STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243-1534

May 31, 2007

Mr. Chris Leauber
Water and Wastewater Authority of Wilson County
680 Maddox-Simpson Parkway
Lebanon, TN 37090

Re: Notice of Determination and State Operating Permit No. SOP-99038
Water & Wastewater Authority of Wilson County - Logue Road STP
Mount Juliet, Wilson County, Tennessee

Dear Mr. Leauber:

In accordance with the provisions of the "Tennessee Water Quality Control Act" (Tennessee Code Annotated Sections 69-3-101 through 69-3-120) the enclosed Notice of Determination and State Operating Permit are hereby issued by the Division of Water Pollution Control. The continuance and/or reissuance of this Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that you have the right to appeal any of the provisions established in this State Permit, in accordance with Tennessee Code Annotated, Section 69-3-110, and the General Regulations of the Tennessee Water Quality Control Board. If you elect to appeal, you should file a petition within thirty (30) days of the receipt of this permit.

If you have questions, please contact the Division of Water Pollution Control at your local Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Miss Julie Harse at (615) 532-0682 or by E-mail at *Julie.Harse@state.tn.us*.

Sincerely,

Edward M. Polk Jr., P.E.
Manager, Permit Section
Division of Water Pollution Control

SOP-99038
P/WAT/5S

Enclosure

cc: Division of Water Pollution Control, Permit Section
Division of Water Pollution Control, Nashville Environmental Field Office

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243-1534

Notice of Determination
Water and Wastewater Authority of Wilson County – Logue Road Wastewater Treatment Plant
State Operating Permit Number SOP-99038

May 31, 2007

Introduction

The purpose of this document is to provide a formal written response to the written and verbal comments submitted to the Division of Water Pollution Control (the division) and to make a final determination regarding the reissuance of the State Operating Permit Number SOP-99038. Questions and comments were presented during the public notice period and prior to and following a public hearing held regarding this permit on April 10, 2007. The written comments received prior to the public hearing are presented in Appendix 1. The public hearing attendance record is located in Appendix 2. The written comments received after the public hearing are given in Appendix 3.

Description of the Existing and Proposed Treatment Facilities for this Permit Period

The existing treatment facility covered by the current permit is a "no discharge" spray irrigation system. The term "no discharge" is defined as a system that does not send it's effluent directly to a surface stream. The components of the system are the following: septic tank at each residence, effluent collection system, fixed media recirculating biological reactor (sand filter), ultraviolet disinfection, treated effluent storage pond, and land application using spray irrigation. All system components except for the septic tanks and effluent collection system are located at the Pine Creek Golf Course whose address is 1835 Logue Road, Mount Juliet, Tennessee 37122. The recirculating sand filter and ultraviolet disinfection are located next to the sixteenth hole. The storage pond is the water hazard at the sixth hole. The design capacity of the recirculating sand filter is 50,000 gallons per day and the storage pond is designed to have a capacity of approximately 900,000 gallons. The pond is sized to hold a twenty-five year rain event (433,354 gallons) and 9.3 days of discharge.

The proposed treatment facility will involve the construction of a submerged membrane bioreactor system and a new reuse storage pond on a sixty acre site adjacent to the golf course. The initial construction of the submerged membrane bioreactor system will involve the building of the housing and structure for the long term final design capacity of the plant. Although the final design capacity of the plant will be 1.0 million gallons per day (MGD), or more, the initial phase will only install the membrane filters for a flow rate of 0.250 MGD. The total design capacity of the plant for this permitting period will be 0.300 MGD (0.050 MGD + 0.250 MGD).

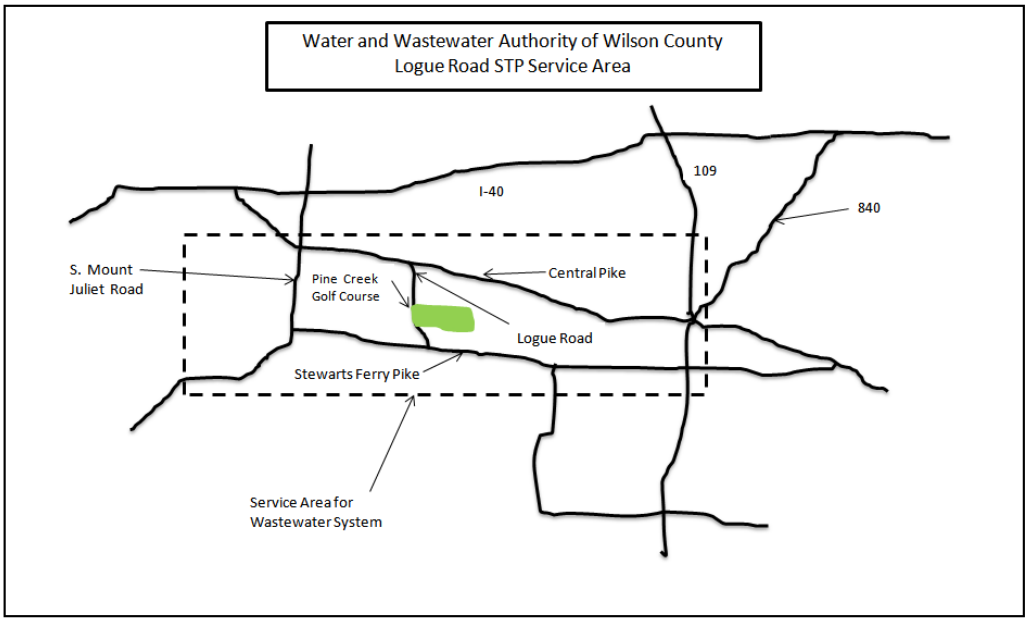
Historical Background

In October 1999, the division received an application for a state operating permit to spray treated wastewater at the Pine Creek Golf Course. The application listed a flow rate of 0.750 MGD and the treatment system was listed as "septic tank effluent to sand filter". The permit issued March 30, 2001 did not specify a design flow rate but did have the following paragraph on the title page.

> " a septic tanks, effluent collection system, recirculating sand filter,storage lake and drip irrigation to golf course for the disposal of domestic wastewater from a facility located at latitude 36^0 08' 00" and longitude 86^0 28' 30" in Wilson County.
>
> This permit is modified as a result of the application filed on October 14, 1999, in the office of the Tennessee Division of Water Pollution Control 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."**

On September 12, 2001, the division approved the plans and specifications for the current 0.050 MGD system (Appendix 4). The division's rules for permit effluent limitations and standards state "In the case of POTWs or domestic wastewater treatment plants, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow." (TN Rule 1200-4-5-.08(l))

On June 21, 2006, the permit section received an application for permit renewal from the Wilson and Wastewater Authority of Wilson County. The renewal application listed a flow rate of 0.750 MGD and the number of homes at 2,500. These values represent the long term flow rate and the estimated number of homes that will be connected to the collection system based on 300 gallons per day of wastewater from each home. Due to the rapid growth in the area, the applicant revised these projections in an engineering report providing for a regional plant with the design capacity of 1.0 MGD and including potential future expansion potential up to 5.0 MGD. The residential subdivisions and geographical area for the final design capacity are listed in the below chart and map.



Logue Road Wastewater Commitments

Residential Development	Final Platted Lots	Flow @ 300 gal/home-day gpd	Lots not Final Platted	Total Lots	Flow @ 300 gal/home-day gpd
Trailwood Farms[1]	78	23,400	0	78	23,400
Oakpoint[1]	52	15,600	15	67	20,100
Quad Oak[1]	52	15,600	29	81	24,300
Seven Springs	41	12,300	33	74	22,200
Stonefield	22	6,600	100	122	36,600
Gregory[1]	6	1,800	75	81	24,300
Wright Farms[1]	0	0	288	288	86,400
Windover	0	0	450	450	135,000
Appaloosa Valley[1]	0	0	150	150	45,000
Central Pike (Capers)	0	0	454	454	136,200
Oakwood Acres	0	0	65	65	19,500
Totals	251	75,300	1,659	1,910	573,000

[1] Sewer lines for these facilities have been approved by the Division of Water Pollution Control

Public Notice, Public Hearing Comments and Response

A review of the comments and public hearing transcript has produced the following questions and corresponding answers from the division.

