TENNESSEE REGULATORY AUTHORITY



460 James Robertson Parkway Nashville, Tennessee 37243-0505

Date:

August 9, 2011

TO:

Docket File

From:

Patsy Fulton, Utilities Division

RE:

Docket No. 10-00145 Petition Of Aqua Green Utility Inc. To Amend Its CCN And Expand Its Service Area To Include A Portion Of Jefferson County In Tennessee, Known As Stonebridge On Douglas

Lake

Copies of the attached e-mail and Soils Map concerning Stonebridge, Jefferson County, Tennessee in reference to SOP-10042 were received by TRA Staff via e-mail from TDEC on February 2, 2011.



January 25, 2011

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

ATTENTION: Mr. Sam Pinner

Subject:

REPORT FOR EXTRA HIGH INTENSITY SOIL MAPPING

FOR PROPOSED DECENTRALIZED WASTEWATER SYSTEM

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

Dear Mr. Pinner:

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

At your request, we met with TDEC officials, along with Jefferson County officials, Mr. Bob Faulhaber, PE, and representatives from AquaGreen Utilities on January 4, 2011. The purpose of this meeting was to have the preliminary soil map that S&ME compiled in August 2008 for the site reviewed by the TDEC Soil Scientist. For continuity, S&ME contracted with Kevin Davis, a registered soil scientist and former S&ME employee, to conduct the field activities for the soil map review meeting. Following this review, S&ME has addressed the TDEC comments and concerns and made adjustments to the soil map deemed necessary by TDEC.

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.

Strike and dip measurements were collected along the recently completed roadway for the Stonebridge Development. The 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.

SOIL DESCRIPTIONS

On the attached soils map, three different soil series have been identified within the proposed drip irrigation site. Those series are Dandridge, Sequoia, and Muskingum. In the following paragraphs, we have described the soils as they were observed in the field. Pit descriptions were made of multiple pit faces to document the test pit variability.

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. However, in the test pit, depths to restrictive horizons were less than 24". With the skeletal nature and weathering processes, depth to restrictive horizons varies throughout the pit face, which is typical for the Dandridge Soil Series. Multiple pit descriptions were made to show the variable depth to the restrictive root depth or the Cr horizon. NRCS Soil Descriptions forms are attached.

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. NRCS Soil Descriptions forms are attached.

The Muskingum Soil Series is derived from residuum and colluvium from interbedded siltstone, sandstone, and shale. These soils are classified as fine-loamy, mixed, semiactive, mesic Typic Dystrudepts. This soil unit was classified as Apison on the original 2008 soil map. After review by TDEC, an agreement was made that the soil is a mixture of the Apison and Muskingum soil series. Soils contained more sand than typical for the Apison Soil Series. NRCS Soil Descriptions forms are attached.

We recommend that you consult with your wastewater design engineer to determine whether and/or to what degree the described soil units are appropriate for use for the proposed wastewater disposal system.

CLOSING

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&ME, Inc.

