

Engineering and Operations Committee Meeting

Minutes

May 15, 2014

The meeting was convened at 3:12 P.M., Thursday, May 15, 2014, at the Lakeway Municipal Utility District's office located at 1097 Lohman's Crossing, Lakeway, Texas 78734-4459.

The following Engineering and Operations (E&O) Committee Members, General Manager (GM), and Board Liaison were in attendance:

Don Walden, *Chairman*,
Earl Foster, *General Manager, Lakeway M.U.D.*,
Bob Rives, *Committee Member (Secretary)*,
Wayne Seime, *Committee Member*.

Not in attendance:

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

Guest consultant in attendance:

Don Baker, *Lakeway, Texas*

The meeting's agenda had been distributed to all committee members by Earl Foster on May 14, 2014. The designated Agenda for the meeting was:

1. Review Ground Water-Well Feasibility,
2. Review Clearwell Construction Start Date,
3. Update on Permit Renewal and Permit Amendment.

Mr. Foster introduced Mr. Don Baker to the committee members saying that he would be sitting in on discussions of a water well. The meeting was opened with the first agenda item and a review of the geology of the Lakeway area. Handouts to the committee members were plats on the local geology gleaned from a United States Geological Survey (USGS) study of the area with geological maps (both structural and isopach) of the Middle Trinity Hensel Sand Member and the Lower Trinity maps of the Sligo/Hosston Sandstones that were produced in a report by Alex S. Broun (Certified Geological Scientist). Studies have identified three potential water-producing sands in the Lake Travis area. The Hensel Sand is expected at a depth of about 700-500 feet above mean-sea-level with an estimated thickness of about 20 to 30 feet with a facies change to limestone as you approach Austin. The next sands are the Sligo/Hosston which are part of the Lower Trinity clastics and underlie the Hammett shale. Reports indicate that these sands are characterized as braided stream and over-bank deposits on the far west side of

Lakeway, to channel-sand deposits as you go eastward, and then to marine high-energy beach bars toward the far east side of the city of Lakeway. These sands are said to be water aquifers with a thickness ranging from 250 to 400 feet thick and located subsurface around 600-500 feet above mean-sea-level. The sands become deeper going from West to East by about 100 feet under the city of Lakeway. As a guide it was noted that the Lakeway airport is around 900 feet above mean-sea-level.

The committee discussed the potentials of a commercial water well(s) indicating that to be commercial the well(s) had to produce a significant amount of water in ratio to the 1.5 (winter months) to 3.5 (summer months) million gallons per day that we obtain from Lake Travis to be a realistic supplement. It was believed that more studies about the geology, chemistry, and thickness of aquifers were still needed, especially in light of the fact that a commercial well(s) and completion to a treatment plant would be expensive. The committee viewed that several slim-hole pilot wells might be drilled in the Lakeway area and from this data scientists could map the geology, chemical water analysis, and wire-line results to determine the best aquifer sands for commercial wells (if feasible). Mr. Foster said he would contact other viable MUD systems, such as District 17, Hurst Creek, and Cypress Hills to see if they might be interested in a study and in joining us in this endeavor. It was also suggested that we consider contacting the University of Texas Geological Department to see if they might have a graduate student (under the guidance of UT and our consortium) who might like to consider such an opportunity for possible thesis work (PhD). Considering the impact of the area's drought problems within Travis County, it was suggested we check into possible government grants that might be available for a regional study that would benefit local communities. The committee felt that for the study to be reasonable it must be concluded within a one year period with a report conclusion as to the potential of commercial production, where to drill, and how best to complete and produce the wells. Mr. Foster said he would also check with local hydro-engineers and obtain more detailed information on commercial water wells.

Mr. Foster said that the Clearwell construction start up is still waiting for paper work from TCEQ and that he should get this by next week and can then go forward. Regarding the permit renewals, he said that because the engineer was so busy with the Clearwell project that M.U.D. would simply submit the application on time and then follow up with the technical data thereafter. He noted that this would not interfere with the overall timing or application requirements.

The next meeting date will be advised at a later time. Regular business was completed and the meeting was adjourned at 4:35 P.M.

The minutes have been read and approved by e-mail:

These minutes approved this 16 day of May, 2014.

Yeas 3, Nays 0, Abstain .

Robert Rives, Secretary, E&O Committee, Lakeway MUD