

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

Matt Blunt, Governor • Doyle Childers, Director

5.200 Aqua Missouri Quail Valley Lake  
Cole County  
#MO-0114081

www.dnr.mo.gov

May 5, 2006

Mr. Edward Storey  
2916 Foxdale Drive  
Jefferson City, MO 65109-9208

Dear Mr. Storey:

The Department of Natural Resources has received the March 7, 2006 letter from ReSource Institute following up on the March 2, 2006 meeting with you, Mr. Greg Haug – your engineer, and Mr. Mark Ludwig – your attorney. Representing the department at the meeting were Mr. Ed Galbraith, Mr. John Hoke, Mr. Refaat Mefrakis, and myself, Mr. Keith Forck.

During the meeting, the items of discussion were downstream water quality impacts – algae, nutrients, duckweed, chlorine residual, sludge in the stream, and how more houses could be connected to the existing treatment plant with little or no upgrade. Your letter highlights several action items discussed during the meeting. The department's response is below each action item.

1. A census was taken to develop the total number of people in the Quail Valley Subdivision. The result of this census showed that there are currently 229 people in the 77 homes.

With Aqua Missouri's acceptance of more connections, the department would consider the lower population equivalent per house based on this actual survey data.

2. Water records from Cole County Public Water Supply District #1 showed a water usage of 425,900 gallons for 75 homes in the month of January.

Was the billing period for the month actually 31 days?

3. The By-laws of the Homeowner's Association will be revised to require the solids from the septic tanks be pumped at a minimum of once every three years.

For additional houses to be considered for connection, adequate primary treatment must be provided to reduce the organic loading to the treatment plant. The department has some reservations about the homeowner's association maintaining the septic tanks over the long term. How can the department be assured that this requirement will be enforced?

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Missouri Public  
Service Commission

Respondent Exhibit No. 31  
Case No(s) WC-2007-0303  
Date 10-29-07 Rptr paa

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4. The initial pumping of each septic tank will occur before June 1, 2006.

According to the department's September 1, 2004 letter, the treatment plant has limited organic capacity. Therefore, primary treatment must be provided before considering the connection of additional residences.

5. The Missouri Department of Natural Resources' inspectors will evaluate the water quality impact below the outfall this summer.

The department has limited resources, but will attempt to follow-up this summer with an on-site evaluation of the stream.

6. Options to upgrade the clarifier of the existing treatment plant will be submitted. Options include tube settling and chemical treatment.

The department will review the engineering report when submitted. These options are not included in 10 CSR 20 Chapter 8 Design Guides, so documentation must be included showing the capability, reliability, and operation and maintenance requirements of the proposed upgrade.

7. The developer will begin hooking up additional homes within the development as the flow and discharge parameters are below the permitted values.

Aqua Missouri regulates service connections as they are the permittee of the treatment facility and they must be notified before making service connections to the wastewater treatment system. Note the department's concerns regarding the organic loading of the wastewater treatment plant.

8. In accordance with their operating permit, Aqua Missouri is required to install a dechlorination system.

The current operating permit has a schedule of compliance to upgrade the system by adding a dechlorination system.

9. Influent samples will be collected to document the removal efficiency improvements from now until after all of the septic tanks have been pumped.

Without sufficient influent data, the department does not know what the actual concentration of the wastewater is and would use the default design guide loading rates.

10. A follow-up meeting with Mr. John Hoke and Mr. Keith Forck will be requested during the fall of 2006 to evaluate the effectiveness of the well-maintained septic tanks, results of the water quality evaluation and discharge monitoring reports.

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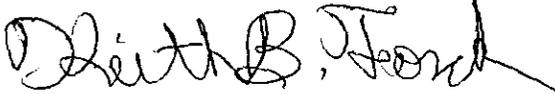
The department is open to another meeting to discuss the wastewater treatment and water quality issues. One issue that was not addressed is inflow and infiltration of the existing collection system.

The department recommends that you coordinate with Aqua Missouri and submit a short report on the capacity of the treatment plant and the potential of remaining capacity. Upon submittal of this report, the department will review and would likely agree with Aqua Missouri's analysis of the capacity of the treatment plant, as they are ultimately responsible for the treatment plant and the water quality of the effluent therefrom.

If you have any questions regarding these matters, please contact me at (573) 526-4232 or (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552.

Sincerely,

NORTHEAST REGIONAL OFFICE



Keith B. Forck, P.E.  
Environmental Engineer

KBF/ks

c: ReSource Institute  
Mr. Ed Galbraith, Water Protection Program  
Mr. John Hoke, Water Pollution Control Branch  
~~Aqua Missouri~~