Question #1 – Since the permit application states a flow rate of 0.750 MGD and the engineering report states that the first membrane treatment plant will have a capacity of 1.0 MGD, what flow rate will be the basis in the draft permit?

Response – The division recognizes that the application and engineering report have submitted flow rates that are based on the long term projected values. The division's rules for permit effluent limitations and standards state "In the case of POTWs or domestic wastewater treatment plants, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow." (TN Rule 1200-4-5-.08(l)) Additionally, the standard language in all drip and spray irrigation state operating permits states that the design plans and specifications are considered part of the permit requirements (See cover page draft permit).

At the time of this draft permit, it is the division's understanding that the design flow in the initial build out of the membrane plant will be 0.250 MGD plus the existing 0.050 MGD sand filter plant for a total design capacity of 0.300 MGD. This is the design basis for the draft permit, i.e. 0.300 MGD. Additionally, the design engineer/contract operator has submitted a letter which presents information regarding the acres available for spray irrigation (Appendix 6). The acreage for the tees, fairways, and greens is estimated at 100 acres (4,356,000 square feet). In Tennessee, the typical wastewater application rate that is protective of the maximum allowable groundwater

nitrate concentration is 0.2 GPD/SF. Utilizing only the tees, fairways, and greens, the amount of wastewater that could be applied on a daily basis would be approximately 870,000 gallons per day. This value is about three times the design capacity listed in the draft permit.

The process for having an operational permitted wastewater facility begins with having a permit drafted and issued based on the anticipated design flow rate. The permit provides the effluent limits and requirements that are required to complete the wastewater system design and final construction documents. The final design and construction documents are required to be signed and sealed by a professional engineer and submitted to the division's plans review section for approval. Any expansion of the wastewater treatment plant requires a permit modification with public notice and the submittal of construction documents.

Question #2 – Explain the wastewater plant's processes and procedures for agreeing to provide sewer services and commitments for residential homes that have not been constructed. Explain the relationship of the design flow and these commitments.

Response – Drip irrigation systems are typically installed and operated in modular units that are constructed in phases as the amount of influent wastewater increases. In order to insure that the treatment system is not significantly over or undersized for the number of connections, the following procedure will be required in the permit. When the number of sewer commitments (final plated lots which have been executed or signed by the permittee for recording) reaches 150% of the installed design flow or the actual measured average flow rate entering the treatment facility reaches 80% of the design flow, the facility will be required to submit an engineering report and permit application for modification of the permit to accommodate the design flow increase. The facility will also be required to submit engineering plans for the construction of additional equipment. At each increase in design flow, the overall Logue Road treatment system will be reviewed to ensure that it can meet the sanitary sewer wastewater needs of the service area. It should be noted that an agreement to undertake the process to provide future sewer service is not the same as a constructed home that is already sending sanitary wastewater to the treatment facility. Agreements to begin the process to provide future sewer service for a development may be made at the preliminary development planning stage. A commitment is made at the time the lots in a development are formally signed by the permittee prior to platting at the county register's office.

At time of this draft permit, the number of final platted lots is 251 (251 X 300 gallons = 75,300 gallons) and the number of lots that are not platted but have an approved sewer line is 690 (690 X 300 gallons = 207,000 gallons). The total number of projected connections is 941 homes at 282,300 gallons with less than one-third being finished homes. The permit design capacity of 0.300 MGD will be significantly greater than the actual number of homes connected to the system.

Question #3 – Since the treated wastewater is being discharged to a golf course, what arrangements have been made to ensure that there will always be land available for spray irrigation?

Response – The legal agreement between the Water and Wastewater Authority of Wilson County and Golf Unlimited (owner of Pine Creek Golf Course) lays out the terms of land disposal as shown in Appendix 5. If the golf course goes out of business, the agreement requires Golf

Unlimited to set aside land for the storage ponds and spray irrigation (Page 3, Item 5). The document also states that the golf course has agreed to set the initial volume of accepted treated effluent at approximately 500,000 gallons per day with the option to increase the volume in the future (Page 4, Item 7). Since the draft permit is based on a design flow rate of 300,000 gallons per day, the proposed treatment system is 200,000 gallons under the initial level set in the agreement.

Question #4 – What are the technical requirements for the holding ponds that store the final treated effluent?

Response – The current holding pond was designed to be part of the golf course (water hazard). The new holding pond that will be constructed on the sixty acre parcel next to the golf course to hold the final treated effluent must be designed in accordance with design criteria specified by the division (See Design Criteria for Sewage Works, Chapter 16, Slow Rate Land Treatment and Chapter 9, Ponds and Aerated Basins).

The pond will hold treated effluent that is suitable for land application. Wastewater sampling and permit compliance is determined at the point where the effluent enters the pond.

Question #5 – How is the flow measured and how are exceedences of the design flow rate handled?

Response – The current facility flow is measured using a flow totalizer located on the effluent discharge to the storage pond. The operation's contractor for this facility utilizes land-based phone telemetry to query the recorded flow and transmit the data to a computer. This same method of flow measurement and reporting is anticipated for the new facility.

The permit requires the reporting of the flow on a daily basis, however, there is not an effluent limit on flow. Daily flows fluctuate over a wide range and exceeding the design flow on an individual day is not a permit violation. The final permit will require the submittal of a permit modification request and engineering plans when the average flow reaches 80% of the design capacity.

Question #6 – What inspections have been performed at the facility?

Response – The division has not performed a formal compliance inspection. The challenge in inspecting this type of system is that a majority of the components are located below grade and cannot be reviewed for compliance. The sampling results are the primary method for insuring that the treatment system is in compliance. One of the main concerns in drip or spray irrigation is the over application of treated effluent. The water is being applied to a golf course in a region of the country where the climate allows the golf course to be operational for a majority of the year. The over application of treated effluent would result in ponding and make the course undesirable for playing golf. Since over application is counterproductive to the golf courses' business goals, the employees would have no motivation to overspray the course.

Question #7 – What is the time frame for building the submerged bioreactor membrane system?

Response – The construction time for building the system is ten to twelve months. The facility expects the construction to be completed in the next year.

Question #8 – Will the existing septic tank effluent pumped system (STEP) be part of the treatment process?

Response – The existing STEP components will remain part of the wastewater collection system. The treatment system is designed to primarily receive domestic sanitary wastewater from residential homes. The system is not designed to operate as a municipal plant with significant industrial users.

Comment #9 – What is the Corp of Engineer's position on the draft permit?

Response – The Clean Water Act has a requirement prohibiting the issuance of a permit for discharge to waters of the U.S. that significantly interferes with the anchorage and navigation activities in the state's waterways. The Corp of Engineers reviews the division's permits to ensure compliance with the provision (See below). Since this permit is a no discharge permit, the Corp of Engineers will not be reviewing the permit.

> "(6) To insure that no permit will be issued if, in the judgment of the Secretary of the Army acting through the Chief of Engineers, after consultation with the Secretary of the department in which the Coast Guard is operating, anchorage and navigation of any of the navigable waters would be substantially impaired thereby;" (CWA 402(b)(6))

Comment #10 – What operator certification grade is required for the new membrane plant?

Response – The new permit will require a Grade III wastewater treatment plant operator and a Grade I wastewater collection system operator due to the addition of the submerged membrane bioreactor system. The certification grade is based on the level required for the only other similar plant in the state (Huntsville STP – NPDES Permit TN0020753). An exact certification grade calculation will be performed when the engineering drawings are submitted to the plans review section.

Comment #11 – What is the division's explanation for the permit violations that occurred in the previous permit period?

Response – The previous permit contained an effluent limitation for fecal coliform set at 23 colonies/100 ml. This limit of 23 colonies/100 ml was applied to spray irrigation systems that are not fenced and have the potential for human contact. During the previous permit period, the facility had the below listed violations. Since the facility recorded seven consecutive months of permit compliance after the violations, it is believed that the issue causing the violations has been corrected.

