Engineering and Operations Committee Meeting

Minutes

September 27, 2012

The meeting was convened at 3:00 P.M., Thursday, September 27, 2012, at the Lakeway Municipal Utility District's office located at 1097 Lohmans Crossing, Lakeway, Texas 78734-4459.

The following Engineering and Operations (E&O) Committee members were in attendance:

Don Walden, *Chairman,*
Carl English, *Committee Member,*
Earl Foster, *General Manager (GM), Lakeway M.U.D.,*
Harvey Harrison, *Committee Member (Vice Chairman),*
Bob Rives, *Committee Member (Secretary),*
Pat Rossmiller, *Committee Member.*

The L.M.U.D. Board of Director's liaison was not in attendance:

Jerry Hietpas, *Board Member and Board Liaison to Committee.*

The meeting's agenda had been distributed to all Committee and Board members by e-mail on September 24, 2012. The designated Agenda for the meeting was issued by Mr. Foster in the following manner:

1. Review Water-Model Progress,
2. Discuss Future CIP Projects.

Mr. Foster asked that before going to the Agenda items that we review last meetings request concerning the *More Aqua* project. Most of the conversations were concerns from the August 30th meeting regarding the toxicity and liability of the procedure. The consensus of the Committee was that the idea is a good one and for Lakeway M.U.D. to continue with its talks with *More Aqua.*

Mr. Foster mentioned that he received a phone call from the community of Jarrell, Texas, regarding their small-water system and how to get it started. TCEQ had recommended that Jarrell talk to Lakeway M.U.D. regarding their questions because of his knowledge in the matters.

Another committee conversation was in regards to the recent power outage in Lakeway in the PEC service area. This outage did impact local L.M.U.D. pumps and water production. Since it was late at night and the water tanks were full, it consequently had minimal problems with the water supply system. Had the outage occurred during peak times it might have been a different story. It took PEC roughly twelve hours to bring electricity back on-line. After only four hours, an interconnection valve was opened to allow water from District 17 to flow into the system until power was re-established. The Committee pointed out the vulnerability of the water system due to power outages that occur over long periods of time and the possible need of an emergency generator. It was also noted that power outages can affect three-phase motors when they are forced off-power such that proper rotation-direction must be checked when re-energized. Mr. Foster indicated that his men are instructed to stick with the power crews during outages and verify that all L.M.U.D systems are up and running properly after repairs. The Committee suggested that Mr. Foster should check into the possibly of using dual-power feeds with an auto-transfer switch from PEC where major pumps are involved.

The first item on the agenda was a review by engineer C. Castlebury regarding the *Innovyze* hydraulic modeling system using a projection of model data from her computer onto a projection screen. The basic model is an x, y coordinate map of the water facilities showing multiple nodes or points within the L.M.U.D. network topology at important data intersection points within the water-distribution system. The system is further controlled by GIS elevation contours of the distribution area. The model's system is also linked to a satellite overview of the area with basic facility data superimposed. It is further supplemented by information from our SCADA system, which is an supervisory control and data system that enables it to logically handle multi-data sites within a large centralized geographical area. Each of the model's nodes represents input or output values which can be monitored or controlled by the system's engineer. Local areas can be zoomed-in to see specific actual ground details. The computer can identify all residential and commercial users. The model can highlight transmission lines by pipe diameter size, location, and material. Demand data is allocated to each node. Fire hydrants are identified as are all storage tanks, main valves, pumps, and meters. Three scenarios have been run: average demand, max-peak per day, high-flow trends. The model can show such things as demand over a time period, flow demand graphs, and hydraulic profiles of elevation/head vs. distance. Castlebury pointed out, however, that the model is not a real-time system and is not intended as such. It serves to model the water-distribution system which is calibrated via SCADA history and as such is able to simulate water usage under different situations. The final product allows L.M.U.D. to project different scenarios to define the best procedure for the facility at the lowest or best costs. As such the model has definite future economical use for the organization in order to expediently help alleviate difficult and possible costly engineering decisions by the Board.

Item 2 of the Agenda was not fully discussed because of a lack of time.

It was agreed that the next meeting would be on October 25, 2012, at 3:00 PM. The meeting was adjourned at 4:20 PM.

The Minutes have been read and approved by:

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Don Walden, Chairman
September 30, 2012

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Earl Foster, General Manager, LMUD
September 30, 2012

RGR/September 28, 2012