

February 6, 1999

**TO:** The County Board of Arlington, Virginia

**FROM:** William T. Donahue, County Manager

**SUBJECT:** Approve an Award of a Construction Services Contract for the Phase IV-A Biological Nutrient Removal (BNR) Project, including the Flow Equalization Facilities, at the Water Pollution Control Plant (WPCP) under Request for Proposal No. 13-92.

**RECOMMENDATIONS:** Approve the award of a construction services contract to Hazen and Sawyer, P.C. (H&S). Authorize the Purchasing Agent to sign a contract for the construction services for the Phase IV-A BNR Project, including the Flow Equalization Facilities, at the WPCP, in the total amount of \$1,210,000. The total amount includes a base contract price of \$1,100,000 and a contingency of \$110,000. Delegate to the Purchasing Agent the authority to sign the contract documents, subject to legal review by the County Attorney.

**ISSUES:** None

**BACKGROUND:** Phase IVA BNR Project will improve the County's existing secondary treatment facilities so that the Water Pollution Control Plant can meet Stage 1 Biological Nutrient Removal (BNR) requirements. The BNR conversion is necessary in order to meet new discharge limits for ammonia and total nitrogen, as set by the Virginia Department of Environmental Quality, and to comply with requirements of the Chesapeake Bay Initiative. The removal of biological nutrients from wastewater improves the health of the Chesapeake Bay by reducing algae blooms and fish kills, and by allowing increased aquatic vegetation necessary for bay resources.

H&S was selected as the top rated engineering firm responding to RFP 13-92, in the spring of 1992. Staff recommended awarding both the design and construction services contracts for the remaining phases of the expansion project to H&S in the May, 1992 board meeting. Since then H&S has provided the construction services for Phase IIB, IIC, and IIIA with satisfactory results. As a result staff recommends the awarding of this construction services contract for Phase IV-A BNR project to H&S.

On March 27, 1997, H&S submitted a series of technical memoranda summarizing preliminary evaluations for possible Phase IVA improvements utilizing the BNR process. After review of the alternative layouts, it was decided to construct the Flow Equalization Facility on the north side of the plant and the Stage 1 BNR facility on the South side of the plant.

Staff: Alan F. Cassel, Chief, WPCD

Jill Neuville, Director, DES

Reviewed by County Attorney: \_\_\_\_\_

In November of 1997, H&S commenced design work on the Flow Equalization Facilities. It was decided to construct a 4.9 million gallon above-grade concrete prestressed tank with a pumping station to deliver primary effluent during high flows and a gravity drain for discharge during low flows. This tank is fully enclosed and includes odor control equipment.

Also in November of 1997, H&S commenced design work on the Phase IV-A BNR Project. It was decided to construct a 2.25 million gallon aeration basin complete with all appurtenances, retrofit the three existing aeration basins for the BNR process, renovate the Secondary Services Pump Station, new centrifugal blowers, upgrade secondary clarifiers, electrical upgrades, and instrumentation and controls systems. The Phase IV-A BNR Project is in final design and the bidding process will start in July, 1999.

**SCOPE OF WORK:** The scope of work for the construction services by Hazen and Sawyer for the Phase IV-A BNR Project, including the Flow Equalization Facilities project, consists of:

- Visit the site and observe construction progress.
- Attend monthly progress meetings.
- Provide interpretations, clarifications and changes to the construction documents.
- Review shop drawings.
- Evaluate and advise as to the acceptability of substitute materials and equipment proposed by the construction contractors.
- Conduct performance testing and final observations of equipment and facilities.
- Assist in computer system configuration.
- Provide a start-up plan and start-up operation and training.
- Prepare Standard Operating Procedures (SOP's).
- Prepare record drawings.

The Phase 4A project is scheduled to be completed no later than spring 2002. The construction schedule will be monitored by the independent program manager (CRSS). The cost for construction services for Phase IV-A BNR, including the Flow Equalization Facilities project, is \$1,100,000. A 10 % contingency of \$110,000 is also requested in this board report. The total request for the construction services cost allocation in this board report is \$1,210,000, which includes the 10% contingency.

**FISCAL IMPACT:** Funding for the construction services described above is available from Utility Pay-As-You-Go funds (Fund 019).