



Tennessee Wastewater Systems, Inc.
Docket 15-00025
January 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 – issues with expanding the system are being addressed with the HOA. Petition will soon be 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 – plans and modified SOP are currently noticed for public comment

Cedar Hill – Part of the 14-00136 Docket – plans and modified SOP have been approved by TDEC (confirmation letters attached)

Maple Green (NOV) – Part of the 14-00136 Docket - plans and modified SOP are currently noticed for public comment.

Jeff Riden

From: HAWKMS Agent [agent@hawkms.com]
Sent: Friday, January 1, 2016 11:36 AM
To: Charles.Hyatt@adenus.com; Brian.Carter@adenus.com; Roy.Denney@adenus.com; John.Czahoroski@adenus.com
Cc: jeff.riden@adenus.com; bob.pickney@adenus.com; matt.pickney@adenus.com
Subject: TRA KPI Compliance Report for 1/1/2016 11:35:09 AM

TRA Flow KPI Report for 12/31/2015

Tracy Nichols	Permitted	Expected	Actual	% of Expected	AvgFlow	% o
Cedar Hill DCP	75000	18036	0	0.00	6254.23	
Maple Green DCP	74000	39048	46680	1.20	52716.33	

Tony Smith	Permitted	Expected	Actual	% of Expected	AvgFlow	% o
Swan Harbour RSF	15800	1575	1495	0.95	173.78	
Tall Oaks RSF	45000	11900	19880	1.67	20833.33	

Jeremy Stewart	Permitted	Expected	Actual	% of Expected	AvgFlow	% o
Starr Crest I RSF	8000	2275	5227	2.30	1764.87	
Starr Crest II BC	28000	23450	34304	1.46	21597.07	
Summit View RSF	8000	5775	7960	1.38	5342.67	

Stone Hanson	Permitted	Expected	Actual	% of Expected	AvgFlow	% o
Townsend Town Square RSF	3640	3640	1618	0.44	1327.37	

Jeff Risdén

From: Charles Hyatt [charles.hyatt@adenus.com]
Sent: Tuesday, December 29, 2015 10:17 AM
To: jeff.risdén@adenus.com
Subject: FW: SOP Signed draft permits and public notice
Attachments: SOP-01028_Maple_Green_Modification Draft Drip Irrigation Permit 2015.pdf; SOP-06035_Summit_View Mod_Draft_Permit 2015.pdf; 151214-MMXV-023-PNOTICE.pdf

From: Hari Akunuri [mailto:Hari.Akunuri@tn.gov]
Sent: Wednesday, December 16, 2015 7:29 AM
To: Charles.Hyatt@adenus.com
Cc: Brad Harris <Brad.Harris@tn.gov>; Wade Murphy <Wade.Murphy@tn.gov>; John West <John.West@tn.gov>; Ann Morbitt <Ann.Morbitt@tn.gov>; George Garden <George.Garden@tn.gov>; Michelle Ramsey <Michelle.Ramsey@tn.gov>; Patsy Fulton <Patsy.Fulton@tn.gov>
Subject: SOP Signed draft permits and public notice

All,

The attachments are the Draft Permit and the Public Notice document. If you have trouble opening them, please let me know. We do not plan to send out paper copies unless you instruct us otherwise. If you have any corrections, comments or questions, please contact me.

Please consider saving a copy of this email for your records.



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

We accept and encourage electronic document submittals.



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 15, 2015

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

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

Dear Mr. Hyatt:

Enclosed please find one copy of the draft state operating permit, which the Division of Water Resources (the division) proposes to issue. The issuance of this permit is contingent upon your meeting all of the requirements of the Tennessee Water Quality Control Act and the rules and regulations of the Tennessee Water Quality Control Board.

If you disagree with the provisions and requirements contained in the draft permit, you have thirty (30) days from the date of this correspondence to notify the division of your objections. If your objections cannot be resolved, you may appeal the issuance of this permit. This appeal should be filed in accordance with Section 69-3-110, Tennessee Code Annotated.

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: Permit 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, from deep cell lagoon to constructed wetlands and 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:

This permit shall expire on: June 30, 2018

Issuance date:

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
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 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.

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 if 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**

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 0.06 MGD per 60,000 gpd rated wetland system up to a maximum of 0.09 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 attain 85% of the 0.06 MGD. Plans and specifications for the additional wetland must have been approved and evidence 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 piping, 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



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 15, 2015

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

**Subject: Draft of State Operating Permit No. SOP-06035
TN Wastewater Systems - Summit View Resort
Sevierville, Sevier County, Tennessee**

Dear Mr. Hyatt:

Enclosed please find one copy of the draft state operating permit, which the Division of Water Resources (the division) proposes to issue. The issuance of this permit is contingent upon your meeting all of the requirements of the Tennessee Water Quality Control Act and the rules and regulations of the Tennessee Water Quality Control Board.

If you disagree with the provisions and requirements contained in the draft permit, you have thirty (30) days from the date of this correspondence to notify the division of your objections. If your objections cannot be resolved, you may appeal the issuance of this permit. This appeal should be filed in accordance with Section 69-3-110, Tennessee Code Annotated.

