

TCEQ Analysis of TCEQ Contractor Surface Water Quality Sampling Data 3/25/19 Update 2 (preliminary lab results)

The Texas Commission on Environmental Quality (TCEQ) received preliminary surface water quality data for up to 125 constituents at three (3) different sites. One sample was collected at each site on March 20, 2019 by the TCEQ's contractor. The constituents consist of inorganics, organics, metals, nutrients, and oil and grease in water. The sampling sites were the following:

- Tucker Bayou @ Buffalo Bayou Inside of Containment Boom
- Tucker Bayou @ Buffalo Bayou Outside of Containment Boom
- Upstream Tucker Bayou

This assessment is based on preliminary results received from the laboratory. These laboratory results are subject to change once the final report is issued. The TCEQ is providing the assessment of preliminary results in an abundance of caution to make this information publicly available as quickly as possible. As sample results are received, or additional water quality sampling is completed, the data will be assessed, and results made available.

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. 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's contractor.

Table 1: Assessment of Preliminary Laboratory Results

	Tucker Bayou @ Buffalo Bayou Inside C	Tucker Bayou @ Buffalo Bayou Outside	Upstream Tucker Bayou
Number of Constituents	124	125	125*
Number of constituents analyzed but not detected (not detected above the method detection limit or quantitation limit)	105	102	114
Number of constituents detected above the method detection limit or quantitation limit	19	23	9
Number of constituents detected but below their known protective concentration levels	11	20	7
Number of constituents that exceeded their known PCLs	8	3	2

*2 constituents, Total Kjeldahl Nitrogen and Phenolic, collected at the Upstream Tucker Bayou site included samples where the MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix/chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD. Therefore, they were excluded from the assessment of preliminary laboratory results.

Table 2: Tucker Bayou @ Buffalo Bayou Inside Containment Boom

Constituent	Maximum (ug/L)	PCL (ug/L)
Benzene	5220	581
Oil & Grease, HEM	47000000	28000
Toluene	1610	1000
Total Xylenes	17700	850
Copper	26.2	3.6
Lead	20.3	3.83
Nickel	14.5	13.1
Zinc	424	84.2

Table 3: Tucker Bayou @ Buffalo Bayou Outside of Containment Boom

Constituent	Maximum (ug/L)	PCL (ug/L)
Benzene	854	581
Oil & Grease, HEM	120000	28000
Total Xylenes	1150	850

Table 4: Upstream Tucker Bayou

Constituent	Maximum (ug/L)	PCL (ug/L)
Cyanide, Total	5.67	5.6
Copper	4.23	3.6