



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

October 28, 2016

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

14-00136
66-00078

Re: State Operating Permit No. SOP-06035
Tennessee Wastewater Systems, Inc.
Summit View Resort
Sevierville, Sevier County, Tennessee

Dear Mr. Hyatt:

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

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

If you have questions, please contact the 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

cc/ec: Land-based Systems File
Knoxville Environmental Field Office
Mr. David K. Beverly, Consulting Engineer, , copperridge303@bellsouth.net
Ms. Michelle Ramsey, Utilities Division, Tennessee Regulatory Authority, michelle.ramsey@tn.gov
Ms. Patsy Fulton, Utility Rate Specialist, Tennessee Regulatory Authority, Patsy.Fulton@tn.gov
Mr. Kevin Dean, Attorney, Fraantz, McConnell & Seymour LLP, kdean@fmsllp.com
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

Tennessee Wastewater Systems, Inc.
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 0.0175MGD.

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: December 1, 2016

This permit shall expire on: August 31, 2017

Issuance date: October 28, 2016

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 field office 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. 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 0.0175 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



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

Notice of Determination

Summit View Resorts, State Operation Permit, Sevier County, Tennessee
Permit No. SOP-06035

October 26, 2016

Administrative Record

This permit rationale for the draft modified SOP-06035, sets forth the Division of Water Resources' (the division) basis for *permit conditions or (denial)* to be applied to the permit for Summit View Resorts. The draft SOP-06035 was placed on public notice December 14, 2015, Public Notice MMXV-023. A public hearing was held on April 15, 2016 at the Knoxville Environmental Field Office, 3711 Middlebrook Pike, Knoxville, TN 37921.

Comments and Responses to Comments

Comments included in this NOD document were compiled based on their relevance to the content of the draft modified SOP, the intent and interpretation of the draft modified SOP, and all governing laws and rules. Comments have been combined based on similar subject matter where possible. The division must consider all comments, but can address only comments relative to water quality or quantity in making final permit determinations (i.e. those under our regulatory jurisdiction). This NOD serves as the division's response to comments submitted during the comment period following Public Notice MMXV-023, the April 15, 2006 public hearing and comments received following the public hearing. This NOD also presents TDEC's decision regarding the modified SOP-06035 and the rationale for that decision.

COMMENT #1

Increasing the capacity of the treatment system and the drip field area by 231.3 %, as proposed by TWSI, is extremely excessive under any circumstances and is not warranted. It would also leave the HOA in a vulnerable and exposed position with respect to financial burden and without any recourse for administrative control and input into the future use of their sewer system

RESPONSE #1

The existing system was originally permitted for a daily flow of 8000 gallons. This permit initially proposed to increase the design flow to 18,500 gallons per day (GPD). This has been reduced to a design flow of 17,500 GPD due to the limitations of the treatment design flow and a reduced loading rate in the drip fields. However this still provides a 9,500 GPD increase. The increase includes disposal capacity of new drip fields on existing HOA property and neighboring property that account for 9,500 gallons per day. The remainder is derived from the proposed rehabilitation and expansion of the existing field. While DWR did include capacity associated with the existing field in the permit, DWR has no indication how long the rehabilitation will take or to what extent it will be successful. The existing field has operated unsuccessfully under anaerobic conditions for the last few years and the residual effects associated with those conditions are uncertain. The existing field may not perform to the full design capacity after rehabilitation. The additional capacity of 9,500 GPD represents what the permittee proposed as necessary to maintain service while the original drip field is rehabilitated and should be able to serve as the primary disposal area should the rehabilitation be only marginally successful. The 9,500 GPD allows coverage of most peak flows shown on the data from 2015 and 2016 as submitted by the permittee.

T.C.A. 69-3-109(a)(1) states: *Whenever the commissioner has reason to believe that a violation of any provision of this part or regulation promulgated thereunder or orders issued pursuant thereto has occurred, is occurring, or is about to occur, the commissioner may cause a written complaint to be served upon the alleged violator or violators.* DWR has issued a Director's Order against TWSI for violation of their permit for the Summit View facility. The order is currently under appeal; however, the addition of drip areas and second recirculating sand filter have been identified by the permittee as an effective means to bring the system into compliance. The proposal from TWSI to acquire additional property and expand the drip system to the level proposed allows a low risk, high reliability option that should be able to accommodate peak flow conditions and provide opportunity for the rehabilitation of portions of the existing field without service interruptions.

