



CITY OF SUGAR LAND

Engineering Department

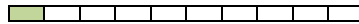
CIP Project Number: SWPE01

Title: Water Plant Upgrades for Surface Water Conversion

Project Phase: PER

% of Phase Completion

PER



Cost for this Phase: \$ 250,000

Funding Sources: Revenue Bonds

Project Manager: Jessie Li

Contractor: TBD

Consultant: MALCOM PIRNIE

Project Description: Two existing water plants were identified needing upgrades for conversion to surface water. PER for Computational Fluid Dynamic Modeling (CFD) of the GSTs to evaluate if any inlet and/or outlet modification or mixing is required. Includes installation of a 1.5 MGD GST at Lakeview plant and upsizing of booster pumps. The PER will evaluate adding ammonia feed systems at the five existing groundwater treatment plants.

Justification: The City must convert 30% of water usage from groundwater to surface water by 2013. In order to distribute the treated surface water, the existing groundwater plants will need to be upgraded. To minimize the groundwater and surface water blending issue, ammonia feed system will be installed to convert the groundwater disinfectant from free chlorine to chloramines.

Updates:

October 2009- Malcolm Pirnie was selected to be the consultant for the project through a RFQ process. Three firms were short listed for interviews and the selection committee consisting of staff in Engineering Dept. and Utilities Dept. recommended Malcolm Pirnie. Scope of Work and fee schedule is currently under development.

November 2009- scope and fee negotiations meeting held with Malcolm Pirnie on 11/30/09 for PER phase. Engineering contract expected for City Council approval in January 2010.

December 2009- Follow up scope and fee negotiations meeting held with Malcolm Pirnie on 12/17/09 for PER phase. Fees were reduced below the budget. City council contract approved of the contract is scheduled on 1/19/10.

January 2010- City Council approved the PER contract with Malcolm Pirnie on 1/19/10. Received the executed contract on 1/29/10. A NTP was delivered to Malcolm Pirnie on 2/1/10.

February 2010- A project kick-off meeting was conducted with Malcolm Pirnie on 2/10/10. Preliminary site investigation is in progress.

March 2010 – Provided requested as built information on the existing groundwater plants to the Engineer. PER is on-going.

April – Malcolm Pirnie is making progress on the Groundwater Plant Improvements for Surface Water Conversion project. One issue is to address the new Groundwater Rule compliance. There are two options for us to be in compliance with the new Rule. One is to add disinfectant contact chamber/tank for 4-log inactivation of viruses and the other is to conduct all groundwater well sampling (source water sampling) when we get a Bacti positive in the distribution system. We decided that the project should provide for 4-log inactivation of viruses. Although the construction cost will be higher, we will be in compliance all the time and not have to worry about what if the source water sample being positive and public notifications.

May - Conducted an internal meeting to make a final decision on how to meet the new Groundwater Rule (GWR) at the two groundwater plants that will receive surface water. There are two options for us to be in compliance with the new GWR. One is to add disinfectant contact chamber/tank for 4-log inactivation of viruses as required by the GWR and the other is to conduct all groundwater well sampling (source water sampling) when we get a Bacti positive in the distribution system. The estimate capital cost on installing contact chamber/tank option is approximately \$300,00 per site with very little O&M. The source water sampling option will avoid the capital expenditure. However, we have to sample all the active wells when we have a bacti positive in the distribution system. Not only each bacti test costs approximately \$20 but also the City has to issue public notice if one of the well is detected fecal positive. Although the chance for the wells to be tested fecal positive is very small, the possibility still exists due to breaking casing or bad sample. In addition to the public notice, the City has to rely on TCEQ's approval to use the well(s) again after testing positive. Considering the potential risks, we decided that we should install the contact tanks to provide for 4-log inactivation of viruses so that we will be in compliance all the time and not have to worry about what if the source water sample be positive and public notifications.

June – Conducted progress meeting No.3 with Malcolm Pirnie. The consultant is making good progress on the project.

July – The consultant has developed a couple of options for the project will is completing the PER.

August - Met with MP on the groundwater improvements PER project. The draft PER will be delivered in a couple of week. A couple of alternatives will be presented for the City to consider with cost impacts.

September – The PER has been completed and a review meeting was conducted with the consultant team. It is anticipated the final design contract will be awarded in October 2010.