TCEQ Analysis of TCEQ Contractor Surface Water Quality Sampling Data Collected on April 13, 2019 (Preliminary Lab Results)

The Texas Commission on Environmental Quality (TCEQ) received preliminary surface water quality data for 125 constituents at five (5) different sites. One sample was collected at each site on April 13, 2019 by the TCEQ's contractor. The constituents consist of inorganics, organics, metals, nutrients, chemical oxygen demand (COD), total suspended solids, and oil and grease in water. The sampling sites were the following:

- Tidal Rd @ Tucker Bayou
- Tidal Road @ Gate #13
- Tidal Road @ Gate #13 #2
- Upstream Tucker Bayou Clean
- Mouth of Tucker Bayou & Buffalo 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 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. 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 Preliminary Laboratory Results

	Tidal Road @ Tucker Bayou	Tidal Rd @ Gate #13	Tidal Rd @ Gate #13 #2	Upstream Tucker Bayou Clean	Mouth of Tucker Bayou @ Buffalo Bayou
Number of Constituents	125	125	125	125*	125
Number of constituents analyzed but not detected (not detected above the method detection limit or quantitation limit)	112	109	112	119	120
Number of constituents detected above the method detection limit or quantitation limit	13	16	13	5	5
Number of constituents detected but below their known PCLs	8	9	5	3	3
Number of constituents that exceeded their known PCLs	2	4	4	1	0
Number of constituents that are still pending further TCEQ evaluation	0	0	0	0	0
Number of constituents that do not have a PCL or are assessed with other constituents*	3	3	4	1	2

*One constituent, Mercury, collected at the Upstream Tucker Bayou Clean site included a sample 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.

*The water quality parameters ammonia nitrogen (as N), total Kjeldahl nitrogen, total phosphate, total organic nitrogen, and total suspended solids are not related to human health; therefore it is not appropriate to develop human health comparison values to evaluate these parameters. Three chemicals on the laboratory target analyte list (4-bromophenyl phenyl ether, 4-chlorophenyl phenyl ether, and benzo(g,h,i)perylene) do not have surface water comparison values and consequently will not be evaluated. These water quality parameters and chemicals are not directly related to the ITC incident, and the TCEQ is evaluating the chemicals that are directly related to the ITC incident (benzene and toluene, for example). C6-12, C12-28 and C28-35 range hydrocarbons, as well as total petroleum hydrocarbons, are included in the assessment of oil and grease. Therefore, these constituents are not assessed individually.

Below are tables of the constituents that exceeded their known PCL at the sampling site(s).

Table 2: Tidal Road @ Tucker Bayou

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	1260	581
Phenolic	18.2	0.29

Table 3: Tidal Rd @ Gate #13

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	2750	581
Phenolic	22.7	0.29
Total Xylenes	1270	850
Zinc	204	84.2

Table 4: Tidal Rd @ Gate #13 #2

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	2830	581
Phenolic	20.9	0.29
Total Xylenes	1360	850
Zinc	117	84.2

Table 5: Upstream Tucker Bayou Clean

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Copper	5.35	3.6