LAGOON 1

Feb-03-2018

Feb-24-2018

Mar-03-2018

Jul-14-2018

LAGOON 2

Feb-03-2018

Feb-24-2018

Mar-03-2018

Jul-14-2018

LAGOON 3 / the one that needs to be cleaned

Feb-03-2018

Feb-24-2018

Mar-03-2018

Jul-14-2018

LAGOON 4

Feb-03-2018

Feb-24-2018

Mar-03-2018

Jul-14-2018

LAGOON 5

Feb-03-2018

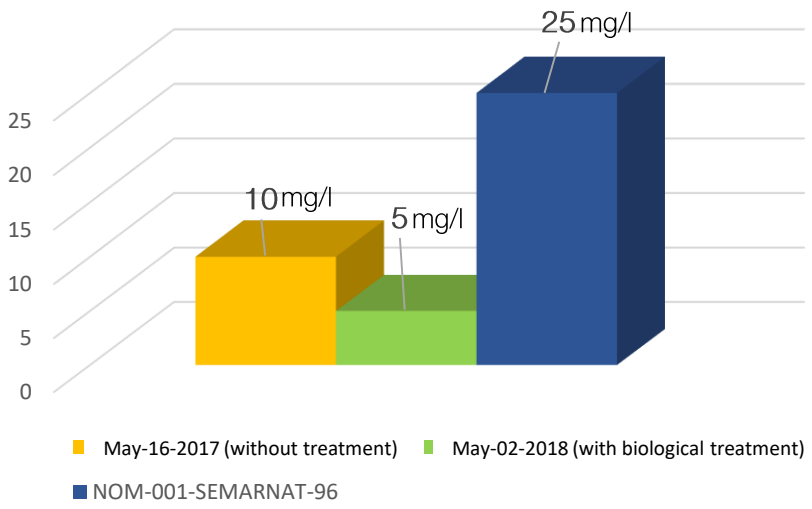
Feb-24-2018

Mar-03-2018

Jul-14-2018

Quality of the water-FOG

Gráphic 1.
Comparison of the behavior of the parameter of FOG
period 2017-2018



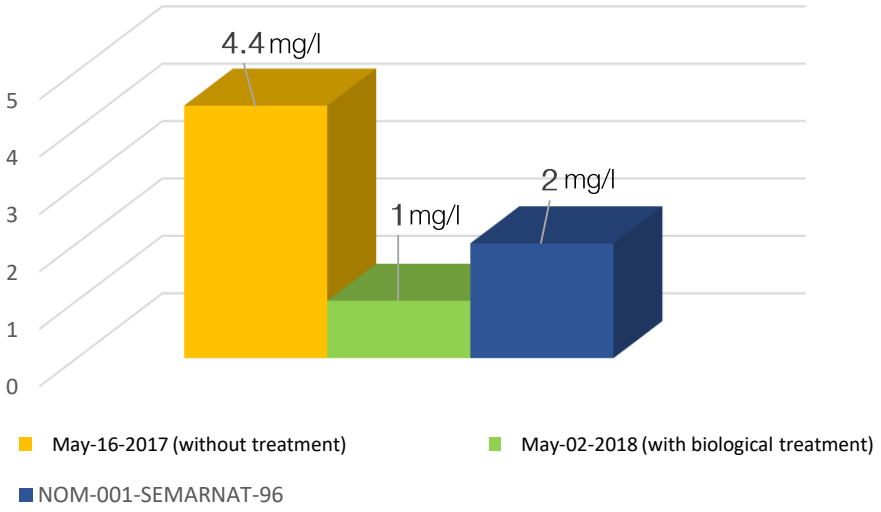
Interpretation of analytical results:

In the comparison of Figure 1. it can be clearly seen the decrease in the load of fats and oil in the water of Lagoon 5 after having implemented the biological treatment for 4 continuous months. Reaching a degradation percentage of 50%.

With this, it will be below the maximum permissible limit of NOM-001-SEMARNAT-96. besides improving water quality considerably.

Quality of the water- SS

Graphic 2.
Comparison of the behavior of the parameter of SS period 2017-2018



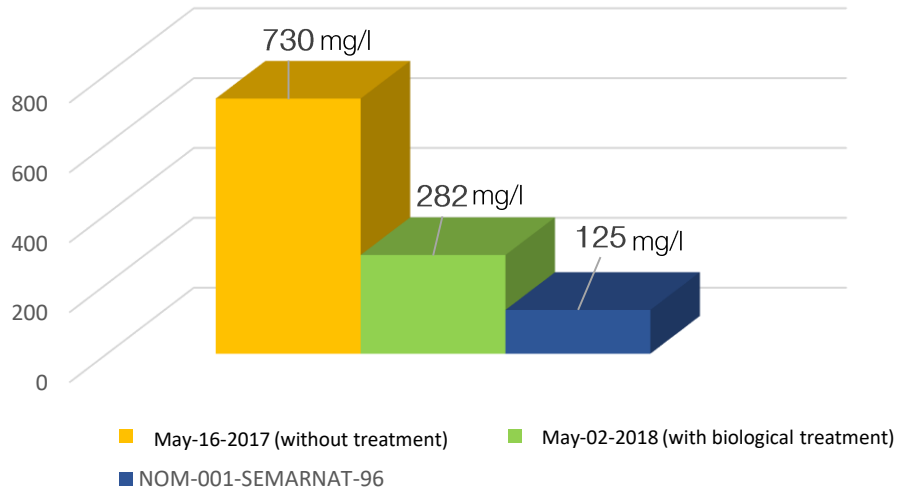
Interpretation of analytical results:

In the comparison of Graphic 2. the decrease in the load of settleable solids in the water of Lagoon 5 can be clearly appreciated after having implemented the biological treatment during 4 continuous months. Reaching a degradation percentage of 77.3%.

