TENNESSEE REGULATORY AUTHORITY

460 James Robertson Parkway
Nashville, Tennessee 37243-0505

Date: **June 17, 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**

The attached e-mail concerning Stonebridge, Jefferson County, Tennessee (SOP 10042) was received by TRA Staff on June 9, 2011.

Patsy Fulton - Stonebridge (AquaGreen Utility)

From: Robert Odette
To: Fulton, Patsy
Date: 6/9/2011 7:48 AM
Subject: Stonebridge (AquaGreen Utility)
Attachments: LTR_Dep_Comm_Palmieri .pdf

Good Morning Patsy,

FYI--Attached is the letter our Deputy Commissioner Dr. Shari Meghreblian sent to Jefferson County Mayor Alan Palmieri relative to the Stonebridge state operation permit (SOP).

Take care,

Bob O'

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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

ROBERT J. MARTINEAU, JR.
COMMISSIONER

BILL HASLAM
GOVERNOR

May 25, 2011

The Honorable Alan Palmieri
Jefferson County Mayor
P.O. Box 710
Dandridge, Tennessee 37725

Dear Mayor Palmieri:

This letter is in response to your recent email and will provide an update regarding the Stonebridge on Douglas Lake project.

Background

As you know, a revised application for a State Operating Permit for land application of wastewater from 107 homes was submitted in August 2010. TDEC's review of the application and site data determined that the area of suitable soils on site would only support half the proposed lots. After additional discussion, and a meeting which you arranged in the county courthouse, we met with the applicant, Mr. Dart Kendall (Aqua Green Utilities) here in Nashville on March 23, 2011. At that time TDEC agreed that we would go ahead and authorize the development for the 50 lot loading that we felt confident the wastewater system would support. We agreed further that Mr. Kendall would be allowed to demonstrate whether any additional soils, including those previously proposed, were in fact available and suitable for disposal of treated wastewater. If that demonstration proved successful, we agreed we would authorize the additional lots as justified by the demonstrated capacity. Mr. Kendall proposed and we agreed that an investigation would be conducted by Dr. John Buchanan, Associate Professor, Biosystems Engineering and Soil Science, University of Tennessee, Knoxville.

Our permit, SOP-10042, was issued at the conclusion of that March 23, 2011, meeting. It authorized 50 homes and a flow of 15,000 gallons per day. Beyond that, a Reopener Clause allowed for permit modification and stated:

> "This permit may be reopened and modified, by either the permittee or the State of Tennessee, subject to permittee comment and appeal and to applicable public notice procedures, to allow additional flow to the drip irrigation system based on identification of additional soils or soil characteristics that would provide more capacity for disposal as allowed by state rule."

Soils Investigation

Dr. Buchanan began this investigation by visiting the Stonebridge site with Mr. Kendall on March 31, 2011. Dr. Buchanan viewed pits that had been dug in the soils area in question and observed water standing in these pits. He also noted the site was located on a geologic uplift that is highly weathered and eroded and that the uplift has provided a very steep strike angle on the bedding planes. Dr. Buchanan documented his findings in an April 14, 2011, 3-page report that describes the soils identified as Dandridge on the Stonebridge site. Dr. Buchanan notes that suitable soils required for wastewater treatment are those having "physical, chemical, and biological properties that will remove the waste constituents and serve as a conduit to put the water back into the hydrologic cycle." He notes that the drip tubing, once installed, would be placed in the paralithic, fractured bedrock material that comprises the soil and that he would have no expectation of denitrification taking place in this material. Denitrification is the soil process that prevents nitrate, a pollutant that is harmful to human health, from entering groundwater.

TDEC's Response

Placement of treated wastewater effluent in soil that lacks the ability to denitrify results is an unacceptable risk to the receiving aquifer. TDEC's determination is that this phase of the study demonstrated that the soils in question are not suitable for the application of treated wastewater regardless of its hydraulic capacity.

On May 16, 2011, Mr. Kendall met in Nashville with Dr, Buchanan and TDEC staff. Dr Buchanan summarized the findings of his investigation and report and reiterated that the soil at Stonebridge is discouraging in terms of wastewater treatment. Based on that, TDEC told Mr. Kendall that continuation of study was not necessary to determine soil suitability since the key factor, the inability of the soil to treat wastewater, had been determined by Dr. Buchanan on his March 31, 2011, site evaluation. Mr. Kendall argued that the study was not concluded, as the hydraulic capacity of the soil was not yet established. We agree that Dr. Buchanan did acknowledge that a hydraulic capacity test could be conducted, but it would not yield meaningful results relative to the treatment issue. TDEC believes that the agreement reached on March 23, 2011, calling for an evaluation of the soil, was fulfilled by Dr. Buchanan's site visit where he observed pits with water standing in them and physically assessed the soil.

Wastewater managed through the means of decentralized technology must be afforded treatment by the soil component. Because of the findings of Dr. Buchanan, i.e., the soils in question had some hydraulic capacity but were devoid of pollutant removal capacity, we cannot authorize wastewater disposal on the subject soils.

Options Going Forward

As you probably know, since the lot sales in 2008, the developer and Mr. Kendall have been looking for more acceptable soil. We understand that soils similar to those permitted were identified immediately adjacent to Stonebridge, but those areas were not acquired. Another option

that has been explored is to construct a traditional sewer line to the City of Newport, but this option has been rejected. From our perspective, both of those options remain available.

We understand that Mr. Kendall maintains that the system he proposes is adequate. But based upon the detailed information at hand stemming from extensive onsite investigations, TDEC cannot modify the existing Stonebridge permit to allow for a greater wastewater load unless Mr. Kendall proposes to use additional, adequate soils. Mr. Kendall has the right to appeal TDEC's decision to the Water Quality Control Board.

In order to start this administrative process, Mr. Kendall must formally request a modification to his existing SOP by submitting an application for the additional 57 lots. TDEC would then deny the permit modification and Mr. Kendall would then be able to take his case to the board. Should he decide to appeal, we will commit to schedule the case as soon as possible.

I appreciate your long-standing interest in resolving this matter and will be pleased to offer any further assistance. If you have any questions, please feel free to contact Paul Davis, Director of Water Pollution Control, at 615-532-0632.

Sincerely,

Shari Meghreblian, Ph.D.
Deputy Commissioner

SM:cm

Cc: Dart Kendall, Aqua Green
Dr. John Buchanan, UT
Commissioner Bob Martineau, TDEC
Paul Davis, TDEC-WPC