

Continuous Flow Seawater RO System for Recovery of Silica-Saturated RO Concentrate

Quarterly Report No. 1

(Oct thru Dec 2009)

TWDB Research Contract #0704830769

WaterReuse Foundation Research Contract #09-12

by

Anthony J. Tarquin and Michael Fahy

Quarterly Progress

In October 2009, the Texas water Development Board (TWDB) and El Paso Water Utilities (EPWU) amended contract #0704830769 to continue the research through October 2010. The purpose of the amendment was to extend the research regarding *batch* treatment of RO concentrate to *continuous flow* treatment of RO concentrate using a seawater RO system. At the same time, EPWU was negotiating Contract #09-12 with the WaterReuse Foundation (WRF) to obtain a matching grant that would provide half of the cash funds necessary to complete the continuous flow project. While those negotiations were taking place, EPWU was negotiating a subcontract with The University of Texas at El Paso (UTEP) to execute the project. Several iterations of contracts were exchanged between all of the parties involved, with a final contract signed between EPWU and UTEP in mid-December 2009. In particular, TWDB required that clauses regarding Debt, Licensing and Permit Requirements, and Ownership of Intellectual Property be added to the EPWU/UTEP subcontract. As a result, the financial accounts required by UTEP for expenditure of project funds were not established until late December 2009, thereby delaying the effective starting date of the project. Therefore, no purchase orders were prepared and no cash funds were expended during the first quarter of the project. However, the pilot plant design was prepared along with the schematic drawings for plant construction. Some plumbing and accessory equipment was collected and assembled as part of EPWU's In-Kind Supplies and Hardware contribution.

Task Schedule and Activities Planned for Next Quarter

The task schedule in the TWDB and WRF contracts shows that Task 1 (design, build, install system) would take place over the first four-month period of the project, from October 2009 through the end of January 2010. The "build and install" part of this task could not be initiated because of the factors described above. Thus, the pilot plant will not be installed by the end of January 2010 as originally planned. However, it appears that some of the lost time will be compensated for, by the contractor, Industrial Water Supply, and the pilot plant should be installed before the end of February 2010. If that is the case, testing can begin in March (only one month later than planned), and the project completion date of October 31, 2010 may not have to be extended. A clearer picture of the status of the project will emerge by the time the quarterly report is submitted for January through March. An on-site, Project Kick-off meeting with pilot plant demonstration and conference call is now planned for March 9, 2010, at the Kay Bailey Hutchison Desalination Plant, with attendance or call-in participation by representatives from TWDB, WRF and the members of the WRF Project Advisory Committee (PAC).