

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

IN RE:)	
)	
PETITION OF TENNESSEE)	
WASTEWATER SYSTEMS, INC. FOR)	
APPROVAL OF CAPITAL)	DOCKET NO. 14-00136
IMPROVEMENT SURCHARGE AND)	
FINANCING ARRANGEMENTS)	

SUPPLEMENTAL STATUS REPORT

Tennessee Wastewater Systems, Inc. ("TWSI") submits the attached, additional information to supplement the "Status Report" filed December 23, 2015 in the above-captioned docket.

Following discussions with the Tennessee Department of Environment and Conservation ("TDEC"), TWSI revised its engineering plans for repairs at Cedar Hill and filed those revised plans with TDEC on September 8, 2015. On December 30, 2015, TDEC issued the attached letter approving the revised plans. Attached also is a new State Operating Permit issued to TWSI for the operation of the Cedar Hill treatment facility.

Respectfully submitted,



Henry Walker (B.P.R. No. 000272)
Bradley Arant Boult Cummings, LLP
1600 Division Street, Suite 700
Nashville, TN 37203
Phone: 615-252-2363
Email: hwalker@babco.com

CERTIFICATE OF SERVICE

I hereby certify that on the 31st day of December, 2015, a copy of the foregoing document was served on the parties of record, via electronic email transmission and regular U.S. Mail, postage prepaid, addressed as follows:

Erin Merrick
Assistant Attorney General
Consumer Advocate and Protection Division
P.O. Box 20207
Nashville, TN 37202-0207
Erin.Merrick@ag.tn.gov

Arthur G. Seymour, Jr.
Grantz, McConnell & Seymour, LLP
550 W. Main Street, Suite 500
P.O. Box 39
Knoxville, TN 37901
ajseymour@fmsllp.com


HENRY WALKER



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

December 30, 2015

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: 14-0763 R
 Project: Cedar Hill Reclamation Facility- Free Surface Wetlands

Dear Mr. Denney:

The Tennessee Department of Environment and Conservation, Division of Water Resources, acknowledges the receipt of 3 sets of construction documents on September 8, 2015.

The project consists of replacing the damaged deep cell lagoon with a free surface wetlands system. The design capacity of the system is 0.03 MGD per 30,000 gpd rated wetland system up to a maximum of 0.06 MGD. The land allocated for dispersal of treated wastewater is rated at 63,000 gpd. Construction of the second 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 0.03 MGD or 25,500 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, 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 (December 30, 2015) 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.

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 1-18 is 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 14-0763 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

December 30, 2015

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-05039
TN Wastewater Systems - Cedar Hill Treatment Facility
Cedar Hill, 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
Ms. Michelle Ramsey, Utilities Division, Tennessee Regulatory Authority, michelle.ramsey@tn.gov
Ms. Patsy Fulton, Utility Rate Specialist, Tennessee Regulatory Authority, Patsy.Fulton@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-05039

**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 - Cedar Hill Reclamation Facility
Cedar Hill, Robertson County, Tennessee

FOR THE OPERATION OF

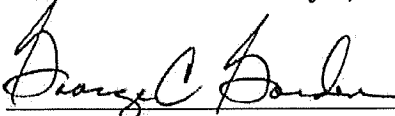
Septic tanks, effluent collection system, constructed wetlands and fenced drip system located at latitude 36.571 and longitude -86.97883 in Robertson County, Tennessee to serve Cedar Hill Reclamation Facility. The design capacity of the system is 0.06 MGD.

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: 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>
Influent Flow*	Totalizer			Daily
Effluent Flow *	Totalizer			Daily
CBOD ₅	Grab	45 mg/l	N/A	Quarterly
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	Quarterly
pH and D.O. Cell 2	Grab (Handheld)	Quarterly; 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.

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.)

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 (NOT APPLICABLE FOR THIS CONSTRUCTED WETLAND SYSTEM)

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.

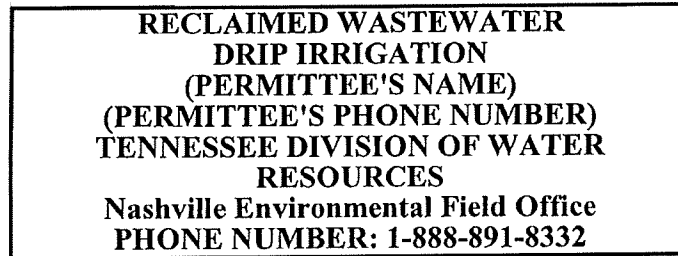
**PART III
OTHER REQUIREMENTS**

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



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 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 0.03 MGD per 30,000 gpd rated wetland system up to a maximum of 0.06 MGD. The land allocated for dispersal of treated wastewater is rated at 63,000 gpd. Construction of the second 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 0.03 MGD. 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, 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.

Rationale
Permit modification
TN Wastewater Systems – Cedar Hill Treatment Facility
SOP-05039
October 2015

The TN Wastewater Systems submitted an application for modification on September 3, 2015, to remedy a failed lagoon with a Free Water System (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 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 systems’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. pH or D.O. of the 2nd cell each quarter
4. Waterlevel from each 2nd cell daily
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 fluctuation in critical wetland water levels due to high evaporation and precipitation rates.

The design capacity of the system is 0.03 MGD per wetand system up to a maximum of 2 wetlands or 0.06 MGD. When one wetland is constructed in accordance with the approved plans and specifications, the wetland system is authorized to treat 0.03 MGD. Construction of the second wetland 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 0.03 MGD.

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: 10/20/2015

SUBJECT: LCSS/SFDS (Class V Injection) Approval
Cedar Hill Treatment Facility
Cedar Hill, Robertson County, Tennessee
UIC File ROB 0000028 SOP-05039

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 Cedar Hill Treatment Facility located at Cedar Hill, Robertson County, Tennessee. This Division approves the application dated 09/03/2015.

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