



Key Largo Wastewater Treatment District Board of Commissioner's Meeting Minutes

1:00 PM Friday, October 17, 2003

**Key Largo Public Library, 101485 Overseas Highway
Key Largo, Monroe County, Florida**

Board Members Present

Andrew Tobin, Chairman
Gary Bauman, Member
Cris Beaty, Member
Charles Brooks, Member
Jerry Wilkinson, Member

Staff Members Present

Robert Sheets, General Manager
Charles L. Sweat, Director of Operations
Jeff Weiler, Weiler Engineering Corporation
Ed Castle, Weiler Engineering Corporation
Faith Doyle, Board Clerk

Guest Present

Nos Espat, Randazza Corp.
Terry Zaudtke, CPH Engineering
John Verscharen, TSC Jacobs
Glen Calltharp, Fluidyne
Robert E. Burt, Key Largo Resident
Gaile Jelinek, Key Largo Resident
Bill Brookman, MCHD
Walt Messer, D.N. Higgins
Tom Evans, Evans Environmental
Thomas M. Dillon, Keys Resident
Joe Paterniti, Brown and Caldwell
Stuart Oppenheim, Brown and Caldwell
John Bratby, Brown & Caldwell
Pete Kinsley, The Haskell Company
Ted Hortenstine, Brown & Caldwell

A. Call to Order

Chairman Tobin called the meeting to order at 1:07 p.m.

Chairman Tobin outlined the agenda for the meeting and introduced the newly appointed Board Attorney Mr. Thomas Dillon. Chairman Tobin turned the floor over to Mr. Robert Sheets the KLWTD General Manager. Mr. Sheets stated that the afternoon would focus on assisting the Board in its decision to use technologies.

Mr. Charles Sweat introduced himself to those assembled and gave a brief biography of his experience.

Mr. Jeff Weiler, KLWTD Engineer introduced himself and gave a brief biography of his experience.

Mr. Ed Castle, Project Manager introduced himself and gave brief biography of his experience.

Mr. Pete Kinsley, Haskell Company, introduced himself and gave a brief biography of his experience.

Mr. Ted Hortenstine, Brown and Caldwell introduced himself and gave a brief biography of his experience.

Mr. John Bratby, PhD, Brown and Caldwell regional process manager for Brown and Caldwell gave a brief biography of his experience.

Mr. Joe Paterniti, Brown and Caldwell introduced himself and gave a brief biography of his experience.

Mr. Stu Oppenheim, Brown and Caldwell introduced himself and gave a brief biography of his experience.

Mr. Terry Zaudtke, CPH engineers introduced himself and gave a brief biography of his experience.

Mr. Glen Calltharp, Fluidyne, introduced himself and gave a brief biography of his experience.

Mr. Walt Messer, DN Higgins, introduced himself and gave a brief biography of his experience.

Mr. Nos Espat, Randazza, (Purestream) introduced himself and gave a brief biography of his experience. Commissioner Bauman asked Mr. Espat if he was a certified engineer. Mr. Espat stated that he was not. .

Mr. John Verscharen, TSC Jacobs introduced himself and gave a brief biography of his experience.

Mr. Robert Sheets, Government Services Group, Inc. introduced himself and gave a brief biography of his experience.

Chairman Tobin recognized and thanked County Commissioner Murray Nelson and Bill Brookman for their attendance.

B. Pledge of Alliance

Because of the lack of a flag the pledge was not recited.

C. Public Comment

Please see below.

D. Additions, Deletions or Corrections to the Agenda

There were no additions, deletions or corrections to the agenda.

E. Presentations on Vacuum Collection Systems and Advanced Wastewater Treatment Processes

Mr. Peter Kinsley of the Haskell Company began the presentation at 1:30 p.m. he then introduced Mr. Ted Hortenstine who showed the first slide on operating requirements.

The presentation outline is incorporated and made part of the minutes as Attachment A.

Dr. Bratby reviewed the available processes slide stating that the challenge is total nitrogen. He then described the modified process for small facilities and described the removal of nitrogen from wastewater.

Mr. Hortenstine then gave some history of the RFP and the need to review two processes the SBR and USBF, which they have done. Consideration of NBR process was not part of the RFP due to the cost consideration and other reasons.

Mr. Hortenstine then gave an SBR overview. He stated he believes it could do the job with additional modifications to the process.

Mr. Hortenstine described the ISAM process, which assists aerobic process adding that the SBR process is where the ammonia is oxidized. He described the four-part sequence that is accomplished in one tank. Dr. John Bratby provided further details. Mr. Hortenstine described the USBF process along with Dr. Bratby.

