



CITY OF SUGAR LAND

Engineering Department

CIP Project Number: WW0902

Title: Treatment Plants Emergency Power

Project Phase: Construction

% of Phase Completion



Cost for this Phase: \$ 970,000

Funding Sources: Revenue Bond

Project Manager: Ross Woodfin

Contractor: C.F. McDonald Electric, Inc.

Consultant: Frank J Dillard & Assoc., Inc.

Project Description:

New stationary generators and switch gear to provide reliable back-up electric service to both wastewater treatment plants. These generators would provide emergency power to critical equipment and allow for partial treatment of wastewater flows. PER completed in FY2007 (WW0707)

Justification:

Updates: December 2008-These facilities treat all the wastewater for the City and in the event of an extended power loss, keeping some treatment capabilities would be critical in maintaining sanitary conditions. These are recommendations following hurricane Rita preparation, evaluation, and recommendations of a facility-wide Vulnerability Assessment conducted in fiscal year 2004.

March 2009 – The engineering design contract with Frank J. Dillard and Associates, Inc. (FJDA) was approved by City Council 01/06/09. A kickoff meeting was held 01/15/09. FJDA is currently underway with field reconnaissance and field data collection. Design of

the generators will begin once the minimum loading requirements for each facility is determined and agreed to by the City.

June 2009 – Progress meeting held 5/27/09 to provide updates of field investigation and minimum loading requirements. Brazos River Authority staff (WWTP operators) were at meeting with City staff to agree to load requirements for both emergency loads and normal loads. Design of the generators for both WWTPs is expected to begin once City staff agree to load requirements. Add alternates will be included in the design bid package to allow flexibility in selection options to control costs.

July 2009 – Progress meeting held 7/02/09. Decision made to move forward with preparation of invitation for bid to purchase WWTP generators prior to installation. This will allow the City to take advantage of lower prices, reduce contractor markup, and get ahead of led time to order generators. Draft technical specifications submitted to be included in invitation for bid.

August 2009 – Progress meeting held 08/04/09. Comments to technical specifications provided to Frank Dillard. Bit tabulation sheet will be prepared by Frank Dillard to be included with technical specifications to purchase the generators prior to installation. Advertising and Bid opening for purchase of generators anticipated in September 2009.

September 2009 – bids were received September 17 for purchase of generators. Apparent low bidder is Cummins South Plains. Bids received were about 60% of Engineer's probable cost estimate. Next steps will include getting approval from council to approve purchase of generators and prepare Invitation for Bid for installation. Construction drawings are expected to be completed in October for bidding.

October 2009 – City council approved purchase of three generators on October 20, 2009. 90% construction drawings submitted for City staff review. Draft technical specs and front end construction documents submitted October 29 and are in review by City staff. Next steps will include completing construction drawings and specifications for bid advertisement expected in November.

November 2009 – Advertisement for bid approved and advertised on 11/18/09 and 11/25/09. Pre-bid meeting scheduled 12/02/09 with bid opening scheduled 12/10/09 unless amended by addenda.

December 2009 – Six bids were received on 12/10/09. Recommended lowest responsible bidder is C.F. McDonald Electric, Inc. for a total bid of \$968,469. City council expected to award construction contract at the 01/05/10 council meeting. Project is expected to be substantially completed within 180 days after notice to proceed.

January 2010 – pre-construction meeting held 01/27/10. Notice to Proceed issued. C.F. McDonald Electric, Inc. has until July 2010 for substantial completion. Progress meetings will be held once contractor is mobilized in 2 to three weeks.

February 2010 – C.F. McDonald Electric moving forward with basic construction at North WWTP including installation of electrical conduit, cables, pads, etc. Some existing infrastructure (below ground pipes) encountered at North WWTP below ground that may required a change order. A similar situation may occur at the South WWTP. Building permits approved after Fire dept review of the proposed fuel tanks. All three generators are still on back order and scheduled for on time delivery at the end of April and early May 2010.

March 2010 – Contractor continues to move forward with basic construction at North WWTP including installation of electrical conduit, cables, pads, etc. All three generators are still on back order and scheduled for on time delivery at the end of April and early May 2010.

April 2010 - Started demolition work and underground conduit installation at the south WWTP. Factory “load” testing of the two large generators completed. Testing of the smaller unit scheduled for early May. Poured all concrete equipment pads and installed new electrical service rack at the north WWTP.

May 2010 – Factory load testing of the smaller unit (600 KW) originally scheduled for early May delayed until mid-June due to delays by the manufacturer. The two larger generators (1250 KW and 1500 KW) were delivered to the site on 5/20/10. Field load testing will begin in June for these two larger generators.

June 2010 – Factory load testing of the smaller unit (600 KW) completed on 06/22/10. The two large generators (1250 KW and 1500 KW) are in the process of being field load tested. Once the smaller 600 KW generator is delivered to the North WWTP, it will be field load tested, tentative for late June/early July. Once the Centerpoint Energy new service connections are made, all three generators will be field accepted tested.

July 2010 – Field load testing of all three generators completed. Centerpoint Energy new service connections are in process of being installed at the south plant. Automatic transfer switch testing in progress.

August 2010 – Completing final work to bring the generators on line. CNP had to reschedule the north plant service connection due to their wind storm damage repair backlog.

September 2010 - Centerpoint service transfers complete. The generators are operational at both plants. Processing change order to add time delay relays on select high horsepower motors to stagger the start up load on the generators.