

From: Tim Lakins <tim.lakins@doc.ok.gov>

Sent: Friday, May 17, 2024 3:30:36 PM

To: jhale@cityofglenpool.com <jhale@cityofglenpool.com>

Cc: Danny Wesley <dwesley@amsmicrobes.com>

Subject: Lagoon treatment

Mr. Hale.

I would like to introduce myself, I am Tim Lakins Construction Maintenance Administrator for the John Lilley Correctional Center located in Boley Oklahoma. I have been with John Lilley for 25 years working in the maintenance department and dealing with multiple issues every day and one that has been a thorn in my side has been the sewage lagoons not meeting DEQ standard for a discharging lagoon system. High readings in TSS and BOD kept us under a NOV from DEQ for several years. During the years under the NOV we hired an engineering firm to try to improve the TSS and BOD numbers and they recommended several things to include; re-piping to try to stop short cycle time, bigger more efficient aerator's have been added, new inflow and outflow structures were added and nothing worked. The engineering firm still got paid although nothing was accomplished.

I had mentioned several times to the engineering firm that lagoon cells one and two were full of sludge and cell three was approximately 1/3 full, they just blew it off as that was not what was causing the TSS and BOD to be high. Common sense tells me that if you have clean water and you add Fecal matter to the water it becomes contaminated and issues start arising and the longer the Fecal matter is added the more problems it causes. I was at my wits end and tired of paying the engineers for nothing.

I had a meeting with my peers to discuss our next move and it was to get quotes for mechanical sludge removal and either land apply or taken to a land fill. Land apply was not applicable do to the steep grades and rock near the surface. A quote was received to remove the sludge and take it to a landfill, it was very expensive but we had to do something so started the process of finding the funding.

One day not long after my peers and I had our meeting in Late February of 2022 Mr. Wesley stopped by my facility and wanted to talk to someone about our lagoon system, I was hesitant as salesmen are a dime a dozen and I didn't really have time but I went to the parking lot and visited with Mr. Wesley. He went to explaining his companies process to remove sludge by injecting billions of specially raised super Microbes into the lagoon cells per day and the Super Microbes were raised in enclosed trailers at the lagoon site. I thought I need some of what this guy is smoking but the longer he talked the more sense he was making. Mr. Wesley asked if they could come and sludge judge the three cells the following week and I said sure what do I have to lose. Mr. Wesley and another employee came and judged the three lagoon cells and in a couple weeks got the data to me showing how much sludge was in each cell. I told Mr. Wesley to get me a price quote and my peers and I would discuss the concept. What Mr. Wesley didn't know was I had judged the cells about three years Pryor to them judging them so I knew about what each cell had in them. After three years the sludge was deeper and there report was spot on.

In August of 2022 I was sent to meet with the Advanced Microbial Solutions owners in Missouri to see a lagoon systems they had completed and one lagoon system that they were currently working on. Cabool

Missouri was the very first lagoon system that they completed and it had been two years clean and when I was there it was still clean and their numbers were under Missouri standards. We went to the lagoon system they were active on to see the process and it was amazing to see how the lagoons were reacting to the influx of Super Microbes. They had an enclosed trailer at each lagoon connected to water and electric with two hoses coming out of the trailers extending to the waters edge. While I was there the one trailer went to dumping the Microbes into the lagoon, had an earthy smell and brownish in color. As I watched the lagoon cells the sludge would break lose from the bottom and float to the top and disappear, and no it did not settle back to the bottom it was being consumed by the Microbes and was gone.

I came back to Oklahoma and reported to my peers what I witnessed and stressed to them that it appears to be a legit sludge removal process. We came up with the funding for Mr. Wesley quote and in December 2022 I started to work on the installation of the water and electric to all three cells. The AMS team moved in in May 2023 and started sludge removal process. I would go to the lagoon at least three times a week to see the progress, first two weeks nothing seemed to be happening but the third week was when I started seeing a lot of bubbles, by the Fifth and sixth week I started seeing what I seen in Missouri the sludge breaking lose and floating to the top and disappearing.

The AMS sludge removal system removed the sludge and now I am below DEQ standards.

AMS does not claim to lower the TSS, BOD or any other Readings, they only clam to remove sludge and that is exactly what they did. **THEY DO REMOVE SLUDGE.**

See attached for the beginning sludge depth compared to the finished depth.

I would like to say that the Advanced Microbial Solutions Team are very professional, will explain the process as it is happening.

Disclaimer:

I do not work for or receive any monetary pay from Advanced Microbial Solutions.

This statement is solely my opinion and facts I stated are exactly what I witnessed.

Feel free to contact me.

918-623-6970

Thank you

Tim Lakins | Construction Maintenance Administrator II

John Lilley Correctional Center

Institutions | Department of Corrections

p. 918-667-3381 ext. 303 | f. 918-667-3958 | Cell 918-623-6970

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