If you have questions, please contact the Knoxville 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: Permit File
Knoxville Environmental Field Office
Ms. Michelle Ramsey, Utilities Division, Tennessee Regulatory Authority, michelle.ramsey@tn.gov
Mr. Roy Denney, Chief Technical Officer, Adenus Group LLC, roy.denney@adenus.com

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

**6th Floor, L & C Annex
401 Church Street
Nashville, TN 37243**

Modification

Permit No. SOP-06035

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 - Summit View Resort
Sevierville, Sevier County, Tennessee**

FOR THE OPERATION OF

Septic tanks, effluent collection system, recirculating sand filter ultraviolet disinfection and drip irrigation system located at latitude 35.815556 and longitude -83.479444 in Sevier County, Tennessee to serve approximately 32 units in the Summit View Resort. The design capacity of the system is 0.0185MGD.

This permit is issued as a result of the application filed on December 11, 2015, in the office of the Tennessee Division of Water Resources and in conformity with approved plans, specifications and other data submitted to the Department in support of the above application, all of which are filed with and considered as a part of this permit, together with the following named conditions and requirements.

This permit shall become effective on:

This permit shall expire on: August 31, 2017

Issuance date:

for Tisha Calabrese Benton
Director

CN-0759

RDAs 2352 & 2366

A. GENERAL REQUIREMENTS

The drip irrigation area is classified as attractive assess by the Division of Water Resources, the Knoxville Environmental Field Office. 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
<i>E. Coli</i> **	Grab	941 colonies/100 ml	N/A	Once /Quarter

* Report average daily flow for each calendar month.

**** Effluent limitation:** E.coli shall not exceed 941 CFU per 100 ml. Quarterly testing is required, which includes the proper collection and analysis of samples, and submission of the results to the Division. Proper sampling requires retrieving a representative sample of what the system is producing with no maintenance on the system being performed immediately prior to the sample being obtained, including, but not limited to, cleaning the Ultraviolet (“UV”) disinfection device.

In the event there are three consecutive E.coli samplings exceeding 941 CFU per 100 ml, sampling will be required every two weeks. When there are six (6) consecutive months of satisfactory E.coli readings (such period to include warm and cool/cold months and periods of high occupancy (if seasonal occupancy is expected), the Respondent shall be allowed to return to quarterly sampling.

Fencing is required by the permittee around the sand filter.

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 pools under dry weather conditions shall be promptly investigated and remedied. Instances of ponding or pools, or any wastewater runoff shall be noted on the monthly operation report. The report shall include details regarding the location(s), determined cause(s),

the actions taken to eliminate the ponding or pools, or any wastewater runoff, and the dates the corrective actions were made. Any wastewater runoff due to improper operation must be reported in writing to the Division of Water Resources, Knoxville Environmental Field Office within 5 days of discovery by the permittee.

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
Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, TN 37921

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 1200-4-5-.07(4)(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 1200-4-5-.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 Pollution Control (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, WPC 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 69-108-(F) 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 if 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
Knoxville Environmental Field Office
PHONE NUMBER: 1-888-891-8332**

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 Chapter 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 the name of the facility to which the septage was taken 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 permit holder shall keep the Division informed of construction progress including start of construction, as well as, final inspection and start-up approval. The plans as approved do not include complete piping, surveyed property lines, boundaries and map and parcel numbers or disposal field zones. This information shall be provided the Division as part of record drawings within 3 months of initiation of operation of the system by the Division, as well as, other features of “as constructed” documentation in accordance with generally accepted engineering standards.

**Rationale
Proposed Changes to SOP Permit
December 2015**

The division received a permit modification request on July 28, 2015 requesting the design capacity change from 0.008MGD to 0.0185 MGD to accommodate periods of peak flows. The division is granting the request based on additional soil areas and reengineering of the existing soil area. Other applicable permit conditions will remain same as previous permit. No additional connections outside of the Summit View Resort are provided for in this permit.

**Rationale
Proposed Changes to SOP Permit
August 2012**

The final permit is revised at issuance to address comments received by the permittee regarding effluent limiting and monitoring, site inspection frequency, entry notification and signage requirements. The revisions reflect an understanding reached regarding these and other issues between division staff and representatives of the permittee in a May 21, 2012, meeting held in the offices of the Division of Water Resources. The following persons were present at that meeting:

<u>Name</u>	<u>Representing</u>
Charles Hyatt	Adenus
Brian Carter	Adenus
Bob Pickney	Adenus
David Henry	TDEC-OGC
Hari Akunuri	TDEC-WPC
Wade Murphy	TDEC-WPC

These changes are not intended to resolve issues specifically as they relate to joint Underground Injection Control (UIC) authorization for the drip irrigation area covered by these SOPs.

Attachment 1
STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER SUPPLY
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: 4/28/2011

SUBJECT: LCSS/SFDS (Class V Injection) Approval
Summit View Resort
Sevierville, Sevier County, Tennessee
UIC File SEV 0000047 SOP-06035

The Division of Water Supply 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 disposal for the waste water at the Summit View Subdivision located at Sevierville, Sevier County, Tennessee. This Division approves the application dated 1/13/2011.

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.

Tennessee Wastewater Systems Inc 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.

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.

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.