T.C.A. 69-3-114(c) states: *The plea of financial inability to prevent, abate, or control pollution shall not be a valid defense under this part.* TDEC has issued a Director's order to TWSI requiring repair of Summit View's wastewater system. The order identifies the permittee as the responsible party. TWSI has identified additional drip areas and treatment components to accommodate peak flow conditions and provide opportunity for the rehabilitation of portions of the existing field. TDEC expects TWSI to make modifications and repairs at Summit View sufficient to bring the system back into compliance with its permit. TDEC has no authority to specify how the TWSI funds these activities. The Tennessee Regulatory Authority (TRA) governs the financial performance of for-profit utilities such as TWSI. TDEC has made these comments available to the TRA for their consideration.

COMMENT #2

No alternative designs were proposed or evaluated in the engineering report. No consideration was given to the possibility that infiltration could be contributing to the high flow values. No rainfall data was monitored nor compared with the high sewer flow values to evaluate the correlation with infiltration. No evaluations were made to compare the calendar date of peak sewer flow rates with actual cabin occupancy days.

RESPONSE #2

While no alternative designs were submitted, alternatives were discussed with TWSI. TWSI has identified additional drip areas and treatment components they feel are necessary to accommodate peak flow conditions. The DWR acknowledges that there may be other more cost effective alternatives.

Since the public hearing in April TDEC has received updated flow data from TWSI. Based on a review of that data from 2015 and 2016 on a day to day comparison, there is no indication that rainfall events play a significant role. Flow data sets do show great similarity based on the day of the week, holiday weekend, and seasonal rental activity.

COMMENT #3

The methodology of the original drip field construction was inadequate as documented by TDEC inspections. Drip lines are also now reported to be lying or exposed on the existing ground surface.

RESPONSE #3

Based on the information available to TDEC, multiple changes were made to the system during the construction process that were not represented on the plans that were approved by TDEC. The recirculating sand filter location was moved to the bottom of the hill, drip line diameter and possibly type were changed, and the type of final filtration was changed. Inspection reports indicate that the drip lines were not installed along contour. TDEC may not be aware of all changes that were made to the system during or since initial construction. There is no record of any contact, revision and resubmission of plans, or discussion from the design engineer or TWSI to TDEC as required in the permit and rules. The installation changes were not supported by permit or rule and would not be considered representative of accepted engineering practices by today's standards.

COMMENT #4

In accordance with design plans submitted by TWSI, Zone 1 and Zone 2 of the proposed drip field area lie within property owned by the HOA and have a utilization capacity of 11,250 gpd.

Neither of the referenced reporting methods has indicated a daily flow in excess of 11,250 gpd since low flow showerheads were installed in all of the resort cabins by the HOA in October 2015.

RESPONSE #4

Since the public hearing in April, TDEC has received updated flow data from TWSI. Based on review of that data from 2015 and 2016, there are reported daily flow peaks in excess of 11,250 GPD. Additionally, a portion of the 11,250 GPD capacity associated with the HOA property is based on successful rehabilitation of the existing drip field. The existing field has operated unsuccessfully under anaerobic conditions for the last few years and the effects associated with those conditions are uncertain. While the permit credits flow on the basis of the existing area, there is no guarantee that the existing field will function at the permitted flow. Design flow may be reduced in the future based on the performance of the existing field.

COMMENT #5

Why has the existing design, installation and the lack of system maintenance not been considered as the reason for the system failure? Why has infiltration into the system not been thoroughly investigated?

RESPONSE #5

TDEC has issued a Director's order requiring TWSI to prepare a corrective action plan and take steps to bring Summit View's wastewater system into compliance with the permit. This order is currently under appeal. As discussed in Response#3 multiple changes during and since the installation process occurred without TDEC approval.. The engineering report prepared by the design engineer indicated that the soils area was capable of passing approximately 27,000 GPD without surfacing. Performance of the system over the last few years in combination with the flow data does not support the original analysis by the design engineer.

Based on review of that data from 2015 and 2016, there is no indication that rainfall events or infiltration play a significant role. Flow data sets do show great similarity based on the day of the week, holiday weekend, and seasonal rental activity.

COMMENT #6

Upon evaluation of all of the flow data reports and the apparent inconsistencies, why has only one month of data been considered and not the life history of the system? Why do the monitoring reports not reflect a distinct reduction in the flow data after the HOA installed the low flow showerheads that reduced the flow from 2.25 gpm to 1.5 gpm? All showerheads in all of the cabins were modified at Summit View as of October 4, 2015.

RESPONSE #6

As mentioned in Response #1, since the public hearing in April, TDEC has received updated flow data from TWSI through July 2016. The data from 2015 and 2016 show great similarity based on the day of the week, holiday weekend, and seasonal rental activity. However, the data do not appear to demonstrate any reduction from the shower head installation between the same months in 2015 and in 2016. Total flow is up around 7%, daily average flows are up approximately 7% and maximum three day total is up around 3% for the 2016 data. Without additional flow data sources and per person occupancy rates, it is not possible to accurately assess the effectiveness of the shower head installation.

