

Wednesday, January 14, 2009

Wednesday, January 14, 2009

Unlike the first night at Rio Frio, I did not get bed bugs' bites because I slept with my yellow jacket. Around 6:05am, I woke up and went to take my last shower in Rio Frio. Afterward, I packed up my luggage.

To my surprise, our host mother served as breakfast. It was a delicious meal with tortillas, beans, rice, and egg. She is a wonderful lady who really took care of us. Not only, she gave us the best room to sleep in, she was very concerned with our health. When we finished our breakfast, Sarah and I bided farewells with our host family.

As we walked to meet our group, Antonio picked us up with the truck. We were glad and happy that we did not have to walk too far. The steep hill in Rio Frio already made us tired. Usually, the hill is fine. However, today, we have to carry our heavy luggage. When we reached the house, we loaded the luggage into the vans. We drove to the FIME plant in San Pedro de Tutile, La Paz.

Upon arrival of the plant, I noticed that the area is very different from the four communities. Unlike Four Communities, this area is very wet. We stopped at the Town Hall and the mayor introduced himself to us. Surprisingly, the mayor has some Chinese blood.

To get to the plant, we have to use their heavy duty truck to drive on the steep, wet, and bumpy path to the water plant construction. When I first saw the FIME plant, I was impressed with grand construction. In addition, I can tell the operator s and Mayor are very happy with their plant. Despite the grandness of the plant, they said the construction and plant is cheap for a large population. Furthermore, I noticed that the operator really know what he is talking about. He also knows which way the water is flowing.

Beside the concrete and rocks, the plant also took into account of the environment by planting flowers and having ants in the dirt. The tanks are also exposed to the air. Instead of using lamella, this plant uses certain gravels in the tank to filter out the dirt, bacteria, and etc. Unlike the AguaClara plants, this plant consists of many rectangular and circular tanks.

At the beginning, the raw water flow through two rectangular tanks filled with filtering gravels. The treated water is then pull from underneath to the next step. The rectangular tanks have an overflow chamber at the end of the two tanks. To clean the rock, the operator uses a rack to move the top layer of the gravel. After the first set of rocky tanks, the treated water travels underneath the tanks into another smaller rectangular tank that separate the water into three squared chambers.

The first tank basically filters out the large mud/dirt. The rock have larger diameter to pull the treated water downward. The operator repeatedly stated that the system is dynamic. There are many circular tanks to continue to filter the water. The gravel in these tanks has smaller diameter than in the first tank. Therefore, the filter water rises above the gravel level. Then, the water flows to another circular tank with an opening in the dome cover. In this tank, the chlorine is added at this point.

Overall, the Mayor believes this system is an excellent system for the community. Since the plant is new, everything looks relatively clean. The Mayor has better high expectations for the FIME plant. In a way, Mayor sees no major fault in the system. The positive side of this system is that it does not require any other chemicals beside chorine. On the contrary, I see a major fault in this system...that is...the high electricity usage.

Then we traveled to Marcala. We checked into Hotel Nueva Jerusalem. It is a beautiful hotel with many lovely flowers/plants. I roomed with Tamar and Nadia in Room 6. After finishing unloading our luggage from the vans, we went to lunch on our own. I ordered a burrito with egg and beans. It was appetizing and only cost 10 lempira. Despite the cheapest, I was slightly not full. I should of order another one. Oh well.

Instead of visiting a BioSand Filter donated by the Rotary, we visited the Marcala water plant. On the way to the plant, we met up with Nick (PeaceCorps volunteer who graduated from Cornell) and Fred (Professor). As we drove the plant, Tamar and John stated that we are taking too many vehicles to the plant. Both of them are very concerned with diesel usage. As we got closer to the plant, I got out of the van and sat in the truck's back. The van could not drive on the muddy path to the plant. On the way, we saw nectarines growing in the trees. I just wonder what will happen if we steal any of the fruits.

Finally, I got closer to the plant and walked the rest of the way. The plant is on a very steep hill. As I walked up the hill, I wonder why and how they choose the location of this plant. In comparison to the FIME plant, the Marcala plant seems to be rundown and dirty. However, I believe that the Maracla plant is older than the FIME plant. Throughout the plant, I saw flou settling on the top of the tank which made the plant look dirty and seem incapable to clean the raw water. As I stared at the flou, I wonder why this is happening.

After looking at the plant, the operator led us throughout the details of the plant. However, I noticed that the operator seem overwhelm with the large group. In addition, he did not seem to be as excited as the operator at the FIME plant. Why is that? In a sense, the operator seems to be confused about the plant. Does he still need training? Overall, I couldn't hear the operator talking. Was he too quiet or was the raw water too loud? The raw water comes into plant very rapid through a large pipe that seems to be handing by a thread.

Since I had trouble listening to the operator, I looked at the plant records with WenQi. WenQi and I concluded that the record shows great numbers. The e. turbidity was usually lower than 5 units. However, the data also display turbidity at 11. Furthermore, the records present the height, chorine check, the alum concentration, etc.

My opinion on this plant is cut between being pessimistic and hopeful. On the negative side, I feel that the plant will always have major problems. On the positive side, the Hondurans are willing to change and learn. In the Honduran's thinking, there is always hope.

On the way back to the vans, I chose to walk with WenQi. At the end of the path, we reached the vans before the people riding the trucks. I realized that John and Tamar were right. We did not need so many vehicles to the plant. During the van ride back to Hotel, Julie and Anaastasia asked John about his view on the Marcala plant? One of the many questions is to ask how we can help improve the quality and the performance of the Maracala plant. John believes that the plant needs to hire another operator, which led to an increase in the tariff. How it is not possible or it is hard because the community does not want to pay more tariff. It made me wonder about how much it will cost to hire an additional operator. Is an additional operator going to help? I am skeptical about it. Is there another solution that does not increase the tariff? However I highly doubt it. It seems like everything revolves around the issue of the lack of money.

When dinner came around, I went with Sarah, Nadia, Rustom, Juanita, Coby, Chris, and Monroe to Fred's house. On the outside of the house, there is a gorgeous mural that was drawn by Fred's friends. The friends drew the mural when Fed was sleeping in the house; however, they did not know he was home. Moreover, Fred did not know that the talking from the outside were his friends.

After a brief tour of his lovely and cozy house, Fred led us to a restaurant. At the restaurant, I ordered Tortilla de Res and Ice Tea. During my meal, Fred talked about his past and current projects in Honduras. He mainly described the problems in the Marcala plant. The water source has its own problems like: the leaves clogging the water source and the difficulty to get to the water source during the muddy season.

During the conversation, Monroe pointed out that the Marcala plant is designed by the APP engineer who is now currently working for AguaClara. Is this a good aspect? I hope it is and I also hope this engineer will use his experience to help improve the future plant. I strongly believe that my hopes in this engineer are not just hope, but reality, I strongly believe this engineer is a passionate engineer who uses his experience to help Honduras water treatment plants.

Tamar also stated she do not believe that the operator recorded the data every hour. I have no comment because I don't know how the operator records the data. In addition, I don't know how close the operator lives next to the plant. Therefore, I cannot judge anything.

For the flowing flou in the Marcala plant, we debated whether it was bad. To solve this issue, Chris suggested an overflow tank at the rear of the sedimentation tank (18 meters). At some point of the discussion, a sed meter was discussed suggested to use a sed meter, which is a clear pipe with ball at the end. In the past, the sed meter was used at Ojojona. Due to the complaints of high e. turbidity, the sedimentation meter was removed. At the end of the discussion, I went back to the hotel and hang out with the other AguaClara members.