## BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE 2010 DEC 10 PM 3: 50

December 6, 2010 T.R.A. DOGKET ROOM
PETITION OF AQUA GREEN UTILITY INC. TO AMEND ITS CERTIFICATE OF

IN RE:

**CONVENIENCE AND NECESSTIY** 

DOCKET NO: \_1000145\_\_\_

Petition of Aqua Green Utility Inc. to amend its Certificate of Convenience and Necessity

Aqua Green Utility Inc. would like add the enclosed letter to our petition requesting to add the Stonebridge subdivision to our service area.

Respectfully Submitted,

Dart Kendall

Aqua Green Utility Inc.



3350 Galts Road . Acworth, Georgia . 30102

December 2, 2010

To: Vojin Janjic

Thank you for your correspondence on November 15, it was good to finally hear something about my SOP application. I appreciate the opportunity to respond to your concerns. This was the first I have heard that you considered my soil map to be a preliminary soils map. It has been far more than 30 days since I have turned in my application. I have enclosed a section of what I will refer to as a bill of rights which states:

Permit applicants shall have the right to a timely completeness determinations for their applications. Permit applicants shall have the right to know exactly how their applications are incomplete and what further information is needed to make their applications complete. Absent extraordinary circumstances, the commissioner shall notify the applicant within (30) days of any permit application deficiencies, or determine that the application is complete.

That being said I would be glad to address any issues that TDEC has. As for the letter dated August 10, 2010, you did receive a response letter. Since Mr. O'Dette did not want to communicate with me, I had my engineer Bob Faulhauber forward the letter to him. I have enclosed the letter dated August 16, 2010. Let me try to summarize my response to Mr. O'Dette letter. Mr. O'Dette and Mr Roach are obviously looking at something that is not included in my application. In an attempt for accuracy, I have gone back to S&ME and obtained a file signed copy of my soil report and map. I have included these also for your review. You will see this is the same soil report as the one sent in with my application. If you look over my S&ME soil report, you will see there is no soil named Muskingum and Mr. O'Dettes assumptions are base on soils with a restrictive layer at less than 24 inches. On page 2 of my S&ME report it clearly states auger refusal was not encountered within 24" of the surface through out the site, this conforms with TDEC rules.

I will attempt to address your response to Mr. O'Dettes letter dated August 10, 2010 as best I can, since he is obviously looking at something that is not in my application. As for his first bullet mark, I understand that drip disposal may be new to Tennessee. The calculations made by my engineer are based on good science from the EPA as well as experience from other state requirements.

His second bullet point clearly addresses your page 2 comments about justification to support deviation from those criteria. If you look at his last line, it states for 107 homes you have used the correct design flow rate of 32,100 GPD. If you will look at our engineering report included, second page bottom paragraph, we expect a flow of 160 GPD but the system design is based on 300 GPD which gives us a safety margin for the system. We clearly did not request any reduction or deviation.

As for the third bullet point, we have no Muskingum soil in our report. we have no soil showing 14 to 24 inches. I don't know how to respond and look for your guidance.

As for the next bullet point, Mr. O'Dettes assumptions are based on soil with depths less than 23 inches. Our report that is included, shows the Dandridge soils at 28 inches, the Sequoia soils at 30-36 inches and the Apison soils at 30-36 inches.

As for the last bullet point, he states the Delta Environmental Bio-Pods system will not be approved as the secondary treatment. If you look at the enclosed engineering report, first page fourth paragraph, it reads fixed film, low rate trickle filter. We never mentioned Bio-Pods and I don't know how to respond. I look for your guidance on this item.

As for your comments about my email dated September 11, 2010, that was a response to Mr. O'Dettes email on 9/1/2010 in which he states different reasons than what I am now being told is the problem with my application. It would be much easier for me to respond if TDEC would make up its' mind on what the problem is. I have included that email response also for your review.

I am sorry for the frankness of my response but don't seem to know a better way to express my confusion over what seems to be information clearly contained in my application. I look forward to your reply and I am willing and ready to provide any additional information available.

The developer for the Stonebridge subdivision has requested in writing that S&ME send a soil scientist to meet with TDEC on site. I will inform TDEC as soon as I hear a response.

Dart Kendall

President

Aqua Green Utility Inc.

cc. Bob Faulhaber PE.

Patsy Fulton TRA



August 28, 2008

Southeastern Development Group, Inc. 9131 Cross Park Dr., Suite 100 Knoxville, TN 37923

ATTENTION: Mr. Mark Weston

Subject: REPORT FOR EXTRA HIGH INTENSITY SOIL MAPPING

FOR PROPOSED DECENTRALIZED WASTEWATER SYSTEM

Stonebridge Development Jefferson County, Tennessee S&ME Job No. 1434-08-434

Dear Mr. Weston:

S&ME, Inc. (S&ME) is pleased to provide you with our report for our extra high intensity soils evaluation for the proposed decentralized wastewater system at the Stonebridge Development located in Dandridge, Tennessee.

## PROJECT INFORMATION

S&ME understands that Stonebridge is a planned community development consisting of approximately 110 acres. Southeastern Development Group plans on utilizing a decentralized waste water system to service the proposed subdivision. You requested that S&ME complete the extra high intensity soils map required by the Tennessee Department of Environment and Conservation (TDEC), Division of Water Pollution Control (DWPC) to determine the compatibility of onsite soils with the use of drip irrigation as a waste water disposal method.