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: Brad Harris, GWP- NCO
file



Public Participation Opportunity
Tennessee Department of Environment and Conservation (TDEC)
Division of Water Resources (DWR)
Notice Requesting Public Comments on Draft Permit Actions

December 14, 2015

Public Notice Number: **MMXV-023**
 Expiration Date: **January 18, 2016**

The purpose of this notice is to advise the public of the following proposed permit actions and to solicit comments and information necessary to evaluate the potential impact of the proposed activities on human health and the environment. A list of Notices of Intent (NOIs) received by the DWR is available on our DataViewer web page :

http://tn.gov/environment/topic/ppo_water

Individual NPDES Permits

Proposed Reissuances

Applicant Name	City of Martin Wastewater Treatment Plant		
Permit Number	TN0062545	Permit Writer Initials	AEMF Discharger rating Major
County	Weakley	EFO Name	Jackson
Street Address/Location	294 Agee Road		
City and/or Zip Code	Martin, TN 38237		
Description of Activity	Treatment of municipal sewage		
Effluent Description	treated municipal wastewater from Outfall 001		
Receiving Stream	unnamed tributary at mile 0.25 to Cane Creek mile 7.7		
Facility Latitude	36.31	Facility Longitude	-88.90

Applicant Name	Green Plains Obion LLC		
Permit Number	TN0080446	Permit Writer Initials	JAH Discharger rating Minor
County	Obion	EFO Name	Jackson
Street Address/Location	2098 McDonald Road		
City and/or Zip Code	Rives, TN 38253		
Description of Activity	This facility is a 125 million gallon per year ethanol manufacturing plant.		
Effluent Description	filter backwash, reverse osmosis wastewater, cooling tower blow down, and softener wastewater from Outfall 001 via the Troy Wastewater Lagoon discharge line		
Receiving Stream	Obion River at mile 61.2 (tributary to Mississippi River)		
Facility Latitude	36.28	Facility Longitude	-89.15

Applicant Name	Harpeth Valley Utility District STP		
Permit Number	TN0074748	Permit Writer Initials	MTS Discharger rating Major
County	Davidson		EFO Name Nashville
Street Address/Location	4063 Old Hickory Blvd.		
City and/or Zip Code	Nashville, TN 37221		
Description of Activity	Treatment of municipal sewage		
Effluent Description	treated municipal wastewater from Outfall 001 through submerged diffuser		
Receiving Stream	Cumberland River Mile 172.4		
Facility Latitude	36.14	Facility Longitude	-86.92
<hr/>			
Applicant Name	Jackson-Madison County School System - Beech Bluff Elementary School		
Permit Number	TN0023272	Permit Writer Initials	HVA Discharger rating Minor
County	Madison		EFO Name Jackson
Street Address/Location	4488 Beech Bluff Road		
City and/or Zip Code	Beech Bluff, TN 38313		
Description of Activity	treatment of domestic wastewater by extended aeration		
Effluent Description	treated domestic wastewater from Outfall 001		
Receiving Stream	mile 0.17 of an unnamed tributary which enters the North Fork of the South Fork of the Forked Deer River at 8.1		
Facility Latitude	35.60	Facility Longitude	-88.63
<hr/>			
Applicant Name	Jarden Zinc Products, Inc.		
Permit Number	TN0001899	Permit Writer Initials	JAH Discharger rating Major
County	Greene		EFO Name Johnson City
Street Address/Location	2500 Old Stage Road		
City and/or Zip Code	Greeneville, TN 37744		
Description of Activity	Melting & casting of alloyed zinc strip, rolling & drawing of non-ferrous metals (zinc), and stamping & electroplating of ferrous and non-ferrous coinage products.		
Effluent Description	non-contact cooling water and air conditioner cooling water from Outfall 001 during dry weather conditions; noncontact cooling water, air conditioner cooling water, and storm water runoff through Outfall SW1 during wet weather conditions; storm water through Outfall 004 during wet weather conditions; treated process wastewater, treated sanitary wastewater, and remediated groundwater through Outfall 002; and treated process wastewater, treated sanitary wastewater, and remediated groundwater through Outfall 02E under emergency conditions		
Receiving Stream	mile 2.9 of Sinking Creek (Outfalls 001, SW1 and 02E) and mile 60.5 of the Nolichucky River (Outfall 002) and Outfall 004 at mile 2.8 of Sinking Creek		
Facility Latitude	36.20	Facility Longitude	-82.74
<hr/>			
Applicant Name	McKenzie STP		
Permit Number	TN0020613	Permit Writer Initials	SEF Discharger rating Major
County	Carroll		EFO Name Jackson
Street Address/Location	482 Clark Street		
City and/or Zip Code	(mailing P.O. Box 160) Mc Kenzie, TN 38201		
Description of Activity	Treatment of municipal sewage		
Effluent Description	treated municipal wastewater from Outfall 001		
Receiving Stream	Spring Creek at mile 2.8 to Clear Creek at mile 2.4 to South Fork Obion River at mile 27		
Facility Latitude	36.12	Facility Longitude	-88.51

Applicant Name **Newport STP**
Permit Number **TN0020702** Permit Writer Initials **JCM** Discharger rating **Major**
County **Cocke** EFO Name **Knoxville**
Street Address/Location **465 Lisega Blvd.**

(mailing P.O. Box 519, Newport, TN 37822)
City and/or Zip Code **Newport, TN 37821**
Description of Activity **Treatment of municipal sewage**
Effluent Description **treated municipal wastewater from Outfall 001**
Receiving Stream **Pigeon River Mile 4.0**
Facility Latitude **35.98** Facility Longitude **-83.20**