	Fecal Coliform (# colonies/100 ml)
June 2005	166
July 2005	358
August 2005	237

September 2005	213
October 2005	175
December 2005	26

Because of changes in the state water quality criteria rules, the fecal coliform criteria has been replaced with E. coli criteria. Thus the draft permit will have an E. coli limit of 23 colonies/100 ml. This limit is applied to spray irrigation systems and systems that treat water to reuse standards. It is the most restrictive bacteriological standard applied in a permit issued by the division. As a frame of reference, the recreational surface water instream coliform limits for a high quality stream are 126 colonies/100 ml as a monthly average and 487 colonies/100 ml as a daily maximum.

Comment #12 – The current permit for the 0.050 MGD sand filter requires only monthly sampling. How will the sampling frequency change as the size and complexity of the system increases?

Response – Quarterly sampling is typical for small residential sand filter systems that land apply the effluent (except that flow measurement is required daily). The Logue Road permit required monthly sampling. As the flow and complexity of a treatment system increases, the division requires more frequent sampling. The expansion of this plant with the addition of the membrane filter system will result in the sampling frequency being increased to three times a week. Three times a week is typical for small municipal plants that discharge to streams.

Comment #13 – The facility's permit expired on March 30th, 2006. Why has the facility continued to operate on an expired permit?

Response – When a State Operation Permit expires and the permittee has submitted a complete and timely application, the existing permit is extended administratively until a new permit is issued. Shutting down a wastewater treatment plant because the permit renewal has been delayed would create a public health issue due to the lack of a disposal method for the wastewater. In this situation, additional time has been needed to draft the permit in order to develop a process and procedure for permitting a regional facility of this nature.

Comment #14 – The National Resources Conservation Service (NRCS) Soil Survey has determined that the golf course soil is unsuitable for spray irrigation. Why is the division allowing spray irrigation on this site?

Response – The NRCS survey is intended to provide soil suitability information for agricultural purposes. The smallest delineation area is about three acres. The soil analysis for spray and drip irrigation systems is conducted on a much smaller area (100 square feet). Utilizing a typical application rate of 0.2 gallons per square foot a day, a design flow of 300,000 gallons would need approximately 35 acres. The golf course's tees, greens, and fairways provide 100 acres which is three times the area required.

Final Determination

It is the decision of the division to issue a State Operation Permit (SOP-99038) for this facility based on a design flow of 0.300 MGD. In reviewing the written and verbal comments made in regards to this draft permit, the final permit will have several changes. The wastewater treatment plant operator certification level will be increased from a grade two to a grade three. The permit will also include language that requires a permit modification when the average flow rate reaches eighty percent of the design flow. The new permit provides a procedure for connecting the subdivision planning process to the expansion of the treatment facility. This is accomplished by limiting the number of future homes that the permittee can formally commit to providing sanitary sewer service to prior to expanding the treatment system.

The final permit will also correct an error in the draft permit effluent limitations and monitoring requirements. The draft permit rationale stated on page eighteen that the permit limitations for the 0.050 MGD existing system would not change except for fecal coliform until the entire treatment system was increased to 0.300 MGD. However, the draft permit incorrectly contained a nitrate as nitrogen limit/monitoring requirement and omitted a Total Suspended Solids limit/monitoring requirement from the previous permit. The final permit will contain the limits from the existing permit for the 0.050 MGD system.

Page 14 of the final permit, Restrictions on Connections Beyond Capacity has been modified. The first paragraph has been modified to clarify what constitutes a commitment for a connection to the wastewater collection system. The revised language states that:

> *"The permittee shall not approve or execute final plats for recording that include connections to the wastewater collection system that, based on a design flow of 300 gallons per day per connection, will exceed 150 percent of the as-built design capacity of the treatment plant."*

The language of the first paragraph was also modified to clarify when the permittee must discontinue allowing connections to the system based on actual measured flow to the treatment plant. The modified language states that:

> *"the permittee will not continue to add sewer taps once the average flow to the facilities (measured over the most recent 12 month period) has reached 80 percent of the design capacity, unless an engineering report and permit application has been submitted to the division for plant expansion."*

Also, the language of the third paragraph has been changed to clarify what information must be developed by the permittee to verify the number, type and location of connections to the wastewater treatment system.

A petition for permit appeal before the Tennessee Water Quality Control Board may be filed by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at the public hearing. The appeal must be based upon any of the issues that were provided to the division in writing or in testimony at the public hearing. The petition for appeal must be filed within 30 days after the public notice of the division's decision to issue the permit.

5-31-07
Date

Edward M. Polk, Jr. P.E.
Manager Permit Section

Appendix 1
Comments Received During the Public Notice Period Prior to the Public Hearing

Comment #1 – January 29, 2007

Julie, in order for my clients to respond to the public notice for the Logue Road WWTP (SOP 99038) expansion, could you please answer these questions that I and a large group of homeowners near the planned WWTP have:

1. Page 13, Section E. The permittee must demonstrate that dedicated land is available for wastewater disposal and an alternate site is required. Could you please provide the specific information on the alternate site relative to where it is (street address and / or GPS please).
2. Has the plan for the alternate site been submitted to the DWPC to demonstrate adequacy and been approved by the Division?
3. Will the existing STEP system be a part of the treatment processes?
4. The draft permit is for 0.3 MGD (Section C, Permit Rationale) yet Section A states that the application was for 0.75 MGD. Then in Section B of that section, it says the PER was for a designed capacity of 1.0 MGD. Then in Section C it also says that under a permitted capacity of 0.3 MGD, they will be allowed to reach 0.45 MGD. What design capacity is the draft permit for?
5. The DWPC file includes adequate information that says the anticipated treatment plant size for the area is 5 MGD for the area in question (I-40 to the north, Hwy 109 and I-840 to the "west" (east, correct?), Rutherford County to the south, and Davidson County to the east (west, correct?). It is my understanding talking to Ed Polk in the past that the permittee desires to increase the size in stages up to 5 MGD. Please advise on this plan and whether the applicant has demonstrated adequate land available to spray the liquid at the planned increments in No. 4 above and whether or not the proposed locations have been identified / evaluated.
6. What is the proposed application rate in gallons per acre for the wastes that the DWPC used to determine suitable land acreage?
7. The draft permit says that wastes will be stored in a 903,000-gallon lagoon. Please advise the location of that lagoon and what testing was performed to determine geotechnical suitability.
8. Table 3 shows what subdivisions are committed to this WWTP. Please advise how long it is expected to build the upgrade once approved.
9. How does the DWPC require the permittee to measure flow? Daily, continuous, etc.?
10. Please confirm that the public comment period ends on February 12, 2007 at 5 pm.

Thank you.

Mark Quarles, MBA, P.G.
Globally Green Consulting
615-352-0471 home office
615-504-0956 mobile

Comment #2 – February 5, 2007

SAI

Systems Analysis, Inc.
1310 Central Court
P.O. Box 634
Hermitage, TN 37076
Tele: (615) 883-9199
Fax: (615) 883-1272

FAX COVER SHEET

Date: 2-5-07

Attn: Julie Harse

Company: TDEC

Re:

Number of pages (including cover sheet): 2

From: Nan Kimbro

- O Urgent
- O For Review
- O Please Comment

Comments:

Dear Ms Harse, 2/5/07

I would like to request a public hearing for the proposed modification of the Water & Wastewater Authority of Wilson County Logue Road Permit # SOP-99038.

I have many concerns & questions regarding the enlargement of the facility.

1.) Where is the alternate site for disposal of wastewater located?

2.) The permit is vague in the amount. Ask for, 0.3 MGD, 0.75 MGD, 1.0 MGD & 0.4 MGD, what is the actual amount the design & permit is going to be for?

3) Show us the geo-technical study that was completed regarding the storage or the collapse of the lagoons & which creeks, streams & lakes this leakage will enter.

4) What is the CORP of Engineers position on this proposed modification?

5) How long is it expected to take to build & at what point are they in this upgrade planning, started, halfway

6) How will TDEC proceed in the future to insure the safety & monitoring of this locations.

