property and system ownership of the expanded system at that time.

The permit holder shall keep the Division informed of construction progress including start of construction, liner installation, as well as, final inspection and start-up approval. The plans as approved do not include complete piping from the discharge of the collection system to the splitter box of the wetlands system and through the disc filters to the dispersal fields or surveyed property lines, boundaries and map and parcel numbers. This information must be provided to the Division as part of record drawings within 3 months of initiation of operation of the system, as well as, other feature of "as constructed" documentation in accordance with generally accepted engineering standards.

Approval is granted in accordance with certain requirements of the Water Quality Control (WQC) Act of 1977 and Regulations of the Water Quality Control Board. **The SITE set of plans and specifications will be stamped with the APPROVAL and APPROVAL EXPIRES STAMPS on the cover sheets only. Any indication of tampering with the bound set of documents will be subject to investigation and prosecution.** One complete set of construction documents, bearing the official stamp, must be kept at the construction site.

Approval expires one year from the stamped approval date (January 20, 2016) unless construction is either underway or complete. Any request for extension must be made prior to this expiration date.

Significant deviations from the approved plan documents must be submitted and approved in writing before such changes are made. Minor changes made during construction need not have prior written approval. Modifications, however, may be required by this Department should the changes be deemed inappropriate. It is advisable, therefore to obtain prior approval in cases where the significance of the change is uncertain.

Prior to commencement of construction, a subsurface investigation of the proposed site must be performed by a Geotechnical Consultant in conformance with ASTM D5777.

The Division of Water Resources is authorized to inspect the construction work to verify compliance with the approved plans and specifications, which are on the site. Therefore, the engineer shall notify our staff at the Nashville Central Office by calling (615) 532-5819 before the start of construction.

Approval of these construction documents should not be construed as a permit for any activities related to this project. Activities which may require a permit under the WQC Act and Regulations include, but are not limited to, the following: streambank vegetation removal; creek crossing(s) for equipment or utility lines; construction within twenty (20) feet of a stream bank; construction in or near a marshy area or wetland, and/or land disturbance greater than one acre. Additionally, this approval does not authorize connection and use of sewer that will cause or contribute to collection system overflow or overload of receiving wastewater treatment facility.

The Nashville Environmental Field Office should also be contacted for determinations regarding whether modification of the existing NPDES or SOP permit, an Aquatic Resource Alteration Permit (ARAP) and/or a National Pollutant Discharge Elimination System (NPDES) construction stormwater permit will need to be obtained prior to the beginning of construction of this project.

The division's most recent TDEC Technical/Engineering Documents, including "Design Criteria for Sewage Works", Chapters 1-17 are available on our website: http://www.tn.gov/environment/water/water-quality_publications.shtml#tech.

To expedite matters, please reference the assigned wastewater project number 14-0471 R on any future correspondence. If we may be of any assistance, please feel free to contact me at (615) 532-5819 or by E-mail at Allen.Rather@tn.gov.

Sincerely,



Allen Rather LPSS
Land-Based Systems Unit

cc: Water-Based Systems File
Ms. Ann M. Morbitt, Unit Manager, TDEC Division of Water Resources, Ann.Morbitt@tn.gov



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

January 21, 2016

Mr. Charles R. Hyatt, CEO
Adenus Group, LLC
e-copy: Charles.Hyatt@adenus.com
849 Aviation Parkway
Smyrna, TN 37167

**Re: State Operating Permit No. SOP-01028
TN Wastewater Systems - Maple Green Reclamation Facility
Coopertown, Robertson County, Tennessee**

Dear Mr. Hyatt:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed State Operating Permit. The continuance and/or reissuance of this Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the technical secretary of the Water Resources Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

If you have questions, please contact the Nashville Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Hari Akunuri at (615) 532-0650 or by E-mail at Hari.Akunuri@tn.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Brad C. Harris".

