CITY OF SAN DIEGO
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

Project Name: MBC DEWATERING CENTRIFUGES REPLACEMENT – (WBS# S-00339)

Name of Project Presenter: Idalmiro Manuel da Rosa, Project Manager.

Project Background:

The City of San Diego's Public Utilities Department operates the Metro Biosolids Center (MBC), a regional biosolids processing facility located adjacent to the City's Miramar Landfill in Kearny Mesa. MBC consists of anaerobic digestion, solids thickening and dewatering, and waste energy cogeneration processes.

The dewatering process is the core function of the MBC Facility. MBC operates with eight Alfa Laval (Sharples) D-706 dewatering centrifuges that dewater digested biosolids from the Point Loma Wastewater Treatment Plant (PLWTP) and the North City Water Reclamation Plant.

The process is critical to systems wide operations. If this process fails to meet system demand, Public Utilities Department (PUD) would face serious risk of failure to comply with the requirements of the PLWTP's National Pollution Discharge Elimination System (NPDES) permit.

The existing eight dewatering centrifuges have been in operation for fourteen years and the recent increased frequencies of major repairs and the associated increased unit downtime indicate that the existing units are approaching the end of their useful life and need to be replaced. The current plan is to replace six of the eight existing centrifuges with larger capacity units.

To minimize the risk of impacting the PLWTP discharge permit and the downtime associated with the replacement of these dewatering centrifuges must be minimized. In order to minimize the downtime, it is necessary to avoid extensive and lengthy structural and mechanical modifications to the centrifuge building and to minimize impacts to the operation and maintenance of the dewatering process. Therefore, the selection criteria for the replacement dewatering centrifuges must require that the new units have similar weight, similar dimensions, similar power requirements, and similar mechanical hook-up locations.

PUD engineering staff identified six centrifuge manufacturers claiming to have units that met the performance criteria for MBC. Of the six Alfa Laval ALDEC G2-120 model centrifuges, was the only one found to meet the physical and performance criteria.

On April 2011 PUD was granted a request for a Sole Brand Alfa Laval Centrifuges, see Attachment.

On May of 2012 Council approved for the City to enter into an SRF Funding agreement conduct all negotiations, execute and comply with State Revolving Fund (SRF) financing requirements for financial assistance from the State Water Resources Control Board to fund the Metropolitan Biosolids Center Dewatering Centrifuges Replacement Project, WBS# S00339, in an amount not to exceed $12 million.

Project Description

The Project requires the following design build support services:

- This project requires design, construction, start up services, and performance guarantees for the replacement of six (6) existing Alfa Laval (Sharples) D-706 dewatering centrifuges at MBC with six (6) Alfa Laval ALDEC G2-120 centrifuges, or its current equivalent replacement model.
- Operational impacts to the ongoing dewatering process must be minimized.
- The dewatering centrifuges building, support systems, maintenance layout, and structures were designed around the Alfa Laval (Sharples) D-706 centrifuges and will not accommodate centrifuges that differ widely from the existing centrifuges without significant modifications to the building.
- Alternatives to Alfa Laval will not be considered.
- The project does not include replacement of ancillary systems such as sludge and polymer feed pumps and cake conveyance systems.
- All six (6) centrifuges shall be replaced within a two year period from the design notice-to-proceed.

Cost:

The costs associated with this project are as following:

Administration	$ 925,000.00
Design Costs	$ 960,000.00
Construction	$9,250,000.00
Contingency	$ 865,000.00
Total Projected Costs	$12,000,000.00

The Administration costs include the planning costs incurred to date for in-house planning and preparation for the competitive selection, and future administrative support.

The funding will come from the MBC Dewatering Centrifuges Replacement WBS # S-00339, Sewer Fund 700009.

Schedule:

The schedule for MBC Dewatering Centrifuges Replacement is as follows:

Design-Builder Selection and Agreement Process	March 2012 - February 2013
NTP for Design-Construction	March 2013
Design- Construction	March 2013-March 2015
Project Closeout	March 2016