



**SUEZ WTS Services, USA INC.**

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July 28, 2021

City of Norman  
ATTN: Scott Aynes  
WTP Supervisor  
3000 E. Robinson  
Norman, OK 73071  
[scott.aynes@normanok.gov](mailto:scott.aynes@normanok.gov)

Cc: Greg Mahan (Suez); Jim Beer (Hartwell Environmental)  
Re: Accelator Inspection (35\_7985)

Dear Mr. Aynes:

I wanted to thank you and your team for allowing me visit your water treatment plant on July 15<sup>th</sup>.

The plant has four Softening Clarifiers, two of them provided by Suez (INFICLO) in 1965. These units are #16 IS, each with a design rate of 2,400 GPM. Lake Thunderbird is the source of your water, which is lime softened (to a pH of 10.3-10.5) along with ferric and polymer added. The plant switched from alum as the coagulant to ferric a couple of years ago. Plant treats the water from ~135 mg/l to ~75 mg/l as CaCO<sub>3</sub>.

According to the operators, the Accelators have operated well over the years. The steel structure was repainted many years ago. However, it appears that the switch from alum to ferric has increased the localized pitting and corrosion. In addition there were areas that we not repainted.

The IS Accelator that was in operation appeared to be operating smoothly although the grease fittings for the rollers have been removed.

One of the IS Accelators was drained to be inspected. The most important observation is that there were areas of pitting of the steel and severe corrosion. None of this has effected the performance yet, but will some time on the future. I could not find any leaks in the launders. The use of ferric as a coagulant will increase this deterioration rate. In my opinion, the launder and outer wall brackets are most need of repair (or replacement of the brackets).

You will need to get a structural person to determine if the steel can be effectively reprofiled and painted again.

The profile of the pinion is showing some wear on the drained unit. The angle brackets for the pinion were only primed. This area needs some surface prep and paint. There is some loose conduit allowing water into the conduit

itself.



The gap between the hood structure and circular deckplate appears to be between 0 to 3". Over time, the hood structure should have some compression which results in a clearance between  $\frac{1}{2}$ " to 1". However, your clearance is much larger. Fixing this issue relates to making sure that the side rollers and the rack and track are aligned. When happens with this large opening is that excessive flow bypass the secondary mix zone.



The outboard end of the launder (especially the first 7-8 inches from the bottom of the trough are rusted and deteriorated. The same is true for the launder support angles (especially the areas where the trough sits on the bracket.)



There is rusting in many places, especially at weld points. These have not started to leak, but will sometime in the future.

Underside of annular flume gussets and outer draft tube.



Where sheets are welded to a rafter and the scraper brackets to the rotating mechanism





Steel pitting in scraper truss



Turnbuckles severely corroded



Respectfully,

A handwritten signature in black ink that reads 'Robert Lake'. The script is fluid and cursive, with the first and last names being clearly legible.

Robert Lake  
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