

## **CITY OF SANGER, TEXAS**

**MINUTES: CITY COUNCIL WORK SESSION**  
**December 3, 2018– 6:00 PM**  
**502 Elm Street, Sanger, Texas**

**COUNCIL MEMBERS PRESENT:** Mayor Thomas Muir, Mayor Pro Tem Bilyeu; Councilman Bill Boutwell, Councilman Lee Allison, Councilman Allen Chick Councilman David Clark;

**COUNCIL MEMBERS ABSENT:** None.

**The Mayor and all Council Members were present constituting a quorum.**

**STAFF MEMBERS PRESENT:** City Manager Alina Ciocan; Public Works Director Neal Welch; City Secretary Cheryl Price.

### **1. Call Meeting to Order**

Mayor Muir called the Work Session to order at 6:00 PM on December 3, 2018.

### **2. Update from Alan Plummer and Associates on the Wastewater Treatment Plant Improvement Project.**

City Manager Alina Ciocan prefaced that when the Council approved to retain the services of Robert Macias to assist staff with start-up assistance at the plant, Councilman Clark and Mayor Pro Tem Bilyeu asked for a future update from Mr. Robert Macias. Mr. Macias is here tonight to give Council an update on the progress.

Jeff Caffey, Alan Plummer and Associates provided various photos showing the construction progress of the plant. He noted that there is an issue with the Peak Flow Storage Basin with cracking in the concrete. He noted that there is a concern of cracking in the basin concrete and provided photos noting the cracking in the construction joints. He noted in the basin under the concrete, there is a geo-synthetic membrane (equivalent to about a three-feet of compacted clay layer) which gives the basin permeability. This layer was done to meet TCEQ requirements. The concrete was put in to make it easier to clean the basin. The contractor proposed they would give the City a credit if they used shotcrete, so they agreed. They left the bottom of the basin and the north slope (where they drive down into the basin) concrete. The three sides were done in the shotcrete. That is where the cracking is occurring. He noted there are some vertical and horizontal cracks. They have had the structural engineer look at it and his main concern is the concrete is cracking where it wants to crack, it has been through a cold and heat cycle. The structural engineer has given the contractor a method to repair the cracks by grouting out the top part of the cracks with a saw and applying expansion material and making them expansion joints. The structural engineer's main concern is that the City does not have long term maintenance issues on having to keep repairing the cracks. Mr. Caffey noted that they have asked the contractor for an extended warranty and is waiting for them to provide it. If they take out the shotcrete, we would have to do the under liner too, so it would be very expensive. The City did pay for a good solid concrete basin, so that is what it should get and they are relying on their structural engineer to give us guidance on that. Right now, they are basically creating expansion joints where the concrete is cracking. Councilman Allison asked if they have looked into the cause of the cracks and that the repairs may not be as purposeful if we don't know what the cause is. Mr. Caffey noted that there are two things they think could be causing the issues. One being, a lot of the cracks are lined up along the joints and they put water stops along the joints which is a 9-inch