Brad C. Harris, P.E.
Manager, Land-based Systems

Enclosure

cc/ec: Water-based Systems File
Nashville Environmental Field Office
Mr. Allen Rather, Environmental Specialist 5, TDEC Division of Water Resources, Allen.rather@tn.gov
Mr. Brian Carter, Maintenance Manager, Adenus Operations LLC, brian.carter@adenus.com
Ms. Michelle Ramsey, Utilities Division, Tennessee Regulatory Authority, michelle.ramsey@tn.gov

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Modification

Permit No. SOP-01028

PERMIT

For the operation of Wastewater Treatment Facilities

In accordance with the provision of Tennessee Code Annotated section 69-3-108 and Regulations promulgated pursuant thereto:

PERMISSION IS HEREBY GRANTED TO

TN Wastewater Systems - Maple Green Reclamation Facility
Coopertown, Robertson County, Tennessee

FOR THE OPERATION OF

Septic tanks, effluent collection system, to new constructed wetlands and existing drip irrigation system. The entire treatment and drip site is fenced. The system is located at latitude 36.44019 and longitude -86.99603 in Robertson County, Tennessee to serve the Maple Green Reclamation Facility. The design capacity of the system is 0.09 MGD.

This permit is issued as a result of the application filed on September 8, 2015, in the office of the Tennessee Division of Water Resources. This permit is contingent on the submission and department approval of construction plans, specifications and other data in accordance with rules of the department. Updated plans and specifications must be approved before any further construction activity.

This permit shall become effective on: March 1, 2016

This permit shall expire on: June 30, 2018

Issuance date: February 1, 2016


for Tisha Calabrese Benton
Director

A. GENERAL REQUIREMENTS

Prior to commencement of construction, a subsurface investigation of the proposed site must be performed by a Geotechnical Consultant in conformance with ASTM D5777.

The treatment system shall be monitored by the permittee as specified below:

<u>Parameter</u>	<u>Sample Type</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Measurement Frequency</u>
Influent Flow*	Totalizer			Daily
Effluent Flow *	Totalizer			Daily
CBOD ₅	Grab	45 mg/l	N/A	Once/Quarter
Each 2 nd Cell Level	Measurement % of design depth	Report	N/A	Daily

* Report average daily flow for each calendar month.

The treatment system shall be monitored by the permittee as specified below for a period of five years:

<u>Parameter</u>	<u>Sample Type</u>	<u>Measurement Frequency</u>
Total Nitrogen	Grab	1/Quarter
pH and D.O. Each 2 nd Cell	Grab (Handheld)	See note
Rainfall	Continuous	Monthly See note

Note: Reading of pH or DO at the time of other quarterly samples. Reading may be from calibrated handheld meter.

Note: Rainfall data may be reported from regional NOAA sites.

Sampling requirements in the table above apply to effluent being discharged to the drip irrigation plots.

 This permit allows the operation of a wastewater drip irrigation system. There shall be no discharge of wastewater to any surface stream or any location where it is likely to enter surface waters. There shall be no discharge of wastewater to any open throat sinkhole. In addition, the drip irrigation system shall be operated in a manner preventing the creation of a health hazard or a nuisance.

Instances of ponding or pooling within the drip dispersal area not associated with a recent rainfall event shall be promptly investigated and noted on the Monthly Operations Report. The report shall include details regarding location(s), determined cause(s), the actions taken to eliminate the ponding, and the date the corrective actions were made. Ponding resulting in the discharge of treated wastewater into the Waters of the State or to locations where it is likely to move to Waters of the State shall be considered a violation of your State Operating Permit.

All drip fields shall be fenced sufficiently to prevent or impede unauthorized entry as well as to protect the facility from vandalism. Fencing shall be a minimum of four feet in height. Fencing shall be constructed of durable materials. Gates shall be designed and constructed in a manner to prevent or impede unauthorized entry. All designs are subject to division approval. Fence shall be installed prior to beginning of operation.

The site shall be inspected by the certified operator or his/her designee, at a minimum, once per fourteen days (default) OR in accordance with an operating and maintenance inspection schedule in the permit administrative file record. The default inspection frequency will apply if an operating and maintenance inspection schedule is not submitted to be a part of the permit administrative file record. The operating and maintenance inspection schedule shall at a minimum evaluate the following via onsite visits or telemetry monitoring or a combination of the two:

- the condition of the treatment facility security controls (doors, fencing, gates, etc.),
- the condition of the drip area security controls (doors, fencing, gates, etc.),
- the condition of the site signage,
- the operational status of the mechanical parts of the treatment system (pumps, filters, telemetry equipment, etc.)