Applicant Name **Vertex Chemical Corporation**
Permit Number **TN0058394** Permit Writer Initials **JCM** Discharger rating **Minor**
County **Shelby** EFO Name **Memphis**
Street Address/Location **2825 Channel Avenue**
City and/or Zip Code **Memphis, TN 38113**
Description of Activity **Manufacturer of sodium hypochlorite**
Effluent Description **non-contact cooling water from Outfall 001**
Receiving Stream **McKellar Lake at approximate mile 4.0**
Facility Latitude **35.08** Facility Longitude **-90.14**

Proposed Terminations

Applicant Name **Kittrell Elementary School**
Permit Number **TN0067253** Permit Writer Initials **HVA** Discharger rating **Minor**
County **Rutherford** EFO Name **Nashville**
Street Address/Location **7801 Woodbury Pike**
City and/or Zip Code **Readyville, TN 37149**
Description of Activity **Septic tank, recirculating media filter with disposal of wastewater via drip irrigation and also direct discharge when needed. The county school system decided to terminate this permit. The drip irrigation activity is now covered under SOP-15025.**
Effluent Description **treated domestic wastewater from Outfall 001 and drip irrigation**
Receiving Stream **Cripple Creek at mile 5.2**
Facility Latitude **35.83** Facility Longitude **-86.25**

Applicant Name **Whirlpool Corporation**
Permit Number **TN0074977** Permit Writer Initials **JAH** Discharger rating **Minor**
County **Davidson** EFO Name **Nashville**
Street Address/Location **1714 Heil Quaker Blvd**
City and/or Zip Code **La Vergne, TN 37086**
Description of Activity **The remediation project involving the extraction and treatment of groundwater containing low levels of chlorinated solvents from a facility has been completed. The treatment system has been permanently decommissioned.**
Effluent Description **treated groundwater from Outfall 001**
Receiving Stream **(Holloway Branch at mile 0.5 to) Hurricane Creek at mile 4.8**
Facility Latitude **36.02** Facility Longitude **-86.60**

State Operation Permits

Proposed Modifications

Applicant Name **TN Wastewater Systems - Maple Green Reclamation Facility**
 Permit Number **SOP-01028** Permit Writer Initials **HVA** Discharger rating **Minor**
 County **Robertson** EFO Name **Nashville**
 Street Address/Location **Sandy Springs Road**
 City and/or Zip Code **Coopertown, TN 37172**
 Description of Activity **This modification authorizes operation of septic tanks, effluent collection system, drip irrigation system and conversion from deep cell lagoon to experimental constructed wetlands. The design flow is increased to 0.09 MGD.**
 Wastewater Description **No discharge allowed**
 Receiving Stream **N/A**
 Facility Latitude **36.44** Facility Longitude **-87.00**

Applicant Name **TN Wastewater Systems - Summit View Resort**
 Permit Number **SOP-06035** Permit Writer Initials **HVA** Discharger rating **Minor**
 County **Sevier** EFO Name **Knoxville**
 Street Address/Location **2251 Upper Middle Creek Rd.**
 City and/or Zip Code **Sevierville, TN 37876**
 Description of Activity **Septic tanks, effluent collection system, recirculating sand filter ultraviolet disinfection and drip irrigation. Modification increases design capacity from 8,000 gpd to 18,500 gpd.**
 Wastewater Description **No discharge allowed from this system**
 Receiving Stream **N/A**
 Facility Latitude **35.82** Facility Longitude **-83.48**

Proposed New Issuances

Applicant Name **Camden STP**
 Permit Number **SOP-15022** Permit Writer Initials **HVA** Discharger rating **Minor**
 County **Benton** EFO Name **Jackson**
 Street Address/Location **Hildon King Road**
 City and/or Zip Code **Camden, TN 38320**
 Description of Activity **Collection system, 2-cell, partial mix lagoon, storage lake and fenced spray irrigation system on 300+ acres in Benton County to serve the city. The treatment capacity is 0.5 MGD and the irrigation disposal capacity is 1.5 MGD.**
 Wastewater Description **No discharge allowed from this system**
 Receiving Stream **N/A**
 Facility Latitude **36.05** Facility Longitude **-88.07**

Applicant Name **Finish Line Truck Wash, LLC**
 Permit Number **SOP-15009** Permit Writer Initials **WDM** Discharger rating **Minor**
 County **Davidson** EFO Name **Nashville**
 Street Address/Location **3301 Knight Road**
 City and/or Zip Code **Nashville, TN 37207**
 Description of Activity **Vehicle washing with wash water collected and transported to public sewer for treatment.**
 Wastewater Description **No Discharge Allowed**
 Receiving Stream **NA**
 Facility Latitude **36.24** Facility Longitude **-86.79**

