

### **13. REQUIRED UPGRADES TO THE BOYKINS WASTEWATER TREATMENT PLANT**

Almost immediately after the Virginia Department of Environmental Quality lowered our permitted limit for total recoverable copper in November 2009, we began to experience chronic problems in meeting it, violating our permit on a periodic basis. We've also had significant problems meeting the imposed ammonia limit as well.

Following a series of violations in 2010, we cooperated with VDEQ in seeking to identify the root cause of the problem and that effort culminated into us entering into a voluntary consent order with the State Water Control Board last September. The consent order imposed a civil charge of \$4,340 (which has been paid) and requires us to bring the Facility into full compliance by January 1, 2013.

The source of our trouble is linked to two issues. First, there is an accumulation of degraded sludge that has settled to the bottom of the aeration basins. The sludge has the consistency of "playdough," and it's believed that certain constituents, including copper and ammonia, are bound up in it, and periodically released during the biological process. The remedy is to remove the sludge, which sounds relatively simple, but is in fact, rather complex. The basins have to be taken out of service one at the time and drained, after which the sludge will be mechanically removed, dewatered, and transported to a landfill for disposal.

In addition, the synthetic basin liners and the equipment at Boykins are now nearing the end of their expected useful life (15 years). With its age, the equipment is insufficient to meet the new permit limits, even after the degraded sludge is removed. Accordingly, we prepared plans and specifications for equipment upgrades for the mixers, aerators, and clarifiers, as well as replacement of the synthetic liners (to mitigate risk of tearing when removing the sludge).

On September 30, we received 5 sealed bids for the sludge removal and new equipment, ranging from a low bid of \$631,012 (Patterson Construction) to a high bid of \$873,165 (M&W Construction). The bids are good for 90 days. After adding in a 5% contingency, and the soft costs for preliminary engineering, design, permitting, bidding and construction administration, the total project is expected to run around \$856,000.

While we were unsuccessful in locating any grants for the work, Mr. Mendenhall has secured the next best thing – 0% financing. He applied to the Virginia Clean Water Revolving Loan Fund (VCWRLF), which provides loans to Virginia local governments to assist with wastewater treatment plant improvements. Localities may apply for a loan from the VCWRLF Wastewater Loan Program for any expansion, upgrade, extension, replacement, repairs, rehabilitation, and/or additions to publicly-owned wastewater collection and treatment facilities; and any planning and/or design costs associated with the above improvements.

The State Water Control Board is expected to officially approve our application at its December 14 meeting (we received unofficial approval in early November) and I expect

to receive the letter of funding commitment (at 0% interest) from the Virginia Resources Authority (VRA), who administers the VCWRLF by Friday.

While the size of the capital project is substantial, the fiscal impact is quite manageable. Amortized at 0% for 20 years, the annual fiscal impact, with closing costs factored in, is less than \$50,000 annually. I'm pleased to report that Mrs. Lowe has recently coordinated with Dominion Virginia Power to move the Courtland Wastewater Treatment Plant to a different rate tier, which is expected to achieve annual power savings of roughly \$50,000, mitigating the budgetary impact of this project.

In light of the consent order, the favorable bid received from Patterson Construction, and the 0% funding commitment from VRA, I'm recommending that you proceed with acceptance of Patterson's bid prior to its expiration date of December 30.

**MOTION REQUIRED:** Subject to VRA's letter of funding commitment, a motion is required to accept Patterson Construction Company's bid.