Submission of the schedule, or revisions to the schedule, may be submitted to the division electronically. The schedule shall be submitted on or before the effective date of the permit. The permittee is responsible for maintaining evidence that the schedule, or revisions, have been submitted to the division.

B. MONITORING PROCEDURES

1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

Effluent to drip irrigation plots.

2. Test Procedures

Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136.

C. DEFINITIONS

The "daily maximum concentration" is a limitation on the average concentration, in milligrams per liter, of the discharge during any calendar day.

The "*monthly average concentration*", is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

A "grab sample" is a single influent or effluent sample collected at a particular time.

For the purpose of this permit, "*continuous monitoring*" means collection of samples using a probe and a recorder with at least one data point per dosing cycle.

A "quarter" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

D. REPORTING

1. Monitoring Results

Monitoring results shall be submitted quarterly. The quarterly report shall detail the following:

Submittals shall be postmarked no later than 15 days after the completion of the reporting period. A copy should be retained for the permittee's files. Operation reports and any communication regarding compliance with the conditions of this permit must be sent to:

Division of Water Resources
Nashville Environmental Field Office
711 R.S. Gass Boulevard
Nashville, TN 37216

The first operation report is due on the 15th of the month following the quarter containing the permit effective date.

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in 0400-40-05-.07(2)(h)2,

the results of such monitoring shall be included in the calculation and reporting of the values required in the Quarterly Operation Report. Such increased frequency shall also be indicated.

3. Falsifying Reports

Knowingly making any false statement on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 69-3-115 of the Tennessee Water Quality Control Act.

4. Signatory Requirement

All reports or information submitted to the commissioner shall be signed and certified by the persons identified in Rules 0400-40-05-.05(6)(a-c).

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

The permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Resources (the "Director") no later than 180 days prior to the expiration date.

2. Right of Entry

The permittee shall allow the Director, or authorized representatives, upon the notification of permittee and presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;

b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and

c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

All reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Resources.

4. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

The monitoring frequency stated in this permit shall not be construed as specifying a minimum level of operator attention to the facility. It is anticipated that visits to the treatment facility by the operator will occur at intervals frequent enough to assure proper operation and maintenance, but in no case less than one visit every fourteen days OR in accordance with an operating and maintenance inspection schedule in the permit administrative file record. If monitoring reports, division's inspection reports, or other information indicates a problem with the facility, the permittee may be subject to enforcement action and/or the permit may be modified to include increased parameter monitoring, increased monitoring frequency or other requirements as deemed necessary by the division to correct the problem. The permittee shall ensure that the certified operator is in charge of the facility and observes the operation of the system frequently enough to ensure its proper operation and maintenance regardless of the monitoring frequency stated in the permit

Dilution water shall not be added to comply with effluent requirements.

The drip dispersal area shall not be used for vehicular traffic or vehicular parking. Dozers, trucks, tractors, and other heavy vehicles shall not be allowed to run over the drip dispersal area lines or other parts of the system.

5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

6. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

7. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in section 69-3-108 (h) The Tennessee Water Quality Control Act as amended.

b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

3. Change of Ownership

This permit may be transferred to another person by the permittee if:

a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

Any permit noncompliance constitutes a violation of applicable State laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the appropriate Division environmental assistance center within 24 hours from the time the permittee becomes aware of the circumstances. (The environmental field office should be contacted for names and phone numbers of emergency response personnel.)

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

- i. A description of the discharge and cause of noncompliance;
- ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- iii. The steps being taken to reduce, eliminate, and prevent recurrence of the non-complying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Quarterly Operation Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

3. Overflow

a. **"Overflow"** means the unintended discharge to land or waters of Tennessee of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls.

b. Overflows are prohibited.

c. The permittee shall operate the collection system so as to avoid overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic overflows (greater than 5 events per year) or would otherwise overload any portion of the system.

d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic overflow point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to a Monthly Operating Report submitted to the local TDEC Environmental Field Office on a quarterly basis. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

e. In the event that more than 5 overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Resources EFO staff to petition for a waiver based on mitigating evidence.

4. Upset

a. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An upset occurred and that the permittee can identify the cause(s) of the upset;

ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

- iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and
- iv. The permittee complied with any remedial measures required under "Adverse Impact."

