

MEMORANDUM

To: Saqib Shirazi, P.E., Innovative Water Technologies, Texas Water Development Board (TWDB)

FROM: Melissa Bryant, San Antonio River Authority

SUBJECT: Assessment of City of Kenedy's Brackish Desalination Plant Quarterly Report – September 2010

DATE: September 10, 2010

CONTRACT: 0604830579

Recent Project Activities:

7/16/10

The City of Kenedy (the City) submitted an application to TCEQ for allowing the City to install a full-scale RO treatment train based on the pilot study conducted for the Kay Bailey Hutchison (KBH) Water Treatment Plant (Exception to use Alternate-Site Data in Lieu of a Site-Specific RO Pilot Study). TCEQ reviewed the City's proposal and provided a Draft decision to the City. According to TCEQ's decision, the proposed new treatment facility needs to be constructed and operated under the same parameters demonstrated during the KBH WTP pilot study.

KBH WTP ran a pilot plant with a 2:1 array, meaning there were two pressure vessels in the first stage and one in the second stage on their array. Based on TCEQ's decision, the City has to operate the new treatment facility arranging pressure vessels in the first and second stage in 2:1 ratio.

The City of Kenedy has three reverse osmosis treatment system trains; namely A, B and C. Currently, trains A and B are operated under 5:3 array and train C is operated under 10:5 array; that means the City will not be able to apply the "exception to use alternate site data" for their 5:3 array train and the City may need to conduct a pilot study for the 5:3 array train.

Since the arrangement of membranes does not affect the permeate water quality of a reverse osmosis system (as long as the average flux and recovery of the system remain the same), the manufacturer of the membranes (Hydranautics Inc.) does not see a point for the City for conducting a pilot study. Therefore, representatives from the City, TWDB, Veolia Water, Hydranautics, SARA, and CMA Engineering met with the representatives of TCEQ in July to discuss the issues on the project.

8/23/10

TCEQ agreed to allow the City to move forward providing that a detailed plan for the project, a letter of support and a complete set of pilot study data from KBH need to be submitted to TCEQ. While Hydranautics has been putting the plan together for TCEQ, they found letters dating back to 1995-1997 from TCEQ allowing them to use the same membranes while the plant was being upgraded. TCEQ will review the letters and come up with a decision soon. Construction documents are also in their final review stage at TCEQ.

Issues Encountered:

TCEQ review process for Letter of Exception is taking longer than expected. SARA will continue to follow up with TCEQ regarding the issue. SARA anticipates moving forward with the Subcontracts for HydraNautics and Bob Johnson & Associates and finalizing them by October.

Items to be Addressed and Anticipated Project Activities:

Membranes will be installed on a two week cycle. Since the construction is delayed, an extension for the project will be filed. SARA will soon request the TWDB for an amendment of the existing Contract.