Sincerely,

Hart N. [illegible]

Comment #3 – February 11, 2007

SAI

Systems Analysis, Inc.
1310 Central Court
P.O. Box 634
Hermitage, TN 37076
Tele: (615) 883-9199
Fax: (615) 883-1272

FAX COVER SHEET

Date: 2-11-07

Attn: Julie Harge

Company: TDEC

Re:

Number of pages (including cover sheet): 2

From: Nan Kimbro

- O Urgent
- O For Review
- O Please Comment

Comments:

FEB-11-07 SUN 5:53 PM SYSTEMS ANALYSIS INC FAX NO. 615 883 1272 P. 2

PETITION

We the undersigned would like to request a public hearing for the proposed modification of the Water and Wastewater Authority of Wilson County-Logue Road Permit# SOP-99038.

Reasons for request;

1. Where will the new holding ponds be located, what is their proximity to existing subdivisions?

2. Show us the geo-technical study that was done regarding collapse of these ponds and which creeks, streams, and lakes this leakage will enter.

3. What will TDEC do in the future to insure the safety and monitoring of this location since you have not inspected this site before now.

4. Where are they going to spray this new increased amount of gray water? Show us the areas, besides the golf course, and show us they are capable of receiving it.

1 [signature]
2 [signature]
3 Ron Mansfield
4 Ryan Davis
5 Melissa Davis
6 Betty M Anderson
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FEB-11-07 SUN 5:54 PM SYSTEMS ANALYSIS INC FAX NO. 615 883 1272 P. 3

PETITION

We the undersigned would like to request a public hearing for the proposed modification of the Water and Wastewater Authority of Wilson County-Logue Road Permit# SOP-99038.

Reasons for request;

1. Where will the new holding ponds be located, what is their proximity to existing subdivisions?

2. Show us the geo-technical study that was done regarding collapse of these ponds and which creeks, streams, and lakes this leakage will enter.

3. What will TDEC do in the future to insure the safety and monitoring of this location sinceyou have not inspected this site before now.

4. Where are they going to spray this new increased amount of gray water? Show us the areas, besides the golf course, and show us they are capable of receiving it.

1 Don Kimbro
2 [illegible]
3 Bessie [illegible]
4 Harold [illegible]
5 Jack Martin
6 [illegible]
7 [illegible]
8 [illegible]
9 [illegible]
10 Keith Martin
11 [illegible]
12 Pat Gammons
13 Tammie Kirkland
14 [illegible]
15 [illegible]
14 [illegible]
17 [illegible]
18 Linda [illegible]
19 E. C. Smith
20 [illegible] Smith
21 Mitchell Underwood
22 Donna Underwood
23 Julia Hensley
24 [illegible]
25 Bob Gammons
26 Mae Gammons
27 [illegible]
28 Mary Chandler
29 Gary Chandler
30 [illegible]
31 Sarah Reynolds
32 [illegible]

Appendix 2
Public Hearing
April 10, 2007
Water and Wastewater Authority of Wilson County

On April 10, 2007, a public hearing was held at the in response to the public noticed draft permit for the Logue Road STP. The following individuals completed record of attendance cards at the hearing. Please note every effort was made to transcribe the names correctly.

Tennessee Department of Environment and Conservation Representatives

Edward Polk
Robert O'Dette
Julie Harse
Michael Thornton

Citizens in Attendance

Keith Townsend
Dale McCulloch
Don Kimbro
Chris Lenuber
Garfield Boyce
Sharon Lister
Nan Kimbro
James McCulloch
Josh Hutcheson
Mark Quarles

Appendix 3
Comments Received After April 10, 2007 Public Hearing

Comment #1 – April 17, 2007

Mr. Polk,

Please include these written comments into the administrative record for the proposed SOP modification. Please acknowledge your receipt of these comments.

1. The draft permit requires that the permittee designate adequate land acreage and proper site suitability for a back-up disposal site should the golf course go out of business. This requirement is in the existing permit yet to this day, that back-up site has never been identified, although required by law. What assurance can TDEC provide that the back-up site will be located and properly evaluated prior to issuance of this permit, given that for years the permittee ignored that requirement without penalty?

2. you stated in the April 10 public hearing that you had no intention of requiring a geotechnical study be performed by a registered Professional Engineer to certify that the existing golf course is suitable as a disposal site, yet you would require that determination for any new land that is proposed. The threat remains the same for both sites. Any such investigation would certify that there soil / bedrock / groundwater conditions are adequate to absorb surface infiltration to protect the groundwater and surface water – including the possibility a sinkhole collapse of the wastewater ponds. As a registered Professional Engineer in the State of Tennessee, if you (or another TDEC registered professional engineer) choose to allow the permittee to dispose of wastewater on the golf course without first conducting such a proper investigation, you in effect have become the engineer-of-record and would assume that liability in the event of a pond failure or other environmental threat. The laws of professional engineering do not afford exemption for State employees who are making design decisions that affect the public.

3. The US Department of Agriculture, Natural Resources Conservation Service (NRCS) has concluded that the golf course is "very limited" as a wastewater disposal site due to the shallow bedrock conditions and proximity to the nearest stream. What data has TDEC collected to counter this claim that suggests this site is a suitable disposal location?

4. the proposed wastewater treatment system is much more complicated that the current sand filtration system. The applicant has not demonstrated that they are capable of properly operating such a simple system without violating effluent limitations in the current permit. What will TDEC do differently in this permit to ensure that the proper operators are provided?

5. Mike Thornton of the TDEC Nashville Field Office stated when asked at the April 10 public meeting, that he had never conducted an inspection of the site, yet he was comfortable that the site was properly operated. What assurances will TDEC give to ensure that inspections will occur in the future, especially given the degree of non-compliance for the life of the existing permit?

6. the permittee routinely exceeded monthly discharge monitoring limits, did not test for some required parameters, did not provide signage as required in the permit, and sprayed their effluent rather than injecting it, yet no violations were ever recorded. What assurance will TDEC give to ensure that the conditions of the permit will be enforced in the future?

7. the permittee accepted subdivision hook-ups on a routine basis without first recognizing if the facility had enough hydraulic capacity. This shows a willful disregard for the law and protection of the environment. In fact, the hydraulic capacity is already exceeded based upon normal wastewater generation factors. The draft permit allows the permittee up to one (1) year to inform TDEC of what customers are discharging wastewater to the golf course. The proposed permit should not be granted until first, the information is submitted to TDEC.

8. The applicant intends to build a wastewater treatment plant with up to approximately 5 million gallons a day capacity yet this permit is only formally for 300,000 gallons per day.

9. TDEC has already approved sewer lines for six (6) subdivisions and connections have been made that represent 223,500 gallons per day flow. This flow already exceeds TDEC's required design threshold for (150% of the as-built design capacity, or 75,000 gallons per day) for a facility that is only permitted for 50,000 gallons per day. How does TDEC explain this over-site?

10. If the facility is receiving in excess of its permitted 50,000 gallons a day, how does TDEC explain how the facility has been allowed to treat such flow without penalty and if the flow amounts being recorded at the facility are not indicative of the number of subdivisions hooked-up, how does TDEC explain this discrepancy?

11. How does TDEC explain that the facility is receiving waste far in excess of its permitted and hydraulic capacity, yet no violations or penalties have been issued?

12. Sampling requirements in the draft permit being only once per month is not representative of the nature and threat of the waste. Comparable size and complexity surface water discharge permits require daily monitoring and this facility should be no exception. Further, grab sample monitoring is not representative nature of the waste. The threat to the surface water and groundwater is no different and therefore daily, flow proportional flow monitoring should be required.

13. The facility has been operating without a valid permit since March 30, 2006, when the current permit expired. As a result, the discharges of the plant have been in violation of the Tennessee Water Quality Control Act and the Clean Water Act – yet no violations as such were written. How can TDEC rationalize this?

We look forward to receiving your written responses to these and other written comments written in response to this draft permit. My mailing address is 5640 Stoneway Trail, Nashville, TN 37209.