COMMENT #7

Would a phased approach to correct the drain field issue not be the best plan of action? The HOA proposes that a Phase 1 be constructed to rework the existing drain field and then a possible Phase 2 be considered to add storage tanks located on the existing HOA property if it becomes needed.

RESPONSE #7

Yes, a phased approach could be considered. The DWR acknowledges that there may be other more cost effective alternatives. The solution proposed by TWSI introduces a low level of risk, minimizes the potential for nuisance odors and reduces the probability of service outages.

COMMENT #8

Are all the signatures on all the monthly flow data reports submitted to TDEC authorized and approved by TDEC at the time and date the reports were submitted? What penalty and repercussions are there for submitting unauthorized signatures and fraudulent reports?

RESPONSE #8

Rule 0400-40-05-.07(2)(i) requires all applications, reports or information submitted to the Commissioner shall be signed and certified by persons identified in 0400-40-05-.05(6)(a) through (c) which requires the signature by a responsible corporate officer.

T.C.A. 69-3-114(b) states: it is unlawful for any person to act in a manner or degree that is violative of any provision of this part or of any rule, regulation, or standard of water quality promulgated by the board or of any permits or orders issued pursuant to this part; or to fail or refuse to file an application for a permit as required in T.C.A. 69-3-108; or to refuse to furnish, or to falsify any records, information, plans, specifications, or other data required by the board or the commissioner under this part.

COMMENT #9

Are all of the contractors listed as potential bidders submitted by TWSI qualified and experienced in wastewater system installations? Has TDEC approved all of the potential contractors as qualified for installation of the type of sewer system that is proposed?

RESPONSE #9

TDEC has no regulatory authority over contractors. TDEC's relationship is with the engineer and permittee. TDEC's involvement in the construction process is centered on plan approval and final inspection.

COMMENT #10

Why was Adenus allowed to design and oversee the Summit View Project? Is there not a conflict of interest given the corporate connection of Adenus and TWSI?

RESPONSE #10

Rule 0400-40-02-.01 states in part: *Whenever any new works or change in existing works is contemplated...a registered engineer must plan, design and inspect the construction of any such works.* TDEC routinely verifies that engineering design plans are sealed with the seal of a registered engineer, and that the engineer oversees the construction of the facility and initial operation of the facility. Through the discovery process in related litigation, TDEC has learned that in this particular case, the design engineer of record was involved in construction of the facility, inspection of the facility and approval of the facility on behalf of TWSI. Considerations of conflict of interest for engineers are found in the State Board of Architectural and Engineering Examiners Rules of Professional Conduct Chapter 0120-02. There may be other rules pertaining to conflict of interest relating to the practices of utilities. The State Board of Architectural and Engineering Examiners and TRA would be the appropriate contacts in regards to potential conflicts of interest.

COMMENT #11

Please advise exactly who is responsible for what at each of the State and Federal agencies along with the points of contact in this wastewater utility matter? What influence and decision making authority does each agency have regarding this matter from start to finish? Why has a more cost effective option not been considered in the approval process before something is approved?

RESPONSE #11

The Utilities Division of the Tennessee Regulatory Authority (TRA) and the Division of Water Resources of the Tennessee Department of Environment and Conservation (TDEC) are the two primary agencies involved in the Summit View wastewater system. TDEC's Division of Water Resources (DWR) regulates the construction and operation of public sewerage systems across the state. The Utilities Division assists the TRA in establishing and implementing policy regarding Tennessee's gas, water, sewer, waste water, electric, and telephone companies to result in fair and responsible regulation for all utility companies and consumers in the state.

DWR acknowledges that there may be other more cost effective design alternatives to the plans under consideration. There are also possibilities of phased approaches (i.e. initially installing zones 1 & 2 on the HOA property and reassessing performance before acquiring additional property). The proposal from TWSI to acquire additional property and expand the drip system should be able to accommodate peak flow conditions and provide opportunity for the rehabilitation of portions of the existing field without service interruptions and bring the system back into compliance with the permit. The DWR does not have specific authority to mandate that a permittee demonstrate that a proposed repair or modification to an existing system be the most cost effective solution to address a compliance issue. The TRA has authority related to the business practices of a utility such as TWSI, and TRA's process is more suited to consider arguments or disputes regarding cost. TDEC has made these comments available to TRA for their consideration.



Determination

The division appreciates the input from all commenters, and used those comments to further evaluate the proposed addition to the Summit View wastewater treatment and disposal system.

The division's decision on this matter is to issue the permit as noticed.

Please contact Ms. Cheryl Montoya at (615) 532-0761, or Cheryl.Montoya@tn.gov to request additional copies of this NOD. A copy of this NOD may also be found on TDEC's Dataviewer.



Brad Harris, P.E.
Manager, Land Based Systems

10/28/16

Date