

August 26, 2005

Mr. Woody Evans
City Manager
Town of Spring City
P. O. Box 369
Spring City, TN 37381

Dear Woody:

MTAS was requested to assist Spring City with financial and operational issues regarding the sewer line being constructed to serve the TVA Watts Bar Nuclear Plant. You have indicated that TVA approached the city with the possibility of building a force main from the existing Spring City sewer system to the nuclear plant in order that TVA could abandon its' existing treatment plant, becoming a customer of the city system.

A review of the contract between TVA and Spring City reveals several important points for the city:

*The force main will be the property of Spring City.

*Section IV (a) states that the *City...shall ensure that its sewage collection and treatment system, including but not limited to the installed facilities, meets or exceeds minimum State of Tennessee Department of Health and Environment standards and the requirements of the Federal Water Pollution Control Act.....* Considering the Inflow and Infiltration (I & I) problems is Spring City meeting this provision? (Similar wording is also contained in Section VII)

*TVA requires a minimum treatment capacity of 20,000 gallons (daily) and a maximum of 100,000 gallons (daily).

*TVA will pay the city a rate of \$4.00 per 1,000 gallons for the first 500,000 gallons plus \$3.00 per 1,000 gallons for treatment over 500,000 gallons. This rate will remain in effect until October 1, 2016.

*The cost of the project will be approximately \$1,200,000 with Spring City obtaining the funds from Rural Development. TVA will pay a portion of the loan by remitting a debt fee of \$5,975 to Spring City each month. This fee may be adjusted based on the final debt costs but TVA's portion will not exceed 40.8% of the total capital costs.

*The planned completion date is April 1, 2006.

Spring City also has the potential to add approximately 200 new sewer customers to the force main.

This project appears on track as the city has entered into the contractual agreement with TVA and is in the process of arranging the funding through Rural Development.

The proposed 8" sewer force main will travel from the town to the nuclear facility through an area that is served water by the Watts Bar Utility District (WBUD). The district has discussed the possibility of buying several sewer taps on the line for the purpose of installing a sewer collection system in their service area. MTAS was asked to assist the city in establishing tap fees and rates to be charged to WBUD.

The issue of serving WBUD customers raises several points for consideration:

1. The capacity of the 8" force main.

The question of serving the district customers is mainly a capacity issue of the new sewer line and downstream facilities. TVA is contracting to send Spring City a flow of between 20,000 and 100,000 gallons per day. In addition the town expects to add 200 residential customers. What is the total capacity of the line and how much of the total capacity should be allocated for utility district usage? Obviously, WBUD will begin with an initial customer base and minimum flows. What is the anticipated future growth of their sewer collection system? Maximum flow limits may need to be written into the contract which could affect the future growth of the district sewer.

2. The capacity of the Spring City sewer treatment facility.

MTAS completed an analysis of the gallons of wastewater treated and billed for January through December 2004. The total gallons treated was 229,292,000 and the gallons billed to customers was 45,655,270 resulting in a difference of 183,636,730 (Exhibit 1). This indicates the city treated 80.09% more wastewater flow than was billed to its' customers. While a portion of the difference may be attributable to metering or other non flow issues, it is evident that the Spring City sewer system is encountering a significant amount of I & I during rain events. How much additional flow can the treatment facility handle?

In the matter of capacity, the city's priorities should be: (1) existing city customers, (2) TVA, (3) new city customers made possible because of the proposed force main and/or improvements to downstream facilities, and (4) WBUD.

3. Billing the WBUD wastewater.

There are several options for Spring City to use in billing the utility district for wastewater treatment. One option is to install flow meters and bill based on the reading. Sewer meters have historically been expensive and unreliable. If flow meters are used, the contract should address the issues of ownership of the meters, who pays for installation, who is responsible for maintenance, etc. Another option would be to use the water meter readings for the WBUD customers who are also connected to the sewer

system. The district would need to supply the city with usage totals on a monthly basis, and have a meter change out program in order to keep readings accurate. A third option would involve the utility district purchasing a capacity of the line (and perhaps the treatment plant) and paying a capacity charge instead of connection fees. This is similar to the arrangement with TVA.

As part of this evaluation, MTAS also calculated the cost of sewer treated and billed (Exhibit 2) and the cost of water produced and sold (Exhibit 3). The cost of sewer treated is comprised of three major cost areas, Treatment & Disposal Cost, Rehabilitation Cost, and General & Administrative Cost. The total treatment cost is \$360,675 for treating 229,292,000 gallons, or \$1.57 per thousand. The total billed cost is also \$360,675 for billing 45,655,270 gallons or \$7.90 per thousand. The calculation of a rate to charge TVA should include Treatment & Disposal (billed) cost of \$3.60 and the General & Administrative (billed) cost of \$.83 for a total cost of \$4.43. The rate of \$4.00 is below the billed cost but is somewhat offset by the fact that TVA is sharing in the debt service for the force main.

Currently the sewer is being billed at \$4.21 per thousand gallons of usage for inside city customers and \$3.56 per thousand for metered customers. This doesn't appear to be a sufficient rate, especially when you factor in the Rehabilitation Cost that almost certainly will rise as the city addresses the I & I situation.

An analysis of the gallons of water treated and billed for January through December 2004 shows that 185,496,000 gallons of raw water were treated and 138,137,951 gallons of water were billed. This is a difference of 47,358,049 gallons or a 25.53% water loss. The cost of water treated is \$2.26, and the cost of water sold is \$3.04.

In summary, it seems several issues need to be resolved before determining any fees or rates to the utility district, especially the question of capacity. Spring City could stub the lines out for the WBUD taps while the main is under construction. The city could work out the service issues and draft a contract with WBUD.

Also, this might be an opportune time to review the Spring City water and sewer rates with projections for the next 4 to 5 years. MTAS would be available for the study and could most likely schedule it this fall.

Thank you for the opportunity to be involved with you in this project. It certainly looks to be a great opportunity for the city, and, most important expand a vital service to others enhancing the quality of life in your community.

Sincerely,

Bill Young
Finance/Utility Finance Consultant