With this, this parameter is below the maximum permissible limit of NOM-001-SEMARNAT-96.

Quality of the water- TSS

Graphic 3.
Comparison of the behavior of the parameter of TSS period 2017-2018

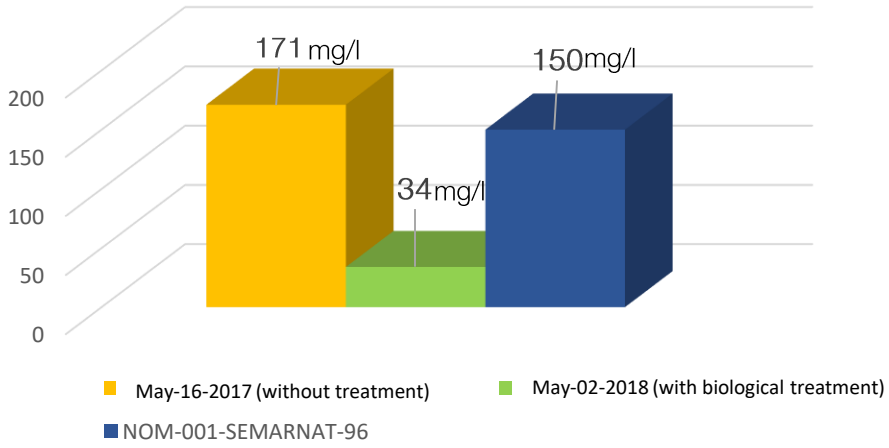


Interpretation of analytical results:

In the comparison of Graphic 3. it can be clearly seen the decrease of the load of total suspended solids in the water of the Lagoon 5 after having implemented the biological treatment during 4 continuous months. Reaching a percentage of degradation of 61.3% with respect to the initial value. However, 157 units needs to be reduced in order to reach compliance with the norm. This is probably due to the presence of floating sludge still present in Lagoon 3 and therefore this sludge is dragged to the final discharge.

Quality of the water- BOD_5

Graphic 4.
Comparison of the behavior of the parameter of BOD period 2017-2018



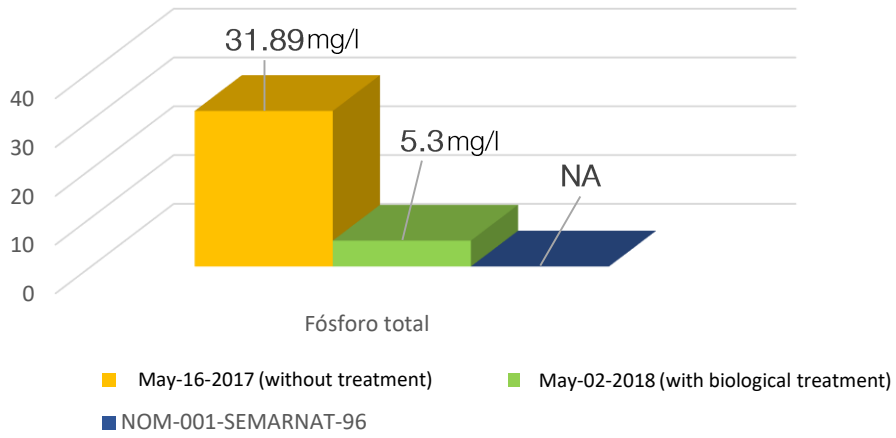
Interpretation of analytical results:

In the comparison of Graphic 4. it can be clearly seen the decrease in the BOD load in the water of Lagoon 5 after having implemented the biological treatment for 4 continuous months. Reaching a degradation percentage of 80.11%.

With this, the parameter is below the maximum permissible limit of NOM-001-SEMARNAT-96. In addition to significantly improve water quality.

Quality of the water- Total phosphorus

Graphic 5.
Comparison of the behavior of the parameter of Total phosphorus period 2017-2018



Interpretation of analytical results:

In the comparison of Graphic 5, it can be clearly seen the decrease in the total phosphorus load in the water of Lagoon 5 after having implemented the biological treatment during 4 continuous months. Reaching a degradation percentage of 83.38%.

Although NOM-001-SEMARNAT-96 does not regulate this parameter, the effect of bioremediation with bacteria is noticeable by reducing the phosphate load and excess nutrients in the water, thus significantly improving water quality.

Conclusion

Parameter	Results with biological treatment (with 4 months)	Maximum allowable limit NOM	STATUS MAY-2018
GyA	<5	5-10	IN NORM
SS	1	2	IN NORM
SST	282	125	STILL OUT OF NORM
DBO_5	34	150	IN NORM