Proposed Reissuances

Applicant Name	Greater Things Baptist church aka Eastside Baptist Church		
Permit Number	SOP-96044	Permit Writer Initials	HVA Discharger rating Minor
County	Dickson	EFO Name	Nashville
Street Address/Location	2612 White Bluff Road		
City and/or Zip Code	Burns, TN 37029		
Description of Activity	Septic tank, recirculating gravel filter and drip irrigation		
Wastewater Description	No discharge allowed		
Receiving Stream	N/A		
Facility Latitude	36.04	Facility Longitude	-87.23
<hr/>			
Applicant Name	Mirror Lawn Turf Doctor, Inc.		
Permit Number	SOP-07070	Permit Writer Initials	WDM Discharger rating Minor
County	Madison	EFO Name	Jackson
Street Address/Location	51 Conrad Drive PO Box 7966		
City and/or Zip Code	Jackson, TN 38302		
Description of Activity	Pressure washing of parking lots and related appurtenances with collection and transport of the wash water to a public sewer system for treatment.		
Wastewater Description	No discharge allowed.		
Receiving Stream	N/A		
Facility Latitude	35.69	Facility Longitude	-88.82
<hr/>			
Applicant Name	Rutherford County Board of Education - Kittrell Elementary School		
Permit Number	SOP-15025	Permit Writer Initials	HVA Discharger rating Minor
County	Rutherford	EFO Name	Nashville
Street Address/Location	7801 Woodbury Pike		
City and/or Zip Code	Readyville, TN 37149		
Description of Activity	Septic tank, effluent collection system and recirculating sand filter and fenced drip irrigation. This activity is existing and formerly covered under NPDES # TN0067253.		
Wastewater Description	No direct discharge allowed from this system		
Receiving Stream	N/A		
Facility Latitude	35.83	Facility Longitude	-86.25
<hr/>			

Proposed Terminations

Applicant Name	Bauer Foundation Corporation - Center Hill Main Dam Construction Site		
Permit Number	SOP-12006	Permit Writer Initials	WDM Discharger rating Minor
County	DeKalb	EFO Name	Cookeville
Street Address/Location	Intersection of Hwy 96 & 141		
City and/or Zip Code	Lancaster, TN		
Description of Activity	Pump and haul of domestic wastewater to the McMinnville STP for the duration of the construction project. Termination requested by the permittee now that construction is complete and the system is decommissioned.		
Wastewater Description	No discharge allowed		
Receiving Stream	NA		
Facility Latitude	36.09	Facility Longitude	-85.82
<hr/>			

POTW - Pretreatment Program Approvals:

None

The Division of Water Resources is authorized to approve local POTW Pretreatment Programs for the administration and enforcement of the National Pretreatment Standards of Performance for industrial users of the respective Publicly Owned Treatment Works listed in this notice. Additionally, the POTW Programs are required to prevent the introduction of pollutants into the POTW's which will interfere with their operation, including the use or disposal of sludge, and prevent the introduction of pollutants into the POTW's which will pass through the treatment works or be otherwise incompatible. All POTW Pretreatment Programs approved are in accordance with the Tennessee Water Quality Control Act, the federal Clean Water Act, and appropriate regulations.

End of List

How to Comment:

TDEC is requesting public comment on this permit action. Obtaining a broad range of facts and opinions on Agency actions is one of the best ways to ensure quality decisions. Persons wishing to comment on the proposed action are invited to submit comments in writing to the Division of Water Resources at William R. Snodgrass - Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243-1102, Attn: Public Notice Coordinator, by fax number (615) 532-0686, or by E-mail at Water.Permits@tn.gov. Comments must be received by the public notice expiration date (January 18, 2016).

How to Request a Public Hearing:

Interested persons may request in writing that the Director of the Division of Water Resources hold a public hearing on any application. The request must be filed by the public notice expiration date (January 18, 2016) and must indicate the interest of the party filing it and the reasons why such a hearing is warranted. When there is significant public interest for a hearing, a hearing will be conducted according to Division of Water Pollution Control Rule 0400-40-05-.06(12). Public hearings will be announced through another public notice.

How the Department will Proceed:

The Director of the Division of Water Resources will determine the final permit action after considering comments submitted during the comment period, the hearing record, if any, and the requirements of the Federal and State acts and regulations.

To Obtain Permit Details:

Copies of the application(s) and draft permit(s) are also available for public inspection by contacting TDEC at <http://state.tn.us/environment/field-offices.shtml>, by calling 1-888-891-TDEC (8332), or by visiting the following locations during normal business hours:

Environmental Field Office - Chattanooga
1301 Riverfront Parkway, Suite 206
Chattanooga, TN 37402
(423) 634-5745
Bledsoe, Bradley, Grundy, Hamilton, Marion, McMinn, Meigs, Polk, Rhea, Sequatchie

Environmental Field Office - Columbia
1421 Hampshire Pike
Columbia, TN 38401
(931) 380-3371
Bedford, Coffee, Franklin, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry, Wayne

Environmental Field Office - Cookeville
1221 South Willow Avenue
Cookeville, TN 38506
(931) 432-4015

Cannon, Clay, Cumberland, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren, White

Environmental Field Office - Jackson
1625 Hollywood Drive
Jackson, TN 38305
(731) 512-1300

Benton, Carroll, Chester, Crockett, Decatur, De Kalb, Dyer, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Lake, Lauderdale, Madison, McNairy, Obion, Weakley

Environmental Field Office - Johnson City
2305 Silverdale Road
Johnson City, TN 37601
(423) 854-5400

Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, Washington

Environmental Field Office - Knoxville
3711 Middlebrook Pike
Knoxville, TN 37921
(865) 594-6035

Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, Union

Environmental Field Office - Memphis
8383 Wolf Lake Drive
Bartlett, TN 38133-4119
(901) 371-3000
Fayette, Shelby, Tipton

Environmental Field Office - Nashville
711 R.S. Gass Boulevard
Nashville, TN 37243
(615) 687-7000

Cheatham, Davidson, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson, Wilson