Mark Quarles, MBA, P.G.
Globally Green Consulting
615-352-0471 home office
615-504-0956 mobile

Appendix 4
0.050 MGD Design Approval Letter

- WPC - Downtown

CGD 7/11/01
MBS 9/17/01
File: Wilson County P+S

Efile:
~~TN0099038~~
SOP-99038

ENVIRONMENTAL ASSISTANCE CENTER
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
711 R. S. GASS BOULEVARD
NASHVILLE, TENNESSEE 37243
PHONE (615) 687-7000 STATEWIDE 1-888-891-8332 FAX (615) 687-7078

RECEIVED
SEP 17 2001
Municipal Facilities

September 12, 2001

Mr. Keith Townsend
Onsite Systems Inc
7638 River Road Pike
Nashville, TN 37209-5733

Re: Plans and Specifications Approval
Logue Road (WPC 01-0596)
Wilson County

Dear Mr. Townsend:

The plans and specification for the Logue Road wastewater treatment system have been reviewed by this office and are hereby approved. This project consists of a 50,000 gpd recirculating sand filter domestic wastewater treatment system with discharge of the treatment plant effluent to an irrigation storage pond at the Pine Creek Golf Course. .05 MGD

This letter, along with the enclosed Three (3) set(s) of plans and specifications bearing our official stamp, constitute approval by the Commissioner of the Tennessee Department of Environment and Conservation for the construction of this project. This approval is granted in accordance with all duly enacted laws and regulations administered by the Division of Water Pollution Control and the Water Quality Control Board. One (1) complete set of plans, bearing our official stamp, must be kept at the construction site and all construction must be in conformance with these approved plans.

It will be necessary for inspectors from this Division to perform a final inspection of the project following the completion of construction. Please notify us when the project is nearing completion so that we may schedule this inspection. Additionally, it will be helpful if you keep us informed of progress, any unusual problems, delays, etc associated with this project.

If you have any questions or comments, please contact me at (615) 687-7126.

Sincerely,

Donald J. Ey
Division of Water Pollution Control

cc: WPC – Municipal Facility Section

TENNESSEE DIVISION OF WATER POLLUTION CONTROL

ENGINEERING REVIEW COMMENTS

Date:	September 12, 2001
Project Name:	Logue Road Treatment Facility
WPC Project No:	01-0596
County:	Wilson
Date received:	August 15, 2001
Review by:	Donald J. Ey
Date reviewed:	September 11, 2001

Design

Design flow	50000 gal/day	Sized for residential development around golf course at 300 gal/day per residence.
Filter size	11137.5 ft^2	Loading rate of 5 gal/ft^2/day would require 10000 ft^2
Irrigation Storage pond	902560 gallons	The pond is sized to hold the 25 year rain event 433,354 gallons and 9.3 days of discharge 465,000 gallons with 3 feet of freeboard

Specifications:

Treatment system pumps	55.6 gpm @ 56 feet	Selected pump delivers 58 gpm @ 60 feet
Pumps to the Irrigation Storage Pond	50 gpm @ 58.9 feet	Selected pump delivers 58 gpm @ 61 feet

No changes required. No comments to design engineer.

Appendix 5
Agreement Between Water and Wastewater of Wilson County and Pine Creek Golf Course

AGREEMENT

This Agreement is entered into by and between GOLF UNLIMITED, its lessee, AMERICAN GOLF, INC., WILSON COUNTY WATER AND WASTEWATER AUTHORITY (hereinafter "AUTHORITY") and WILSON ON-SITE SYSTEMS, LLC (hereinafter "ON-SITE"), as follows:

WHEREAS, Golf Unlimited owns certain real property known as Pine Creek Golf Course in Wilson County, Tennessee and leases the same to American Golf, Inc.;

WHEREAS, the Authority was created by the County Legislative Body of Wilson County, Tennessee pursuant to T.C.A. 68-221-601, et seq. And thereby has the authority to provide for the storage, treatment, recycling and reclamation of sewage and wastewater and further pursuant to T.C.A. 5-6-120 is the sole and exclusive provider of such services in all of Wilson County located outside corporate boundaries of any cities or utility districts providing wastewater services, as such boundaries existed on July 21, 1978, the date of the creation of the Authority (hereinafter referred to as the Authority's "wastewater service area"). Further, pursuant thereto, the Authority may designate providers of such services to operate under contract with the Authority;

WHEREAS, On-Site is a private company which has been authorized to provide wastewater services within the service area of the Authority pursuant to an Agreement between the Authority and On-Site;

NOW, THEREFORE, in consideration of the premises, Golf Unlimited and its lessee, American Golf, Inc., the Authority and On-Site have agreed to enter into a contractual arrangement which will provide a perpetual easement for the treatment site (as described in attachment "A") and other easements as may be necessary to the Authority and On-Site as

necessary for the discharge of treated effluent from sewage treatment facilities (hereinafter "effluent") to Pine Creek Golf Course irrigation ponds for use in irrigation of the Course, in the following particulars:

1. On-Site shall design, build, operate and maintain a wastewater collection, treatment and disposal system (hereinafter "The System") for the area around and including Pine Creek Golf Course. All technical and business decisions concerning the design, construction and operation of The System shall be the sole responsibility of On-Site. On-Site shall be responsible for maintaining The System such that it delivers effluent, which will be suitable for irrigation of Pine Creek Golf Course. Onsite will be responsible for all fines and penalties imposed as a result of the operation of the "The System". On-Site will only discharge treated wastewater to Pine Creek Golf Course. Al construction work and maintenance work will be performed as not to disrupt the operation of Pine Creek Golf Course. In the event some disruption is inevitable, Golf Unlimited, American Golf Inc., On-Site and Authority must agree on the best method to accomplish the requested work with the least disruption. The system must be designed so that normal operation and maintenance do not disrupt operation of Pine Creek Golf Course.

2. On-Site shall be responsible for all compliance, testing and reporting to the Tennessee Department of Environmental and conservation (hereinafter "TDEC") and for maintaining effluent within the permit limited issued by TDEC for this facility. On-Site will notify the Authority and Golf Unlimited of any substantial occasion of noncompliance and will take appropriate action to remedy such noncompliance.

3. Golf Unlimited and, where appropriate, its lessee, American Golf, Inc., agree to convey, execute, acknowledge and deliver to Authority all perpetual easements that may be

necessary or appropriate as determined by Authority for access, construction, operation and maintenance of The System. In using such easements to construct or maintain The System, On-Site agrees that any damage it causes to the golf course will be repaired to preconstruction condition.

4. Golf Unlimited and American Golf, Inc., agree to accept effluent in the irrigation ponds of Pine Creek Golf Course of approximately 500,000 gallons per day. The parties agree that existing ponds may be used until additional storage capacity is needed. The parties further agree that if On-Site determines that additional ponds and/or the enlargement or upgrading of the existing ponds becomes necessary, the work shall be done at the expense of On-Site. On-Site will not seek alternative uses or markets for treated wastewater other than Pine Creek Golf Course unless Golf Unlimited and American Golf, Inc. agree to such use.

5. In the event the Pine Creek Golf Course ceases golf operation under any name or for any reason seeks a significantly limit or prohibit the discharge of treated effluent by On-Site into the irrigation of The System, Golf Unlimited and American Golf, Inc. agree to set aside an area of land suitable for storage ponds and land application of effluent. Size of the area to be set aside will be determined by On-Site design criteria and TDEC regulations in effect at the time and shall be conveyed to Authority in fee simple or by perpetual easement. Golf Unlimited shall be responsible for any cost to move existing storage ponds. On-Site shall be responsible for the cost of any new land application system. In the event Golf Unlimited is unable to move storage ponds, then On-Site will be responsible for moving and locating storage ponds.

6. In the event On-Site ceases operations under any name or for any reason, property must be restored to as near original condition as possible.

7. On-Site agrees to deliver effluent to the storage ponds at no cost to Golf Unlimited or American Golf, Inc. Golf Unlimited and American Golf, Inc. agree to accept approximately 500,000 gallons per day of effluent or such increased amounts as are agreed to by Golf Unlimited at no cost to On-Site. Golf Unlimited shall have the first right of refusal for any additional amounts of effluent produced by the system at no cost to Golf Unlimited or American Golf. On-Site does not warrant or guarantee any minimum amount of effluent per day.

8. Golf Unlimited further agrees to set aside either within limits of Pine Creek Golf Course or in nearby adjacent area an additional four acres of land for the purpose of building additional treatment capacity. As consideration for the perpetual easement dedicated to Authority and acceptance of effluent, Golf Unlimited will receive nine residential taps from On-Site for the acre of land (as described in Attachment "A") dedicated for use by On-Site. The fee to the Authority is not included in this tap fee. All wastewater effluent shall be provided to Pine Creek Golf course at no cost to Pine Creek Golf Course as additional consideration per this agreement.