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. Bypass

a. "**Bypass**" is the intentional diversion of wastewater away from any portion of a treatment facility. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypasses are prohibited unless all of the following 3 conditions are met:

i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There are no feasible alternatives to bypass, such as the construction and use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass, which occurred during normal periods of equipment downtime or preventative maintenance;

iii. The permittee submits notice of an unanticipated bypass to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the director, if possible, at least 10 days before the date of the bypass.

c. Bypasses not exceeding permit limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 6.b.iii, above.

7. Washout

a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.

b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.

D. LIABILITIES

1. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law.

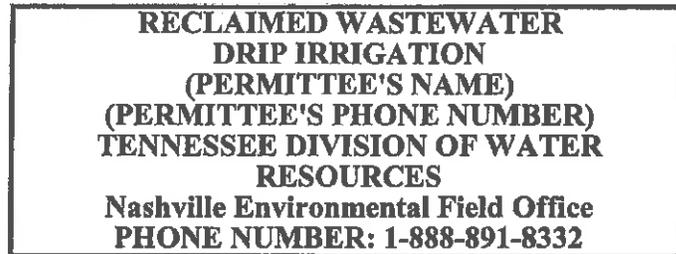
PART III OTHER REQUIREMENTS

A. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a Biological Natural System certified wastewater treatment operator and collection system shall be operated under the supervision of a the grade I certified collection system operator in accordance with the Water Environmental Health Act of 1984.

B. PLACEMENT OF SIGNS

The permittee shall place a sign at the entrance if the drip area is fenced or all reasonable approaches to the drip irrigation lot. The sign should be clearly visible to the public. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material



C. ADDITION OF WASTE LOADS

The permittee may not add wasteloads to the existing treatment system without the knowledge and approval of the division.

D. SEPTIC TANK OPERATION

The proper operation of this treatment system depends, largely, on the efficient use of the septic tank. The solids that accumulate in the tank shall be removed at a frequency that is sufficient to insure that the treatment plant will comply with the discharge requirements of this permit.

E. SEPTAGE MANAGEMENT PRACTICES

The permittee must comply with the provisions of Rule 0400-48-01-.22. If the septage is transported to another POTW for disposal, the permittee shall note the amount of septage wasted in gallons and name of the facility the hauler intends to use for disposal of the septage on the monthly operation report. Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

F. OWNERSHIP OF THE TREATMENT FACILITIES

a. The permittee shall own the treatment facilities (and the land upon which they are constructed) including the land to be utilized for drip or spray irrigation. A perpetual easement (properly recorded) may be accepted in lieu of ownership. If the permittee elects to make the treated wastewater available for reuse (irrigation of a golf course for example) a backup dedicated land application site must be provided or a perpetual easement must be obtained for the property where reuse is to take place. The perpetual easement must allow year-round application of the wastewater except where the permittee has provided (and the division has approved) storage facilities for periods when reuse is not available. Evidence of ownership of the treatment

facility land application site(s) and/or a copy of the perpetual easement(s) must be furnished to the division for approval prior to construction of the wastewater collection and treatment system.

b. Where the treatment facility serves private homes, condominiums, apartments, retirement homes, nursing homes, trailer parks, or any other place where the individuals being served have property ownership, rental agreements, or other agreements that would prevent their being displaced in the even of abandonment or noncompliance of the sewerage system, ownership of the treatment facilities must be by a municipality, a public utility, a wastewater authority, or a privately owned public utility (having a Certificate of Convenience and Necessity from the Tennessee Regulatory Authority), or another public agency.

G. COMPLIANCE SCHEDULE:

The design capacity of the system is 0.09 MGD based on available soil assimilation capacity of 90,000 gpd on a treatment capacity of 60,000 gpd rated wetland system up to a maximum of 0.09 MGD. Construction of the third 30,000 gpd wetland treatment system with accompanying approved drip emitter disposal system must be completed one (1) year after the average daily flows attain 85% of the 0.06 MGD. Plans and specifications for the additional wetland must have been approved and evidence of ownership of the property and system by TN Wastewater Systems be demonstrated.

The permit holder shall keep the Division informed of construction progress including start of construction, liner installation, as well as final inspection and start-up approval. The plans as approved do not include complete system piping between collection system discharge to wetland, to disc filter to the existing dosing system, or surveyed property lines, boundaries and map and parcel numbers. This information shall be provided to the Division as part of record drawings within 3 months of initiation of operation of the system, as well as, other features of “as constructed” documentation in accordance with generally accepted engineering standards.

