

TCEQ Analysis of TCEQ Contractor Surface Water Quality Sampling Data Collected on March 20, 2019 (Lab results)

The Texas Commission on Environmental Quality (TCEQ) received surface water quality data for 129 constituents at two (2) different sites. One sample was collected at each site on March 20, 2019 by the TCEQ's contractor. The constituents consist of inorganics, organics, nutrients, metals, chemical oxygen demand (COD), and oil and grease in water. The sampling sites were the following:

- Tidal Rd at Tucker Bayou
- Tidal Rd at Gate 13

This assessment is based on results received from the laboratory. There are still constituents that are still pending further TCEQ evaluation.

The TCEQ used the Texas Water Quality Standards and the Texas Risk Reduction Program as references for determining the known health protective concentration levels (PCLs) in surface water. PCLs are very conservative and below levels where we would expect any health impacts. The TCEQ is using these PCLs to evaluate impacts to aquatic life and human health. No public drinking water system draws its source water from the Houston Ship Channel. This methodology was also used for previously reviewed data from samples collected by ITC and will be used to review samples from the TCEQ contractor. The TCEQ used the PCLs listed in the tables below to assess the surface water quality data.

Table 1: Assessment of Laboratory Results

	Tidal Rd at Tucker Bayou	Tidal Rd at Gate 13
Number of Constituents	129	129
Number of constituents analyzed but not detected (not detected above the method detection limit or quantitation limit)	106	107
Number of constituents detected above the method detection limit or quantitation limit	23	22
Number of constituents detected but below their known PCLs	5	4
Number of constituents that exceeded their known PCLs	8	8
Number of constituents that are still pending further TCEQ evaluation	10	10

Below are tables of the constituents that exceeded their known PCL at each sampling site.

Table 2: Tidal Rd at Tucker Bayou

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	1960	581
COD	1000000	150000*
Copper	14	3.6
Lead	11	3.83
Nickel	17.3	13.1
Oil and Grease	670000	28000
Xylenes, Total	2930	850
Zinc	171	84.2

Table 3: Tidal Rd at Gate 13

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	1590	581
COD	750000	150000*
Copper	11.8	3.6
Lead	10.4	3.83
Nickel	13.3	13.1
Oil and Grease	298000	28000
Xylenes, Total	2030	850
Zinc	105	84.2

Footnote:

*COD is a measure of the oxygen demand exerted by chemical constituents in water. There was not a known PCL for COD, therefore the permitted technology-based limit was used for comparison purposes. Although COD levels for treated process wastewater vary 150000 micrograms/L for noncontact stormwater was provided for comparison purposes.