List of DWR Permit Writers

AEWF	Ms. Ariel Wessel-Fuss	(615) 532-0642	Ariel.Wessel-Fuss@tn.gov
BCH	Mr. Brad Harris	(615) 532-5367	Brad.Harris@tn.gov
BKC	Mr. Brian Canada	(615) 532-0660	Brian.Canada@tn.gov
CEE	Ms. Caitlin Elam	(615) 532-0359	Caitlin.Elam@tn.gov
HVA	Mr. Hari Akunuri	(615) 532-0650	Hari.Akunuri@tn.gov
JAH	Miss Julie Harse	(615) 532-0682	Julie.Harse@tn.gov
JCM	Mr. Jim McAdoo	(615) 532-0684	Jim.McAdoo@tn.gov
JCN	Mr. John Newberry	(615) 532-7743	John.Newberry@tn.gov
JWo	Ms. Jeanene Woodruff	(615) 532-0645	Jeanene.Woodruff@tn.gov
MEP	Ms. Meghan Ploch	(615) 532-0646	Meghan.Ploch@tn.gov
MTS	Ms. Maybelle T. Sparks	(615) 532-0651	Maybelle.Sparks@tn.gov
PJH	Mr. Paul Higgins	(615) 532-1178	Paul.Higgins@tn.gov
PLB	Mr. Lyle Bentley	(615) 532-0154	Lyle.Bentley@tn.gov
PMS	Mr. Phil Simmons	(615) 532-0358	Phil.Simmons@tn.gov
RDB	Mr. Robert D. Baker	(615) 532-0710	Robert.D.Baker@tn.gov
REA	Mr. Bob Alexander	(615) 532-0659	Robert.Alexander@tn.gov
RGO	Mr. Robert O'Dette	(615) 253-5319	Robert.Odette@tn.gov
RJW	Mr. Robert Wayne	(615) 532-0709	Robert.J.Wayne@tn.gov

SEF	Ms. Souraya Fathi	(615) 532-0485	Souraya.Fathi@tn.gov
VLJ	Ms. Vena Jones	(615) 253-5320	Vena.L.Jones@tn.gov
VMJ	Mr. Vojin Janjic	(615) 532-0670	Vojin.Janjic@tn.gov
WDM	Mr. Wade Murphy	(615) 532-0666	Wade.Murphy@tn.gov
WML	Mr. Mike Lee	(615) 532-0712	Mike.Lee@tn.gov

State of Tennessee Antidegradation Policy:

Antidegradation determinations have been made in regard to the permits referenced in this Public Notice. Tennessee's Antidegradation Statement is found in Chapter 0400-40-03-.06 of the Rules of the Tennessee Department of Environment and Conservation. The primary purpose of the antidegradation policy is to establish a greater level of protection for those waters that are identified to be of high quality. Generally, there are two types of high quality waters. Some high quality waters are those at near pristine conditions. These Outstanding National Resource Waters (ONRWs) are specifically designated by the Tennessee Board of Water Quality, Oil and Gas and are afforded the greatest level of protection. No new discharges or expansion of existing discharges are allowed to result in degradation of the existing water quality. Waters determined to be high quality due to specialized uses and/or unique features and are identified by the Department as Exceptional Tennessee Waters are also protected against degradation.

Some degradation may be allowed in the Exceptional Tennessee Waters only if the Tennessee Board of Water Quality, Oil and Gas deems it economically and socially necessary. Other surface waters not specifically identified and/or designated as high quality are referred to as waters with available or unavailable conditions. Generally, new discharges or increases in existing discharges may be allowed in waters not identified as ONRWs or Exceptional Tennessee Waters. The Division of Water Resource's evaluation of such discharges may include the following provisions:

- The proposed lowering of water quality by the discharge is necessary for economic growth or community benefit; the proposed discharge can not be mitigated by reasonable pollution prevention measures; and
- There is no other reasonable non-discharge alternative available to prevent the new/increased discharge to waters with available or unavailable conditions.

In all cases, the proposed discharge must meet water quality standards and fully protect all classified uses. Information used by the Division of Water Resources in evaluating any of the above provisions is available upon request.

State of Tennessee Policy of Non-Discrimination:

Pursuant to the State of Tennessee's policy of non-discrimination, the Tennessee Department of Environment and Conservation does not discriminate on the basis of race, sex, religion, color, national or ethnic origin, age, disability, or military service in its policies, or in the admission or access to, or treatment or employment in its programs, services or activities. Equal Employment Opportunity/Affirmative Action inquiries or complaints should be directed to the EEO/AA Coordinator, Office of General Counsel, William R. Snodgrass - Tennessee Tower, 312 Rosa L. Parks Avenue, 2nd Floor, Nashville, Tennessee 37243-1102, 1-888-867-7455. ADA inquiries or complaints should be directed to the ADA Coordinator, Human Resources Division, William R. Snodgrass - Tennessee Tower, 312 Rosa L. Parks Avenue, 2nd Floor, Nashville, Tennessee 37243-1102, 1-866-253-5827.

Please bring this notice to the attention of persons you believe will be interested.

Jeff Ridsen

From: Roy Denney [roy.denney@adenus.com]
Sent: Friday, December 18, 2015 10:56 AM
To: Jeff Ridsen
Subject: Fwd: Outstanding TWSI Actions

Sent from my iPhone

Begin forwarded message:

From: George Garden <George.Garden@tn.gov>
Date: December 18, 2015 at 9:49:25 AM CST
To: "Roy.denney@adenus.com" <Roy.denney@adenus.com>
Cc: George Bell <George.Bell@tn.gov>, Brad Harris <Brad.Harris@tn.gov>, "Hari Akunuri" <Hari.Akunuri@tn.gov>
Subject: Outstanding TWSI Actions

Roy, I'm out next week; but can receive (and will reply to) emails and cell phone calls except on 24-26 December; I will be back in the office Dec 28. Hari and I will be knocking stuff out that last week in December.