Rationale
Permit modification
TN Wastewater Systems – Maple Green Reclamation Facility
SOP-01028
October 2015

The TN Wastewater Systems submitted an application for modification on September 3, 2015, to remedy a failed lagoon with a Free Water Surface (FWS) constructed wetlands treatment system designed in accordance with the Tennessee State *Sewerage Design Criteria* and the *Water Environment Federation, Manual of Practice No. FD-16, Natural Systems for Wastewater Treatment* (Third Edition). FWS systems are rare in Tennessee and additional monitoring will be required to ensure proper development of the treatment capacity.

The division is granting your request and imposes the following monitoring requirements for a period of 5 five years or one complete permit cycle. This data is necessary for evaluation of the treatment ability of this experimental system for use in future permit considerations. A five year period has been chosen for the monitoring since the complete vegetation and stabilization of the wetland performance is generally agreed to take at least three years. While the system is not considered “experimental”, per se, it is based entirely on empirical results and its performance needs to be monitored, tracked and adjusted until stable. The fact that the system will be assuming the load from an established system only emphasizes the importance of monitoring the system’s construction, operation and establishment.

The limit table is expanded to include additional monitoring and reporting requirements for:

1. Influent totalized flow on a monthly basis
2. Total Nitrogen each quarter:
3. Reading of each 2nd cell pH or D.O. once/quarter:
4. Daily record of each 2nd cell level
5. Daily rainfall totals

Influent totalized flow in addition to effluent flow monitoring is required due to the difficulty of monitoring flows at this location and the difficulty of readily monitoring water flows to customers from which wastewater flows could be estimated. Readings of Total Nitrogen are an indication of the establishment and viability of biological communities removing nutrients and the overall health of the biota. pH and Dissolved Oxygen in the effluent are indicative of minimum oxygen transfer rates and sufficient safety factor or the robust character of the natural treatment system. Water levels in the cells are critical to the natural system treatment performance and design parameters. Since the system will not be visited each day, remote level measurement is critical to monitoring the systems for proper operation and reducing damage during cold weather due to freezing and during hot weather due to potential deleterious aquatic plant exposure to hot and dry conditions. Daily rainfall totals are advisable for the evaluation of the demonstrated hydraulic capacity of the existing follow-on dispersal areas. The natural

wetlands present a potentially low cost treatment alternative for secondary treatment of domestic wastewater, but the relatively large footprint presents potentially wide fluctuations in critical wetland water levels due to high evaporation and precipitation rates.

The design capacity of the system is 0.03 MGD per wetland system up to a maximum of 3 wetlands or 0.09 MGD. When two wetlands are constructed in accordance with the approved plans and specifications, the wetland system is authorized to treat 0.060 MGD. Construction of the third wetland treatment system with accompanying approved drip emitter disposal system must be completed one (1) year after the average daily flows during the school year attain 85% of the 0.06 MGD.

Attachment 1

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES-WATER SUPPLY BRANCH
GROUND WATER MANAGEMENT SECTION
9th Floor, 401 Church Street
Nashville, Tennessee 37243-1549

MEMORANDUM

TO: Hari Akunuri, WPC-CO

FROM: Allen Rather, DWS- Ground Water Management Section

DATE: 10/21/2015

SUBJECT: LCSS/SFDS (Class V Injection) Approval
Maple Green Reclamation Facility
Coopertown, Robertson County, Tennessee
UIC File ROB 0000033 SOP-01028

The Division of Water Resources has reviewed the submittal of an Application for Authorization to Operate a Class V Underground Injection Well (Large Capacity Septic System/Subsurface Fluid Disposal System) utilizing conventional disposal for the waste water at the Maple Green Reclamation Facility located at Coopertown, Robertson County, Tennessee. This Division approves the application dated 9/08/2015.

If at any time the Division learns that a ground water discharge system may be in violation of The Tennessee Water Quality Control Act, the Division shall:

- a. require the injector to apply for an individual permit;
- b. order the injector to take such actions including, where required, closure of the injection well as may be necessary to prevent the violation; or
- c. take enforcement action.

All groundwater discharge activities must operate in such a manner that they do not present a hazard to groundwater.