## **GEOLOGY**

The project site, as most of East Tennessee, lies in the Appalachian Valley and Ridge Physiographic Province. The Province is characterized by elongated, northeasterly-trending ridges formed on highly resistant sandstone and shale. Between ridges, broad valleys and rolling hills are formed primarily on less resistant limestone, dolomite, and shale.

Published geologic information indicates the site is underlain by bedrock of the Sevier Shale formation. This formation generally consists of bluish gray to black calcareous shale with minor amounts of limestone. The Sevier shale typically weathers to produce a

thin acidic yellowish-brown residual soil containing varying amounts of weathered shale fragments.

Some portions of the Sevier Shale have been documented to be expansive. The expansion occurs during the weathering of the parent bedrock. During the weathering process, pyrite is broken down in the presence of water and oxygen. One of the end products of the weathering process is gypsum, which has a greater volume than the original bedrock volume.

Strike and dip measurements were collected along the recently completed roadway for the Stonebridge Development. Test pit location south of grid point C-1 contained shale bedrock 3.0 feet below ground surface striking 64 east, dipping 55 south. Shale bedrock observed in the utility trench at lot 100/99 had a strike measuring 275 east and a dip of 21 south. The shale bedrock observed at lot 96 had a strike of 52 east and 55 south. A cut bank existing north of lot 87 contained limestone striking 250 east, dipping 54 south.

## SOILS ANALYSIS

In our attached soils map, we have identified three different soil series within the proposed drip irrigation site. Those series are Dandridge, Sequoia, and Apison. In the following paragraphs, we have described the soils as they were observed in the field.

The Dandridge Soil Series consists of shallow, excessively drained soils. These soils are classified as clayey-skeletal, mixed, active, mesic, shallow Ruptic-Alfic Eutrudepts. These soils form from weathered calcareous shale. Due to the nature of the geology, shale ledges may extend to the surface. Auger refusal was not encountered within 24" of the surface throughout the site. Typical pedon description on this site is as follows:

	Depth				Fragments
Horizon	(inches)	Texture	Structure	Color	(%)
A	0-3	Silt Loam	M Granular	10YR 4/3	
Bw	3-7	Silt Loam	Wk Blocky	10YR 4/4	15
Bt1	7-15	Silty Clay	Wk/Mod.	10YR 5/4	35
		Loam	Blocky		
BC	15-24	Silty Clay	Wk Blocky	10YR 6/4	60
		Loam			
Cr	24-28	Silt Loam	Wk Blocky	10YR 6/4	>60
R	28	Shale			
		bedrock			

Table 17-2 of the Tennessee Department of Environment and Conservations', *Design Guidelines for Wastewater Disposal using Drip Dispersal*, shows a hydraulic loading rate of .1 gallons per day per square foot for this soil.

The Sequoia soil series consists of moderately deep, well drained soils with low permeability. These soils are classified as fine, mixed, semiactive, mesic Typic Hapludults. Typical pedon description on this site is as follows:

Horizon	Depth (inches)	Texture	Structure	Color	Fragments (%)
A	0-3	Silt Loam	M Granular	10YR 4/3	
Bt1	3-7	Silty Clay		10YR 4/4	10
		Loam	Wk Blocky		
Bt2	7-24	Silty Clay	Mod. Blocky	5YR 5/8	10
BC	24-30			5YR 5/8	25
		Silty Clay	Wk Blocky		
Cr	30-36	Silty Clay/	Wk Blocky	7.5YR 5/8	35
		Soft Shale			

Table 17-2 of the Tennessee Department of Environment and Conservations', *Design Guidelines for Wastewater Disposal using Drip Dispersal*, shows a hydraulic loading rate of .1 gallons per day per square foot for this soil.

The Apison Soil Series consists of well drained, moderately permeable soils that are moderately deep to soft shale. These soils form in residuum from interbedded sandstone, siltstone, and fine-grain sandstone. Apison soils are classified as fine-loamy, siliceous, thermic Typic Hapludults. Typical Pedon description on this site is as follows:

	Depth				Fragments
Horizon	(inches)	Texture	Structure	Color	(%)
A	0-7	Silt Loam	M Granular	10YR 4/3	
Bt1	7-14	Clay Loam	M Blocky	10YR 4/4	10
Bt2	14-24	Silty Clay			10
		Loam	Mod. Blocky	10YR 5/4	
BC	24-30			5YR 5/8	25
		Silty Clay	Wk Blocky		
Cr	30-36	Silty Clay/			35
		Soft Shale	Wk Blocky	7.5YR 5/8	

Table 17-2 of the Tennessee Department of Environment and Conservations', *Design Guidelines for Wastewater Disposal using Drip Dispersal*, shows a hydraulic loading rate of .2 gallons per day per square foot for this soil.

Thank you for the opportunity to be of service to you on this project. If you should have any questions, or need any further information, please do not hesitate to contact us.

Sincerely, **S&MIE**, Inc.

Kevin Davis Soil Scientist Eric M. Solt, P.G.

Environmental Services Manager

Attachments: Extra High Intensity Soils Map

Vicinity Map

KFD:ems

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