

AE Progress Report 5.25.09

#Cuatro Comunidades
#Ojojona
#Meetings
#Training of APP Personnel

Cuatro Comunidades

Monday evening 5.18 we met with the water board to discuss plans for the June 6 plant inauguration. Most of the invitations have already gone out.

We also discussed ideas to improve the operation of the plant. Because it is difficult for them to maintain an operator in the plant all night, we agreed that it would be worth experimenting with shutting down the plant at night when it rains. They have already tried this several times with positive results. When they know it is going to rain, a member of the water board will go up to the plant and close the entrance at 9 or 10 pm. It doesn't seem to take very long to get the plant running well again in the morning, although any floc blanket they might have built up probably condenses when they shut the plant down.

Previously, when they had shut the plant down, they had closed the exit from the distribution tank to maintain the tank full. This would cause them to lose pressure in the distribution system, and increase the risk of contamination through leaks in the system. We recommended that they leave the tank exit open when they shut the plant down. Since the system has few leaks and very few people use water in the middle of the night, they might be able to maintain water in the tank until they turn the plant on again early in the morning.

The water board raised the tariff from 30 Lempiras to 60 Lempiras per month starting this month to be able to sustainably operate the plant.

Ojojona

Dan went to Ojojona Tuesday 5.19 to take measurements and make plans for repairs and improvements to the plant. He is working on a budget and set of plans for the improvements.

Meetings

Thursday 5.21 Oscar Garcia, an engineer who works for SANAA and is getting a masters degree in water technology from a university in Sevilla, Spain, came to the APP office to learn about the AguaClara plant. He mainly works with wastewater treatment technology, but also has interest in potable water. After we explained the AguaClara plant, he gave us electronic copies of some potable water treatment design manuals written by the Centro Panamericano de Ingenieria Sanitaria y Ciencias Del Ambiente (Pan-American Center of Sanitary Engineering and Environmental Science) and the Pan-American Health Organization. Other engineers from SANAA had shown us these manuals before, but revisiting them now it looks like there are quite a few design ideas that could help us.

Saturday 5.23 we visited the Tamara and Cuatro Comunidades plants with Bill Edgar, the general manager of CEU Plan, a U.S. company that gives online continuing education training to water treatment plant operators. Before working in education, Mr. Edgar ran a construction company that built water treatment plants. He has a lot of practical experience in treatment plant construction and operation and was able to give us some great ideas:

- We should look for small pipe cleaners or brushes to clean the chlorine and sulfate dosing hoses.
- The dosing tables would be more useful and would last longer if they were laminated and posted on the wall.
- A piece of rebar with a fork on the end could be used to open valves in the drain canal without bending down. We had considered this option before but have still not implemented it.
- It might be possible to close off the sed tank inlet chimneys with vertical gates made from ¼" thick PVC plastic. This could be especially useful in larger plants.
- If it is available and affordable in Honduras, galvanized steel grating would be ideal to cover up the drain canal.

Training of APP Personnel

Friday 5.22 we gave a day-long training session to Antonio and Wil about the theory behind chemical dosing and the new linear doser. Although the doser seems quite simple and intuitive, a closer look revealed that there is actually quite a bit of theory behind it that is worth explaining. We hope to continue with these training sessions over the next several weeks, covering other parts of the treatment plant process.