piece of plastic that is tied to the reinforcing that prevents water from going through. It is their opinion that the contractor may not have done a good job at keeping the water-stop in place when pouring; and, that could be the cause of the cracks. Some of the other cracks are caused by the expansion and compression of the shotcrete. There is a question of whether we got the best material, even though it met the specifications. There was discussion regarding different scenarios on what is causing the situation and how to fix it. City Manager Alina Ciocan noted that staff has requested that the cracks are fixed according to instruction and specification by the structural engineer. Councilman Allison asked about the current warranty. It was noted that the current warranty is valid for one year after construction is complete. Councilman Boutwell asked at what point would they deem this an inferior product. Mr. Caffey stated that he felt this is, at one point, already an inferior product, that this is not what the City paid for. Mr. Caffey stated through questioning by Councilman Clark that It was noted that the shotcrete was offered by the contractor and considered by the structural engineer and the product should do better than what it is doing. Mayor Muir asked what the Contractor's take was on the issue. Mr. Caffey noted that they are talking about an extended warranty. Councilman Boutwell voiced his concern that an extended warranty may not do us any good if cracks continue to show up and the warranty expires, it could end up costing quite a bit of money. Mr. Caffey noted that they are going to work at getting this issue taken care of, but if there are more cracks that show up in the spring, at some point they have to say they can't keep filling the cracks. Mr. Caffey continued the presentation on the completed improvements to the wastewater treatment plant explaining details of each improvement made to date. Discussion was brought up on the generator and it was noted that it needed to be started and running for a while on a regular monthly schedule at full power periodically on a schedule so it is ready if an outage occurs. Mr. Robert Macias was recognized and noted that they would create a final document of all of the operation and maintenance practices and it would include maintenance of the generator. Mr. Caffey advised that Mr. Macias is on site to help with the startup of Plant 1 and the deactivation of the other plants. Plant 1 and Plant 2 are in operation. Plant 3 and Plant 4 are out of service. They are full of fluid and sludge and we have a situation of what to do with that and how to empty those basins. This is another one of the big issues we are faced with right now. He recognized Robert Macias to summarize. Mr. Macias noted that what the City has is four individual units/plants. He summarized the details of the improvements to Plant 1 in detail. He noted that the City would have more capacity and would be able to handle the sudden increases in flow, such as a rain event (this was a problem with the old plant) which washes out all of the solids and bugs that make the system work). He noted that Plant 1 is all aeration and is about 250,000 gallons in that one tank. He noted that the bubbles are finer and work better, for oxygen transfer efficiency. He noted that it was one of the hardest parts to get the plant operators to understand that the plant does not need as much air as it used to because of the improvements made. More is not better in this case. The aeration basin is working well and then there are two clarifiers. The system is designed to run on just one clarifier, but they put both clarifiers online to have a safety net. If we have a rain event, we would have less of a risk of solid wash out. He noted that the new units are working beautifully. The plant is putting out clear water. It is activated and operating properly. Additional information was shared regarding how the clarifiers are designed to work, that it is going to be the workhorse of the plant and will handle the high flows. Mr. Macias noted that the plant is in compliance. The plant used to use chlorine for disinfection and it now uses UV light disinfection. They explained some of the future additions that are going to be added. Jeff Caffey noted that one of the issues that he has been working with Jim Bolz on with is to empty tanks 2 and 4. The lowest price he has found it about 20 cents per gallon and there is about 700,000 gallons in the two tanks combined so we are looking at about \$140,000 to get the tanks emptied. The received a second proposal for \$500,000 to empty the tanks. Another option which they have spoken with Ben Hodges of Upper Trinity is to protect Plant 1. The thought process is to go ahead and try emptying the tank through Plant 1 and see if the Plant 1 process is strong enough not to be affected. They plan on continuous thorough testing and running the sludge through the unit in a small rate and diluting it

with chemicals with Robert Macias's assistance. If this would work, it would avoid the large cost to the city. Mr. Caffey noted that if you ran the unit 24 hours for 8 days, that is how long it would take to empty the two basins. They can do a four-hour test to see how it does. They could run it through at four hours a day at a point where they could consistently monitor it. At 4 hours a day it would take about 32 days to empty the tanks. Mr. Macias noted that four hours a day is small enough that it should not make a difference. It may take about a week to see if this process will work. They would watch it very closely and if it looked like there was any sign of problems, they would shut it down. Mr. Macias advised that you will know right away if there is a problem. It will upset the process almost immediately. City Manager Alina Ciocan asked if it does upset the process how do we get it back on track. Mr. Macias stated that it would not be irreversible, that it would just be keeping an eye on it and doing microscopic evaluation to make sure there is no filamentous bacteria which does not let the sludge settle. Also, there is the unknowns as to what else is in there that we do not know. Mr. Macias noted that they can also take samples out of the tank and send them to the lab to see what else may be in the tanks. As soon as they see adverse effects, they can stop it immediately and it will be reversible. City Manager Alina Ciocan asked if it takes 32 days will that affect the timeline of the project. Mr. Caffey stated that ideally the contract is written so that at the end of phase 1 they can move into phase 2. Plant 3 is the one they want to get into first and it would be about 16 days to drain Plant 3. Plant 1 has not been accepted yet, so there is some flexibility and the timing would not be too big of an issue. It was noted they could start this process as soon as we get tests back from the lab to see what is in the tanks, which may be a few days. Mr. Macias has two more weeks on the contract and he could come back before the tanks start draining to keep an eye on the process. It was noted that Mr. Macias would be testing the water on site by microscope. There was some discussion with Councilman Clark regarding how the system would work. Mr. Macias shared a water bottle with a sample to the audience and Councilmembers and stated that it is so clear right now it looks like drinking water. Council Mayor Muir noted the pros and cons in running it through the plant and the cost of hauling it off and stated that the Council is leaning on the professionals to advise us and lead us through this process with what is going to be best to keep the system in compliance.

Mayor Muir noted that he would like to take 30 seconds regarding the next step to the plant which is the outfall. He asked if we really could not discharge that kind of water, that clear into the stream system. Mr. Caffey stated that the issues are the permitting limits that the State would require the City to have because of the lake. If the creek went around the lake then it would be possible to discharge at the creek.

### **3. Overview of Items on Regular Agenda.**

No Items.

### **4. Adjourn.**

There being no further business, Mayor Muir adjourned the Work Session at 7:05 PM.