9. The Authority shall own the easements provided for herein. The rights granted in such easements shall be perpetual. In the event the location of the said easements are to be changed pursuant to paragraph 5 herein, the revised locations shall be subject to Authority approval and shall likewise be perpetual. The Authority agrees to approve such revisions so long as the revised locations are sufficient to carry out the purposes of this agreement in perpetuity. All additional areas provided for in paragraph 8 herein, shall also be subject to the approval of the Authority and shall likewise be conveyed in perpetuity.

10. References to the parties herein shall include their successor and assigns.

IN WITNESS WHEREOF, the parties hereto have set their hands on the 25 day of MARCH, 2002.

WILSON WATER & WASTEWATER AUTHORITY OF WILSON COUNTY, TENNESSEE

By: _____

Title: Executive Director

WILSON ONE-SITE SYSTEMS, LLC

By: _____

Title: MARK PANTHER

GOLF UNLIMITED

By: _____

Title: _____

AMERICAN GOLF, INC.

By: _____

Title: _____

Appendix 6
Spray Irrigation Land and Storage Calculations

Adenus Solutions Group

89 Aviation Parkway
Smyrna TN 37167

April 17, 2006

RECEIVED
APR 23 2007
Permit Section

Ed Polk
TDEC, Water Pollution Control
401 Church Street, L&C Annex
Nashville, TN
37243-1534

RE: Logue Road Wastewater Facility: Requested information concerning Pine Creek Golf Course water use capacity.

Dear Ed,
We are pleased to submit the following information to address your question concerning water use capacity at the golf course property.

Pine Creek Golf Course Land Characterization:

Tees, Fairways & Greens:	100 Acres
Open area/Rough:	55 Acres
Wooded Areas:	40 Acres
Water Bodies:	15 Acres
Bldg/Parking/other:	5 Acres
Total:	215 Acres

Area Description	April-Nov (In/Week)	Dec-Mar (In/Week)	Area (Acres)	April-Nov (GPD)	Dec-Mar (GPD)
Greens	4	1.5	4	62,063	23,273
Tees	3	1.25	6	69,820	29,092
Fairways	2	1.5	90	698,205	523,653
Open Area/Rough	1.5	0.75	55	320,010	160,005
Wooded	1.5	0.75	40	232,735	116,367
			195	1,382,833	852,391

Total Water Usage Capacity:			Days	Total GPD	GPD AVG
April- November:	1,382,833	GPD X	244	337,411,238	
December- March:	852,391	GPD X	121	103,139,361	
				440,550,599	1,206,988

615.356.7294 www.adenus.com Fax: 615.356.7295

Adenus Solutions Group

89 Aviation Parkway
Smyrna TN 37167

Total Gallons that could reasonable be applied on the Golf Course property with adequate storage:
Dec – March: 121 days @ 852,391 = 103,139,361 gallons
April – November: 244 days @ 1,382,833 = 337,411,238 gallons

Total reasonable Capacity with adequate storage = 440,550,599 gallons/year.
Average gallons per day: 1,206,988
Adequate Storage would likely be Six months average GPD:

180 days at 1,206,988 = 217,257,830 gallons of Storage

As one can see, there is sufficient capacity to far exceed the needs of the current expansion request and ultimately beyond 1MGD.

Attached is (1) a Wilson County Property Assessment Data form indicating the property acreage and (2) an aerial photograph of the property.

The information and data submitted herein should be sufficient for you to complete the Notice of Determination.

Sincerely,

Robert J. Pickney, P.E.

615.356.7294 www.adenus.com Fax: 615.356.7295

Wilson County
Tennessee (095)

Property Assessment Data
Tax Year: 2007

Property Owner and Mailing Address

Jan 1 Owner
GOLF UNLIMITED INC C/O AMERICAN GOLF COURSE 2951 - 28TH STREET SANTA MONICA CA 904052961

Property Location

Address:	LOGUE RD 1835		
Map:	118	Parcel:	015.00
Group:		PI:	
Ctrl Map:	118	S/I:	000

Value Information

Reappraisal Year:	2005
Land Market Value:	$300,000
Improvement Value:	$620,800
Total Market Appraisal:	$920,800
Assessment %:	40
Assessment:	$368,320

Subdivision Data

Subdivision:			
Plat Book:	20	Plat Page:	157
Block:		Lot:	

Additional Description

PINE CREEK GOLF COURSE
210.21 AC ON 001//

Sale Information

Sale Date	Sale Price	Deed Book	Page	Vac/ Imp	Type Instr	Qual
04/05/1994	$0	435	856			
01/06/1986	$0	397	142			
00/02/1900	$0	00000	00000			
00/01/1900	$0	00000	00000			
00/00/1900	$0	00000	00000			

Land Information

Deed Acrea	Calc Acres	Total Land Units
215.21	0.00	5.00

Land Type	Soil Class	Units
24 - GOLF COURSE		5.00

General Information

Class:	08 - COMMERCIAL		
City #:	000		
SSD1:	950	SSD2:	969
District:	24	Mkt Area:	M99
# Bldgs:	2	# Mobile Homes:	0
Util- Water:	1 - PUBLIC	Util- Sewer:	3 - INDIVIDUAL
Util- Elec:	1 - PUBLIC	Util- Gas:	0 - NONE
Zoning:		Gas Type:	

Building Information

Building #001

Improvement Type:	24 - BOWLING	Stories:	2
Base Area Sq Ft:	10,660	Aux Base Sq Ft:	6,470
Foundation:	03 - SPREAD FOOTING	Floor System:	01 - SLAB ON GRADE
Exterior Wall:	05 - SIDING ABOVE AVG	Structural Frame:	00 - NONE
Roof Framing:	02 - GABLE/HIP	Roof Cover/Deck:	03 - COMPOSITION SHINGLE
Cabinet/Millwork:	03 - AVERAGE	Floor Finish:	11 - CARPET COMBINATION
Interior Finish:	07 - DRYWALL	Paint/Decor:	03 - AVERAGE
Heat and A/C:	08 - HEAT & COOLING PKG	Plumbing Fixtures:	8
Bath Tile:	00 - NONE	Electrical:	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	Quality:	01 - AVERAGE
Act Yr Built:	1995	Condition:	1 - NEEDS MINOR REPAIRS

Building Areas:

Area:	BAS	Sq Ft:	5,330
Area:	OPF	Sq Ft:	570
Area:	BMU	Sq Ft:	5,330
Area:	OPU	Sq Ft:	570
Area:	USB	Sq Ft:	5,330

Building Information

Building #002

Improvement Type:	47 - PREFAB	Stories:	1
Base Area Sq Ft:	6,960	Aux Base Sq Ft:	
Foundation:	03 - SPREAD FOOTING	Floor System:	01 - SLAB ON GRADE


2011 feet
Logue

TENNESSEEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
6th Floor, L & C Annex
401 Church Street
Nashville, TN 37243-1534

Permit No. SOP-99038

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

Water & Wastewater Authority of Wilson County - Logue Road STP
Mount Juliet, Wilson County, Tennessee

FOR THE OPERATION OF

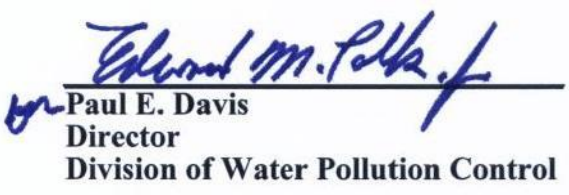
Septic tanks, effluent collection systems, fixed media recirculating biological reactor, suspended growth biological treatment, membrane filtration treatment, disinfection, storage lake, and spray irrigation to Pine Creek Golf Course located at latitude 36.126200 and longitude -86.465100 in Wilson County, Tennessee. The design capacity of the system is 0.30 MGD with the system details listed in Part III.