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

Environmental Services Manager

Attachments: Extra High Intensity Soils Map

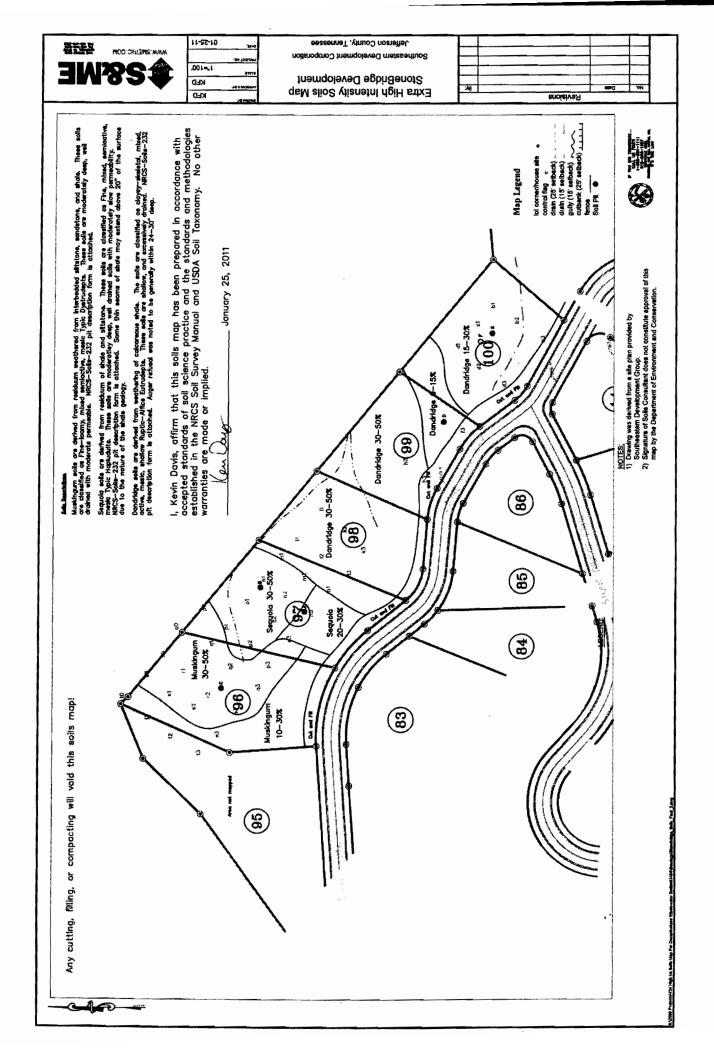
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Soil Series Description Forms

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From:

Dart Kendall <dartken@att.net>

To:

Vojin.Janjic@tn.gov; dart@adseptic.com

CC:

Patsy.Fulton@tn.gov; bob@fesconsulting.com; Robert.Odette@tn.gov

Date:

2/2/2011 1:20 PM

Subject:

Stonebridge soil report SOP-10042

Attachments: Soils Report 1-25-2011.pdf; scan0001.jpg

Hard copies of these attachments are in the mail Thanks Dart

Hard copus sure received! Forward Email to Docket File!

Patsy Fulton - Stone Bridge Update

Dart Kendall <dartken@att.net> From:

lgale4667@bellsouth.net; dart@adseptic.com To:

2/1/2011 5:07 PM Date: Subject: Stone Bridge Update

CC: mayor@jeffersoncountytn.gov; Robert.Odette@tn.gov; RTucker@CaseClerk.com...

Louise could you please forward this

Dear Stonebridge Homeowners,

We finally received a finalized soils map required by TDEC with the necessary changes from S&ME yesterday. This would not have been possible without the extensive help and effort made by Sam Pinner. Bob Faulhaber (Aqua Green's engineer) and I met with Bob O'Dette from TDEC today. To make a very long story short, we came to a consensus the proposed solution for the wastewater needs at Stonebridge including 107 homes. Though this does not guarantee a permit, it is now very likely we will be receiving a draft permit in a few weeks. The first step, a basic sewer plant, will be built and have capacity for treating the wastewater to the standards currently in use by plants in the area directly discharging into the lake or rivers. Next, we will install some proprietary automation that assures this very high treatment standard is consistently met. Then we will furnish additional proprietary automation that will distribute the high quality effluent to soil already set aside in Stonebridge subdivision in the most efficient manner possible.

I appreciate your patience during the past few months and hope to be building a plant as soon as possible. There is a 30 day wait period after the permit draft is issued before the construction can begin.

I would also like you to know how much Michael Sorrolls has helped and been involved in this process. Additionally, your commissioners, Tucker and Dockery, have been invaluable and very involved through the process. I only wish the commissioners in my district cared this much. I can assure you that without the help of these four people, I probably would have thrown in the towel on this project.

Dart Kendall

Aqua Green Utility Inc.