Cedar Hill:

1. SOP: public notice completed; final permit in preparation; anticipate mailing prior to December 29.
2. Plans, Specs, Engineering Report: Review completed; approved; stamped & approved plans to be mailed with final permit.

Summit View:

1. SOP: on public notice as of December 15; anticipating comments and possible public hearing.
2. Plans, Specs, Engineering Report: Review complete; approval pending results of public comment period.
3. Response to request for information from Homeowner's Association
 - a. Engineer: plans to be sent; detailed response to be mailed prior to end of the year
 - b. Attorney: plans and copy of response to engineer to be provided

Maple Green

1. SOP: on public notice as of December 15; expect final permit by the end of January 2016
2. Plans, Specs, Engineering Report: Review complete; approval pending results of public comment period.

Smoky Village: Roy: I believe we have finished these but I need to check on the status when I get back in the office tonight.

1. SOP:
2. Plans, Specs, Engineering Report:



George C. Garden, P.E. BCEE | Chief Engineer
Division of Water Resources
11th Floor, William R. Snodgrass TN Tower
312 Rosa L. Parks Avenue
Nashville TN 37243-1102
p. 615-253-9934 c. 615-416-0164
george.garden@tn.gov

Jeff Ridsen

From: Roy Denney [roy.denney@adenus.com]
Sent: Tuesday, December 29, 2015 10:13 AM
To: Jeff Ridsen
Subject: Fwd: Maple Green Response to Comments Draft
Attachments: 151211_Public Notice - Responses.docx

----- Forwarded Message -----

Subject: Maple Green Response to Comments Draft
Date: Fri, 11 Dec 2015 19:22:51 +0000
From: George Garden <George.Garden@tn.gov>
To: Roy.denney@adenus.com <Roy.denney@adenus.com>

This is where we are headed with our response to your diatribe.

Maple Green went on public notice with 60,000 gpd capacity because that is what we were under the impression you were asking for. Since we are at 90,000 we need to place on notice again this Tuesday.

Cedar Hill is ready to go. We are working on draft permits with the changes we accepted after our discussion and we'll let you see the draft before we send it to you.

Something to think about before we talk. Multiple wetland cells; they are designed based primarily on area, depth and detention time. If we do not measure influent or separate effluents how do we know that the flow is adequately split between the cells?



George C. Garden, P.E. BCEE | Chief Engineer
Division of Water Resources
11th Floor, William R. Snodgrass TN Tower
312 Rosa L. Parks Avenue
Nashville TN 37243-1102
p. 615-253-9934 c. 615-416-0164
george.garden@tn.gov

Jeff Ridsen

From: Roy Denney [roy.denney@adenus.com]
Sent: Tuesday, December 29, 2015 10:12 AM
To: Jeff Ridsen
Subject: Fwd: FW: Maple Green

----- Forwarded Message -----

Subject:FW: Maple Green

Date:Wed, 9 Dec 2015 17:09:11 +0000

From:George Garden <George.Garden@tn.gov>

To:Roy.denney@adenus.com <Roy.denney@adenus.com>

CC:Allen Rather <Allen.Rather@tn.gov>, Brad Harris <Brad.Harris@tn.gov>

Roy, I have 3.74 + 4.75 or 8.49 acres. At 0.25 gpd/sf that represents 92,456 gpd or 0.243 gpd/sf. Based on no reason not to approach the 0.25 limit, we will alter the permit to 90,000 with the condition that we do not exceed 80% of the existing capacity (60,000 gpd \times 0.8=48,000 gpd without construction of the third wetland.

From: Allen Rather
Sent: Wednesday, December 09, 2015 7:18 AM
To: George Garden
Subject: Maple Green

George, There are two areas for drip at Maple Green. A 3.74 and 4.75 acre sites for a total of 73,880 gallons /day at .2 loading rate.

Allen

Jeff Ridsen

From: Roy Denney [roy.denney@adenus.com]
Sent: Tuesday, December 29, 2015 10:12 AM
To: Jeff Ridsen
Subject: Fwd: FW: Summit View

----- Forwarded Message -----

Subject:FW: Summit View
Date:Wed, 9 Dec 2015 14:38:09 +0000
From:George Garden <George.Garden@tn.gov>
To:Roy.denney@adenus.com <Roy.denney@adenus.com>
CC:Allen Rather <Allen.Rather@tn.gov>, Brad Harris <Brad.Harris@tn.gov>

See the email stream below on our calculations on Summit View disposal areas. With the existing problems in the original field there is no way we are going to allow loading higher than the 0.25 gpd/sf allowed in the Criteria, if that. If I permit at the requested 18,500 gpd/83,400 sq ft the loading rate is 0.222 gpd/sf. To make this work, I'll have to insist as we did a couple of months ago, that both old and new areas have to be maximized; and the existing wet area of the original field needs to be on a separate zone that is only used during the highest flow rates. All the drip hose has to be on grade with special attention to ensure that the low areas of the drip are NOT in the watercourses. The plans show a "curtain drain" to divert ground water off the disposal fields; positive surface drainage diversions need to be in place for both the original and new fields.