Adenus shall also conduct a monthly visual inspection of the complete drip field looking for any signs of failure.

In accordance with Underground Injection Control (UIC) Rule 1200-4-6-.14 (3) "The owner of a Class V well shall be responsible for notifying the Department of change in ownership." This notification must be made to this Division within thirty (30) days of the change in ownership.

Also note that according to Underground Injection Control (UIC) Rule 1200-4-6-.14 (8)(d) "Upon completion of the well, the owner or operator must certify to the Department that the well has been completed in accordance with the approved construction plan, and must submit any other additional information required". The certification must be submitted to the UIC Program within thirty (30) days upon the completion/closure of the Class V well.

This Division will require a minimum of seven (7) working days advance notice before the construction on the drip system is to begin to allow for a witness from this Division to be present.

No drip emitters are to discharge directly into an open throat or crevice in the subsurface. All drip lines are to be installed on contour.

Our concurrence with your approach does not imply that this procedure is exempt from future changes or restrictions in the Underground Injection Control (UIC) Regulations, or any additional requirements set forth by the Division in order to protect the groundwater of Tennessee.

A copy of this authorization must be kept on site until the development has been completed and must be made available to inspection personnel.

Should you have any questions or comments please feel free to contact me at (615) 532-5819 or allen.rather@tn.gov.

c: file

Jeff Risdén

From: Charles Hyatt [charles.hyatt@adenus.com]
Sent: Monday, February 1, 2016 8:56 AM
To: 'Jeff Risdén'
Subject: FW: SOP-06035_ Summit_ View_160113_FMS_Public Notice Comments Received Jan_14_2016

From: Hari Akunuri [mailto:Hari.Akunuri@tn.gov]
Sent: Thursday, January 21, 2016 12:40 PM
To: Kevin A. Dean <Kdean@fmsllp.com>
Cc: copperridge303@bellsouth.net; Patsy Fulton <Patsy.Fulton@tn.gov>; Michelle Ramsey <Michelle.Ramsey@tn.gov>; Charles.Hyatt@adenus.com; 'Roy Denney' (roy.denney@adenus.com) <roy.denney@adenus.com>; Brad Harris <Brad.Harris@tn.gov>; George Garden <George.Garden@tn.gov>; Wade Murphy <Wade.Murphy@tn.gov>
Subject: RE: SOP-06035_ Summit_ View_160113_FMS_Public Notice Comments Received Jan_14_2016

All,

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Hari Akunuri
TDEC/DWR
William R. Snodgrass Tennessee Towers
312 Rosa L. Park Avenue, 11th Floor
Nashville, TN 37243
Email: Hari.Akunuri@tn.gov
Office: (615)532-0650
Fax: (615)532-0683

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From: Kevin A. Dean [mailto:Kdean@fmsllp.com]
Sent: Thursday, January 21, 2016 12:34 PM
To: Hari Akunuri
Cc: copperridge303@bellsouth.net; Patsy Fulton; Michelle Ramsey; Charles.Hyatt@adenus.com; 'Roy Denney' (roy.denney@adenus.com); Brad Harris; George Garden; Wade Murphy
Subject: RE: SOP-06035_ Summit_ View_160113_FMS_Public Notice Comments Received Jan_14_2016

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Mr. Akunuri,

I would respectfully request the attached flow data for October, November, and December of 2015, which was just received by my office today from Mr. John West, be added to (and supplement) our public comments (specifically section 1 on page 1) and request for public hearing acknowledged below.

Thanks,

Kevin A. Dean *Attorney*

550 W. Main Street, Suite 500 | P.O. Box 39 | Knoxville, Tennessee 37902
phone: 865.546.9321 | fax: 865.637.5249 | email: kdean@fmsllp.com

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For additional information about Frantz, McConnell & Seymour, LLP, including a list of attorneys, please visit our website at www.fmsllp.com

From: Hari Akunuri [<mailto:Hari.Akunuri@tn.gov>]
Sent: Thursday, January 14, 2016 9:06 AM
To: Kevin A. Dean <kdean@fmsllp.com>
Cc: copperridge303@bellsouth.net; Patsy Fulton <Patsy.Fulton@tn.gov>; Michelle Ramsey <Michelle.Ramsey@tn.gov>; Charles.Hyatt@adenus.com; 'Roy Denney' (<roy.denney@adenus.com> <roy.denney@adenus.com>); Brad Harris <Brad.Harris@tn.gov>; George Garden <George.Garden@tn.gov>; Wade Murphy <Wade.Murphy@tn.gov>
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Fax: (615)532-0683