This permit is issued as a result of the application filed on June 21, 2006, in the office of the Tennessee Division of Water Pollution Control 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: **July 1, 2007**

This permit shall expire on: **May 31, 2012**

Issuance date: **May 31, 2007**



Paul E. Davis
Director
Division of Water Pollution Control

CN-0759 RDAs 2352 & 2366

PART I

A. GENERAL REQUIREMENTS

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

The following shall apply to the fixed media recirculating biological reactor prior to installation of the 250,000 gpd membrane plant:

Parameter	Sample Type	Daily Maximum	Sampling Point	Measurement Frequency
Flow	Totalizer[1]		[2]	Daily
$CBOD_5$	grab	10 mg/l	[2]	1/month
TSS	grab	10 mg/l	[2]	1/month
Ammonia as N	grab	5.0 mg/L	[2]	1/month
E. Coli	grab	23 colonies/100 ml	[2]	1/month

[1] Total daily flow to the golf course lake shall be measured using a flow totalizer.
[2] Sampling shall be conducted on the effluent to the golf course lake.

The following shall apply to the membrane plant and the fixed media recirculating biological reactor following construction of the 250,000 gpd membrane plant:

Parameter	Sample Type	Daily Maximum	Sampling Point	Measurement Frequency
Flow	Totalizer[1]		[2]	Daily
$CBOD_5$	composite	10 mg/l	[2]	3/week
TSS	composite	10 mg/l	[2]	3/week
Nitrate as N	composite	10 mg/l	[2]	3/week
Ammonia as N	composite	5.0 mg/L	[2]	3/week
E. Coli	grab	23 colonies/100 ml	[2]	3/week

[1] Total daily flow to the golf course lake shall be measured using a flow totalizer.
[2] Sampling shall be conducted on the combined effluent to the golf course lake. In the event that the fixed media recirculating biological reactor and and the membrane treatment

system discharge separately, both discharges shall be subject to the above effluent limitations and monitoring requirements.

The permittee must disinfect the wastewater in order to meet the above *E. Coli* limit.

This permit allows the operation of a wastewater collection and treatment system with spray irrigation to a golf course. The operation should be such that there is no contamination and no wastewater discharge to any surface or subsurface stream due to collected pools of water called "ponding", irrigation into karst features and/or improper irrigation. Any runoff due to improper operation must be reported in writing to the Division of Water Pollution Control, Nashville Environmental Field Office within 5 days of the incident. In addition, the spray irrigation system must be operated in a manner preventing the creation of a public health hazard or a public/private nuisance.

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):

Combined effluent to the golf course lake. In the event that the sand filter and the membrane treatment system discharge separately, each discharge shall be subject to the above effluent limitations and monitoring requirements.

C. DEFINITIONS

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

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

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 and submitted quarterly. Submittals shall be postmarked no later then 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 Pollution Control
Nashville Environmental Field Office
711 R.S. Gass Boulevard
Nashville, TN 37243

The first operation report is due on the 15th of the month following permit effectiveness

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.

E. SCHEDULE OF COMPLIANCE

Full operational level shall be attained from the effective date of this permit.

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 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 Pollution Control.

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 that 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 per month. If discharge

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 responsible charge of the facility and observes the operation of the system frequently enough to ensure its proper operation and maintenance regardless of the effluent monitoring frequency stated in the permit."

Dilution water shall not be added to comply with effluent requirements

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 that could cause a threat to public drinking supplies, or any other discharge that 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 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 discharge to land or water 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. 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 Pollution Control EFC 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 that would cause them to become

inoperable, or substantial and permanent loss of natural resources that 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 Pollution Control 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 Pollution Control 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 Grade III Wastewater Treatment Plant Operator and the collection system operated under the supervision of a Grade I Wastewater Collection System operator or other operator classification as determined by the Board of Water and Wastewater Operator Certification Board in accordance with the Water Environmental Health Act of 1984 and TDEC Rule 1200-5-3.

B. PLACEMENT OF SIGNS

The permittee shall place a sign at all 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 and have a white background with black letters.

TREATED DOMESTIC WASTEWATER
DRIP IRRIGATED PLOTS
(PERMITTEE'S NAME)
(PERMITTEE'S PHONE NUMBER)
TENNESSEE DIVISION OF WATER
POLLUTION CONTROL
Nashville Environmental Field Office
PHONE NUMBER: 1-888-891-8332

No later than sixty (60) days from the effective date of the permit, the permittee shall have the above sign(s) on display in the location specified.

C. SEPTIC TANK OPERATION

The proper operation of this treatment system depends, largely, on the efficient use of the septic tank serving each connection. 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.

D. SEPTAGE MANAGEMENT PRACTICES

The permittee must comply with the provisions of 40 CFR Part 503. If the septage is transported to another POTW for disposal, the permittee shall note the amount of septage wasted in gallons, % solids of septage wasted 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.

E. LAND DISPOSAL SITE RESTRICTIONS

The permittee must demonstrate that dedicated land is available for wastewater disposal. The use of a golf course for spray irrigation is permissible provided that permittee demonstrates that wastewater disposal cannot be precluded without the provision of an alternative site that is approved by the division. In order to make this demonstration, the permittee must provide documentation of either ownership of the land, a perpetual easement, or other deed restriction on the land providing for its perpetual use as a dedicated disposal site. Written documention the above shall be provided within 60 days of the issuance of this permit.

F. RESTRICTIONS ON CONNECTIONS BEYOND CAPACITY

The permittee shall not approve or execute final plats for recording that include connections to the wastewater collection system that, based on a design flow of 300 gallons per day per connection, will exceed 150 percent of the as-built design capacity of the treatment plant. Additionally, the permittee will not continue to add sewer taps once the average flow into the treatment facilities (measured over the most recent 12 month period) has reached eighty percent of the design capacity unless an engineering report and permit application has been submitted to the division for plant expansion. For this permit term the design capacity of the treatment plant is 0.30 MGD. Recognizing the permittee's long-term plans for the collection and teatment system to be expanded to 1.0 MGD or more, additional capacity may be added to the treatment plant through requests for modification of this permit and through approval of engineering reports, engineering plans and specifications by the division.

The division requires detailed information to support the position that the wastewater plant has not unreasonably committed to service connections beyond the design capacity of installed treatment facilities. The items listed below define the minimum submittal requirements for the current system and the requirements for application to expand the treatment system.

Water & Wastewater Authority of Wilson County (WWAWC) will develop and maintain a master scaled drawing that details the plant location and the locations of the residential developments being served. The drawing will indicate the developments that are platted, the developments that represent existing customers and the number of preliminary and platted lots in each development. WWAWC will also develop an annual report listing the number of customers connected to the system and the associated flows. The previously listed items will be developed and available for review by the the division within one year of permit issuance. The data shall be updated at a minimum of annually and made available to the division upon request. It shall also be provided to the division at the time of any application for a permit modification.

Addendum to Permit Rationale

May 31, 2007

Following the public hearing held on April 10, 2007, the review of the public comments received after the public hearing, discussions held with representatives of the permittee, and the preparation of the Notice of Determination, several changes were made to the language of the draft permit in preparing this final permit. The changes are enumerated and disussed as follows:

1. Page 3, General Requirements and Page 20, Rationale, C. New Permit Conditions – the Rationale for the draft permit stated that the effluent limitations and monitoring requirements for the system would remain the same (as in the previous permit) except that bacteriological monitoring would be changed from Fecal Coliform to E. *coli*. However, the limits and monitoring requirements that were presented in the table on page 3 of the draft permit incorrectly added a new limit and monitoring requirement for Nitrate as N and left out the previous limit and monitoring requirement for Total Suspended Solids. This table has been corrected to match what was in the previous permit.
2. Page 13, Certified Operator - the certified operator grade was increased to a level three.
3. Page 14, Restrictions on Connections Beyond Capacity – The first paragraph has been modified to clarify what constitutes a commitment for a connection to the wastewater collection system. The revised language states that:

   > *"The permittee shall not approve or execute final plats for recording that include connections to the wastewater collection system that, based on a design flow of 300 gallons per day per connection, will exceed 150 percent of the as-built design capacity of the treatment plant."*

   The language of the first paragraph was also modified to clarify when the permittee must discontinue allowing connections to the system based on actual measured flow to the treatment plant. The modified language states that:

   > *"the permittee will not continue to add sewer taps once the average flow to the facilities (measured over the most recent 12 month period) has reached 80 percent of the design capacity, unless an engineering report and permit application has been submitted to the division for plant expansion."*

   Also, the language of the third paragraph has been changed to clarify what information must be developed by the permittee to verify the number, type and location of connections to the wastewater treatment system.