From: Allen Rather
Sent: Wednesday, December 09, 2015 8:05 AM
To: George Garden
Subject: RE: Summit View

Old area 47,500 sq. ft. counting 20,000 sq. ft of 30-50% stuff . New area 35,900 sq. ft. staying 15 off the road cut and 10 off the property line.

From: George Garden
Sent: Wednesday, December 09, 2015 8:00 AM
To: Allen Rather
Subject: RE: Summit View

Is this both the old and new areas? Can you break out the two areas and check to see if the first area sq ft = what we originally permitted?

From: Allen Rather
Sent: Wednesday, December 09, 2015 7:58 AM
To: George Garden
Subject: Summit View

George,
On the existing site if we allow them to use the area that is 30-50% slope, they have approximately 47,500 square feet, 20,000 being the 30-50% slope.

The new area after setback contains approximately 35,900 square feet. Total area 83,400 sq. ft. At .2 we're looking at 16,680gpd. Since this is a repair to the existing system, I don't think we should allow them any additional connections. Hope this helps.

Allen



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 10, 2015

Mr. Roy Denny, PE
CTO, Adenus Group, LLC
849 Aviation Parkway
Smyrna TN 37167

Subject: Response to Comments to Proposed Draft Permit SOP-01038
Maple Green Reclamation System

Dear Mr. Denny,

This letter is in response to the Comments provided and dated November 25, 2015.

The term "experimental system" will be omitted from the permit. However, the designer is reminded that the authors of *Natural Systems for Wastewater Treatment (Third Edition) WEP Manual of Practice No. FD-16* felt constrained to add the comment: *"Various physical, chemical, and biological treatment responses occurring in wetlands have also been identified...These responses can occur concurrently or sequentially in the wetland because of the dual aerobic-anoxic environments present at the microsite level. Unfortunately, sufficient data are not yet available to precisely define these mechanisms and their relationships."*

Thus, the present generation of design models approximates system performance based on system input-output data. The rate constants involved do not actually describe the time of spatially dependent removal mechanisms in wetlands, but they are apparent rate constants that describe the change in input versus output data as though the wetland were a simple black box reactor. This present status of wetland system design is not unique because using empirical models still dominates design procedures for many well-known conventional treatment processes." [Emphasis added by author.] immediately before the section outlining the formulas used and accepted for this design.

Additional monitoring beyond that normally required was added by an understanding that Adenus had volunteered to provide additional data the Division deemed advantageous to continue to refine

successful designs in Tennessee. After further discussions, the following specific comments are addressed in the paragraphs following:

Comment: It was stated that the inclusion of both an influent and effluent flow meter in a lined basin is superfluous and would not provide meaningful data.

Response: Hydraulic integrity is not the issue. The detention time in each basin, as well as, the water level in each basin are critical parameters in the wetlands' performance. The plans provided no means to assure that the design parameters will be maintain in each individual cell of multiple cell systems. If the influent flow meter on each wetland is to be omitted the hydraulics of the basins should be positively matched and levels monitored in each basin when discharge values are recorded. At a minimum effluent meters for each basin are required to ensure even loading.

Comment: CBOD5 is recommended over BOD5 and Ammonia and Total Nitrogen measurement is unnecessary.

Response: CBOD5 will be specified instead of BOD5. Total Nitrogen was requested to determine the efficacy of the system for more stringent permit requirements if necessary. Frequency of testing will be reduced to once per quarter.

Comment: Total Suspended Solids is not necessary if the system is monitored by the operator frequently.

Response: The Division concurs.

Comment: *E. Coli* readings are not meaningful since the effluent is to be disposed of below grade and the throughput is too variable for valid data.

Response: The Division will remove the *e. coli* monitoring requirement as long as restriction of public access is satisfactorily maintained.

Comment: pH and D.O. monitoring are particularly cumbersome and expensive and provides limited information regarding effluent quality.

Response: It was added to reduce the dependence on frequent inspections during the first three years as the wetlands vegetation is established and the system attains steady state. The Division will limit the requirement to be taken by hand-held calibrated instruments coincident with the other quarterly monitoring.

Comment: Rainfall data collection data is provided and is available from other sources.

Response: The Division will accept data from another regional governmental source.

Comment: "The site has a permitted capacity independent of the existing service connections. TWSI will notify the Division in the event that the capacity of the system needs to be increased or as stated in the engineering report and plans should the need to construct addition (SIC) treatment cells be needed. The restriction as stated arbitrarily restricts the capacity of the treatment system."

Response: The capacity of the system is based on flow rate not the number of residences or other discharging activities. It is not arbitrary; as TWSI contends, the design capacities were calculated from generally accepted engineering practice as exemplified by the WEF Manual of Practice FD-16. The originally submitted engineering report requested 60,000 gpd based on two 30,000 gpd wetland cells. The Division will increase the permitted amount to 90,000 gpd based on the construction of a third 30,000 gpd wetland when school year average flows reach 80% or 48,000 gpd. Plans and specifications must be provided for the third wetland.

Sincerely,

George C Garden, P.E. BCEE
Division of Water Resources
Tennessee Department of Environment and Conservation

CC: Brad Harris, P.E./Britton Dotson, P.G./Hari Akunuri – Division of Water Resources, TDEC
George Bell, Esq. – Office of General Council, TDEC
Charles Hyatt, CEO, Adenus Group LLC,; President Tennessee Wastewater Systems, Inc.
Jeff Ridsen, General Counsel, Adenus Group, LLC.