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Jeff Ridsen

From: Charles Hyatt [charles.hyatt@adenus.com]
Sent: Monday, February 1, 2016 8:56 AM
To: 'Jeff Ridsen'
Subject: FW: SOP-01028 Final permit with minor change on Page 2 BOD to CBOD limit
Attachments: SOP-01028 Final Modified Permit 2015.pdf

From: Hari Akunuri [mailto:Hari.Akunuri@tn.gov]
Sent: Thursday, January 21, 2016 12:10 PM
To: Charles.Hyatt@adenus.com
Cc: 'Roy Denney' (roy.denney@adenus.com) <roy.denney@adenus.com>; Patsy Fulton <Patsy.Fulton@tn.gov>; Michelle Ramsey <Michelle.Ramsey@tn.gov>; Brad Harris <Brad.Harris@tn.gov>; Wade Murphy <Wade.Murphy@tn.gov>; Ann Morbitt <Ann.Morbitt@tn.gov>
Subject: SOP-01028 Final permit with minor change on Page 2 BOD to CBOD limit

All,

The attachment is the Final Permit. If you have trouble opening it, please let me know. We do not plan to send out a paper copy unless you instruct us otherwise. If you have questions about the contents of the document, please contact me.

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Fax: (615)532-0683

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From: Charles Hyatt [charles.hyatt@adenus.com]
Sent: Monday, February 1, 2016 8:56 AM
To: 'Jeff Ridsen'
Subject: FW: SOP-01028 Final Permit and plans approved letter
Attachments: SOP-01028_Final_Permit_Mofification_2015.pdf; SOP-01028_Plans 14-0471 Approval Letter.pdf

From: Hari Akunuri [mailto:Hari.Akunuri@tn.gov]
Sent: Thursday, January 21, 2016 9:19 AM
To: Charles.Hyatt@adenus.com
Cc: Michelle Ramsey <Michelle.Ramsey@tn.gov>; Patsy Fulton <Patsy.Fulton@tn.gov>; Brad Harris <Brad.Harris@tn.gov>; George Garden <George.Garden@tn.gov>; 'Roy Denney' (roy.denney@adenus.com) <roy.denney@adenus.com>; Ann Morbitt <Ann.Morbitt@tn.gov>; Wade Murphy <Wade.Murphy@tn.gov>
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Attachments: SOP-06035_ Summit_ View_ 160113_ FMS_ Public Notice Comments.pdf

From: Hari Akunuri [mailto:Hari.Akunuri@tn.gov]
Sent: Thursday, January 14, 2016 8:06 AM
To: kdean@fmsllp.com
Cc: copperridge303@bellsouth.net; Patsy Fulton <Patsy.Fulton@tn.gov>; Michelle Ramsey <Michelle.Ramsey@tn.gov>; Charles.Hyatt@adenus.com; 'Roy Denney' (roy.denney@adenus.com) <roy.denney@adenus.com>; Brad Harris <Brad.Harris@tn.gov>; George Garden <George.Garden@tn.gov>; Wade Murphy <Wade.Murphy@tn.gov>
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Jeff Ridsen

From: Charles Hyatt [charles.hyatt@adenus.com]
Sent: Monday, February 1, 2016 8:57 AM
To: 'Jeff Ridsen'
Subject: FW: SOP-15007 Signed final permit
Attachments: SOP-15007_Lookaway_Farm_Final_Drip_Irrigation_Permit 2015.pdf

From: Hari Akunuri [<mailto:Hari.Akunuri@tn.gov>]
Sent: Tuesday, January 5, 2016 9:17 AM
To: Charles.Hyatt@adenus.com
Cc: Michelle Ramsey <Michelle.Ramsey@tn.gov>; Patsy Fulton <Patsy.Fulton@tn.gov>; Wade Murphy <Wade.Murphy@tn.gov>; Brad Harris <Brad.Harris@tn.gov>; Ann Morbitt <Ann.Morbitt@tn.gov>
Subject: SOP-15007 Signed final permit

All,

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