Mr. Hortenstine described the evaluation process stating they asked both vendors for information and confirmed references for process and visited treatment facilities. Operational cost were given by the manufactures, however they used their own expertise on sludge cost. Dr. Bratby reviewed each of the processes in reference to sludge generation. There are non-biodegradable by products (sludge), which are estimated at about 20% of influent solids or approximately 41 lbs a day needs to be processed in some way. Dr. Bratby stated that sludge can be reduced by various means but it will not be eliminated. Dr. Bratby stated that a digester could assist in the process.

Commissioner Wilkinson stated that there was a typo on the inert sludge generation slide.

Mr. Hortenstine and Dr. Bratby reviewed the USBF numbers showing how it approaches the nitrate requirements. It was noted that only four weeks of data was used for the review and on Marco Shores the temperature stays warm and with this process temperature has an impact.

Chairman Tobin asked if Marco Shores was the only USBF looked at. Mr. Hortenstine stated that the ones used on the chart; Ocean Side, Marathon Marina, Tiki shores, etc. were also reviewed. Chairman Tobin asked if these were comparable comparisons. Discussion ensued on the levels of nitrogen and the relationship to the data given and if it may have adversely impacted the results of the graph. Chairman Tobin requested he give the sizes of the plants for the comparison stated. Mr. Hortenstine reviewed the information provided on the slide in greater detail.

Mr. Jeff Weiler asked if any of the comparison USBF plants were at capacity. Mr. Hortenstine stated that Marco Shores uses two of four trains mostly and are operating the others due to seasonal peaks. Mr. Weiler asked if any are required by permit to have 10.10.10.1 by permit for a secondary process. Mr. Hortenstine stated yes. Commissioner Brooks asked if required by permit to be 5.5.3.1 could they operate that way. Mr. Hortenstine stated that plants are designed give proper results of the effluent levels. Discussion ensued on the expectation of a process.

Mr. Hortenstine stated that USBF is easy to operate with not a lot of mechanics to fail; it has continuous operation with no cycling on and off. The disadvantages come from the lack of consistent flows and difficulties handling peak flows. He added that KLWTD would have seasonal variations and weekend peaks that would affect flows.

The ISAM process (Fluidyne) has multiple SBR facilities stated Mr. Hortenstine. He noted that with both processes, Florida is one of the only states that has a 5.5.3.1 requirement because of the temperature of the receiving streams. Mr. Weiler asked if the plants are operating at capacity. Mr. Hortenstine noted that Blacks Fort is going to expand because it is going past capacity.

The ISAM advantages and disadvantages were reviewed. It was noted that the process handles peak flows well and there are plants working at 5.5.3.1. The process is more complex and more operator attention is required along with process instrumentation. Operational costs are difficult to determine.

Commissioner Wilkinson asked about storage facility cost on chemical storage. Mr. Hortenstine stated that it wouldn't be unduly burdensome to abide by. Comm. Wilkinson question electrical costs comparison. Mr. Hortenstine stated that the power to oxidize the nitrate is used to degrade B.O.D.'s.

Chairman Tobin asked where the data was received concerning the sludge costs. Mr. Hortenstine stated that he had recently take a masters class concerning the subject and that although no real data was available a statistical theory of estimating them was used for computing them. Mr. Hortenstein stated that he did not except zero sludge as stated by the vendor.

Discussion ensued on the USBF and SBR systems, the capital costs of both and the possibility of expansion of both systems. Mr. Hortenstine noted that USBF is not established and he is uncomfortable with the treatment Process.

Mr. Jeff Weiler and Mr. Ed Castle presented their recommendation on the treatment systems. WEC recommended SBR with modifications adding that there is not enough data to support using the USBF system.

Discussion ensued concerning the modifications needed for both processes and if the size of the plant would make it difficult to achieve the standard.

Mr. Charles Sweat presented GSG's recommendation. GSG recommended SBR for use in Key Largo.

Chairman Tobin recessed at 3:30 p.m.

Chairman Tobin reconvened at 3:40 p.m.

Ms. Nancy Brooks of the DEP's Marathon office was introduced.

Chairman Tobin requested the USBF vendor and engineers to address the concerns of the Board. Mr. Terry Tsaudkey of CPH spoke concerning the Purestream USBF systems. He stated that the systems shown were not designed to be AWT and that is why the nitrogen's are not at 3. Discussion ensued concerning the USBF process and about the sludge blanket and sludge wasting. Mr. Nos Espat of Randazza, Inc. spoke concerning sludge costs and nitrogen levels.

Discussion ensued on the lack of information provided to the Haskell team by Purestream and Randazza during their evaluation of the systems.