Permit Rationale

A. Introduction

The original application for the Logue Road treatment facility was submitted in October 1999. The application was for a regional plant with an ultimate design flow of 0.75 million gallons per day (MGD). The design loading and land application area were specified as 2.0 inches per week over a 210-acre golf course site. This spray site represents enough drip area to potentially handle 1.63 MGD (approximately 5433 connections at a flow of 300 gallons per connection per day). The proposed treatment included a fixed media recirculating biological reactor (recirculating sand filter) followed by disinfection using ultraviolet light. Discharge was to a storage pond followed by spray irrigation onto the Pine Creek Golf Course. The projected service area for the system is bounded by I-40 to the north, Hwy 109 and I-840 to the west, Rutherford County to the south, and Davidson County to the east.

A State Operation Permit was issued for the Logue Road facility on March 30, 2001. The permit established the following effluent limitations and monitoring requirements as given in Table 1:

Table 1
Previous Permit Limits and Monitoring Requirements

Parameter	Sample Type	Daily Maximum	Sampling Point	Measurement Frequency
Flow	instantaneous		*	**
$CBOD_5$	grab	10 mg/l	*	1/month
TSS	grab	10 mg/l	*	1/month
Ammonia as N	grab	5.0 mg/l	*	1/month
Fecal Coliform	grab	23 colonies/100 ml	*	1/month

*Effluent to the golf course lake.

**Flow can be reported from water meter reading.

Engineering plans were subsequently submitted for the first phase of the project to include a 50,000 gallon per day (gpd) recirculating sand filter and 903,000 gallon storage lagoon (large enough to serve approximately 166 connections at 300 gal/connection-day). The plans were approved on September 12, 2001.

The current application for reissuance of the permit was submitted on June 21, 2006. The application requested a design flow of 0.75 MGD to serve 2500 homes.

B. Inventory of Current Conditions at the Logue Road System

The following Table 2 provides a review of the discharge monitoring data for the Logue Road facility:

Table 2
Wilson Water & Wastewater Authority - Logue Road at Pine Creek Golf Course

Design Flow = 50,000 gpd

Month	Flow gpd	BOD5 mg/l	TSS mg/l	NH3 col/100ml	E. Coli col/100ml
Limits		10	10	5	23
Jan - 04					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sep	No discharge from this system				
Oct					
Nov					
Dec					
Jan-05	1,750	1.3	1.2	<0.05	5
Feb					
Mar					
Apr	1,250	5.27		2.4	<2
May	1,250	0.46	0.8		
Jun	450	2.63	0.4		166
Jul	750	4.39	0.8		358
Aug	355	2.79	0.4		237
Sep	2,250	3.16	0.4	2.3	213
Oct	2,300	0.58	0.8	2.4	175
Nov	2,350	0.78	1.2		<2
Dec	1,275	1.61	0.8	0.05	26
Jan - 06	1,475	1.9	0.75	<0.05	22
Feb	2,150	2.66	1.2	<0.05	20
Mar	3,500	2.7	0.8	<0.05	9
Apr	15,750	3.1	1.2	<0.05	7
May	14,895	1	1.6		8
Jun	15,200	1	1.6	<0.05	4
Jul					
Aug					
Sept	14,700	BDL	BDL	4.1	<2
Oct					

The above data provide a measure of the quality of the water that is discharged to the storage lagoon. Generally the treatment facility has met all permit limits except for problems meeting fecal coliform limits during five months in the summer and fall of 2005. Measured flows are well below the design capacity of the system.

Table 3 provides a list of the different residential developments currently connected or proposed for connection to the system:

Table 3
Logue Road Wastewater Commitments

Residential Development	Final Platted Lots	Flow @ 300 gal/home-day gpd	Lots not Final Platted	Total Lots	Flow @ 300 gal/home-day gpd
Trailwood Farms[1]	78	23,400	0	78	23,400
Oakpoint[1]	52	15,600	15	67	20,100
Quad Oak[1]	52	15,600	29	81	24,300
Seven Springs	41	12,300	33	74	22,200
Stonefield	22	6,600	100	122	36,600
Gregory[1]	6	1,800	75	81	24,300
Wright Farms[1]	0	0	288	288	86,400
Windover	0	0	450	450	135,000
Appaloosa Valley[1]	0	0	150	150	45,000
Central Pike (Capers)	0	0	454	454	136,200
Oakwood Acres	0	0	65	65	19,500
Totals	251	75,300	1,659	1,910	573,000

[1] Sewer lines for these facilities have been approved by the Division of Water Pollution Control

It can be seen from this table that the flows projected to enter the system are significantly greater than the flows actually being recorded at the facility (see Table 2). Also projected flows for both final platted lots and lots not yet final platted exceed the design capacity (50,000 gpd) of the existing fixed media recirculating biological reactor and the design storage capacityof the lagoon.

Common engineering practice for municipal wastewater plants is to design and construct the treatment facilities based on a projected 20-year life. However, for decentralized wastewater facilities, construction of the treatment units in modular phases may be preferred. This approach reduces front-end capital costs and avoids the maintenance problems associated with having portions of a treatment works go unused for several years. Thus, it is not unusual for the projected waste flow (based on platted lots) to a decentralized wastewater system to exceed the actual measured flow to the system. One reason for this can be that actual flows from each connection may be less than the 300 gal/day-connection applied as design criteria by the division. For example, data from a major utility district serving over 1000 three and four bedroom homes in 20 Middle Tennessee subdivisions reports average flows of 160 gallons per home per day. Also, it can take considerable time for new residential developments to complete build-out and thus all platted lots may not be discharging to the system for several years.

It is the current position of the division that the number of committed connections to decentralized wastewater treatment systems should not exceed the as-built design capacity by more than a reasonable amount that takes into account the above factors. Unless unusual circumstances warrant, the projected flow (based on the projected connections) should not exceed more than 150 percent of the installed design capacity. When projected connections reach 150 percent of installed design capacity (based on 300 gal/day-connection) or when actual flows to the plant exceed 80 percent of installed design flow, then an engineering report should be submitted for expansion of the plant along with a revised permit application requesting permit modification. In the case of Logue Road, the permittee has now connected in excess of 150

percent of the as-built design capacity and thus no new sewer connections will be approved by the division until the treatment system has been expanded.

It was the original concept of the permittee to expand the plant in 50,000 gal/day increments using the fixed media recirculating biological reactor treatment technology. However, due to the rapid growth of development and the projected total population in the service area, the permittee is considering a major expansion of the plant using a different treatment technology. The applicant has submitted an Engineering Report providing for a regional plant with a final design capacity of 1.0 MGD to be built in increments of 250,000 gpd. The proposed plant will employ membrane filter technology.

C. New Permit Conditions

This permit will be issued based on a design flow of 0.3 MGD (50,000 gallons per day from the existing plant and 250,000 gallons per day from the proposed membrane plant). Until the membrane plant is constructed, effluent limitations and monitoring requirements will remain the same as in the previous permit except that bacteriological monitoring will be changed from Fecal Coliform to E. *coli*. Once construction of the membrane plant is complete, effluent limitations and monitoring requirements will change for both plants. The monitoring will be required three times per week using composite samples, as is required for other municipal plants. Also total suspended solids monitoring will be required.

Part III of the permit will contain requirements for detailed engineering information regarding the proposed expansion of the plant.

The division has already approved collection systems for Trailwood Farms, Oak Point, Quad Oak, Wright Farms, Appaloosa Valley, and Gregory. This permit will allow no new connections to the system until the 0.3 MGD membrane plant has been installed. Once the membrane plant has been installed, this permit will allow sewer lines to be constructed for developments listed in Table 3 above up to the point that the total commitment reaches 450,000 gallons per day based on 300 gallons per conection(150 percent of the 300,000 gpd design capacity) To accept new developments beyond this capacity, this permit must be modified to expand the capacity of the plant.