Chairman Tobin stated that information must be provided so that the Board could make an informed decision.

Dr. Bratby asked Mr. Espat about the capacity and type of facility used for the evaluation. Discussion ensued. Mr. Ed Castle stated that he had received information from Mr. Espat but was not satisfied that the data indicated USBF would work.

Mr. Glen Calltharp addressed the Board concerning the SBR technology. Discussion ensued on plant size, permit requirements and nitrogen levels.

Commissioner Wilkinson made a motion to accept modified SBR technology and Chairman Bauman seconded. Commissioner Bauman stated that a warranty on the process should be in writing. Commissioner Beaty comments that he is not convinced on sludge removal costs and power costs and he did not find the presentation of the ISAM process compelling enough to reverse his thought process. Commissioner Brooks commented that he is not comfortable with the modification required for either system. It was stated that with a motion on the floor a vote must be taken. Chairman Tobin would prefer not to vote until warranties are available in writing. Commissioner Wilkinson motioned to call the question. Chairman Tobin urged the Board to vote no so that warranties could be secured. Discussion ensued on the warranties. Commissioner Wilkinson stated that Haskell is the warrantor and there should be no further discussion. Commissioner Brooks asked legal counsel if the motion could be tabled so that voting could take place at a future meeting. Commissioner Beaty stated that as the swing vote he would prefer to wait. Discussion continued concerning warranties and the need to have one prior to the selection of a technology. Mr. Weiler stated that warranties are in place and that the particulars could be confirmed during the design process. The Board asked staff if the warranty concerns impact their recommendations. Staff stated that

their recommendations are not related to the warranty concerns and would stand as is. Commissioner Wilkinson stated that if the Board does not have trust in the staff's recommendation Haskell has the warranties and if the vendors default Haskell is holding bonds that would cover the KLWTD. Chairman Tobin asked if the prior motion could be trumped by another motion.

Commissioner Brooks made a motion to defer and table action on the item. Chairman Tobin seconded the motion. Commissioners Tobin, Beaty and Brooks were in favor of the motion. Commissioners Bauman and Wilkinson were not in favor. The motion carried.

Commissioner Wilkinson asked for a point of order and if the motion required a specific date for action. Discussion ensued on the costs involved in postponing the decisions and if it opens the KLWTD to possible litigation from Haskell. Discussion ensued concerning the impact on the project schedule. Commissioner Wilkinson noted that the lack of a decision might be of concern to FEMA.

1. Government Services Group, Inc. recommendation
See above.
2. Weiler Engineering Corporation recommendation
See above.
3. The Haskell Company's recommendation
See above.

F. Action Items

1. Approval of a Vacuum Collection System

Chairman Tobin recessed the meeting at 7:00 p.m.
Chairman Tobin reconvened the meeting at 7:13 p.m.

Mr. Joe Paterniti of Brown and Caldwell presented information on the function of the vacuum collection system.

Mr. Jeff Weiler questioned the possibility of corroded valve pits noting that has it been a problem in the Airvac systems to date and that in the salt ground water conditions here cause concern. Mr. Sweat stated that 3/16" stainless steel vaults would help them to last.

WEC recommends Airvac because of the whole tank system. Discussion ensued concerning the number of houses per pit, installation concerns and settling problems.

Mr. Tom Evans explained that the sump tests ordered by Boyle Engineering were not conducted under proper conditions and that they had not been installed per the manufacturers recommendations. Discussion ensued on installation and testing methodology.

Commissioner Wilkinson commented that he preferred Roovac for many reasons and that Higgins as the installer prefers Roovac. **Commissioner Wilkinson made a motion to approve Roovac. Commissioner Brooks seconded the motion. Discussion**

ensued concerning well depth and gravity system requirements. Commissioner Bauman stated concern over going against the recommendation of staff. Discussion ensued on the cost differences between Roevac and Airvac. Chairman Tobin requested a roll call vote, which was as follows:

Commissioner Bauman	No
Commissioner Beaty	Yes
Commissioner Brooks	Yes
Commissioner Wilkinson	Yes
Chairman Tobin	Yes

The motion was approved.

2. Approval of a Wastewater Treatment Process

See above.

3. Approval of the Haskell Company Change Order

The item was deferred to the next meeting.

G. General Manager's Report

There was no report given.

H. Legal Counsel's Report

There was no report given.

I. Engineer's Report

There was no report given.

J. Commissioner's Items

There were no commissioner's items to consider.

K. Meeting Adjournment

A MOTION TO ADJOURN WAS MADE BY THE CHAIR AT 8:37 P.M.