

TCEQ Analysis of ITC Water Quality Sampling Data (final lab results)

The Texas Commission on Environmental Quality (TCEQ) assessed final water quality data for 117 constituents at one site. Thirteen (13) samples were collected from April 1, 2019 through April 2, 2019 by Intercontinental Terminal Company (ITC). The constituents consist of organics, oil and grease, and chemical oxygen demand (COD). The sampling site was the following:

- Gate 13 Ditch

This assessment is based on final results received from the laboratory. As 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 Final Laboratory Results

	Gate 13 Ditch on April 1, 2019 at 10:00 AM	Gate 13 Ditch on April 1, 2019 at 12:00 PM	Gate 13 Ditch on April 1, 2019 at 2:00 PM	Gate 13 Ditch on April 1, 2019 at 4:00 PM	Gate 13 Ditch on April 1, 2019 at 6:00 PM
Number of Constituents	117	117	117	117	117
Number of constituents analyzed but not detected (not detected above the method detection limit or quantitation limit)	111	111	112	112	112
Number of constituents detected above the method detection limit or quantitation limit	6	6	5	5	5
Number of constituents detected but below their known PCLs	0	0	0	0	0
Number of constituents that exceeded their known PCLs	6	6	5	5	5
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	0	0	0	0	0

Table 1 continued. Assessment of Final Laboratory Results

	Gate 13 Ditch on April 1, 2019 at 8:00 PM	Gate 13 Ditch on April 1, 2019 at 10:00 PM	Gate 13 Ditch on April 1, 2019 at 11:59 PM	Gate 13 Ditch on April 2, 2019 at 2:00 AM	Gate 13 Ditch on April 2, 2019 at 4:00 AM
Number of Constituents	117	117	117	117	117
Number of constituents analyzed but not detected (not detected above the method detection limit or quantitation limit)	111	112	111	111	111
Number of constituents detected above the method detection limit or quantitation limit	6	5	6	6	6
Number of constituents detected but below their known PCLs	0	0	0	0	0
Number of constituents that exceeded their known PCLs	6	5	6	6	6
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	0	0	0	0	0

Table 1 continued. Assessment of Final Laboratory Results

	Gate 13 Ditch on April 2, 2019 at 6:00 AM	Gate 13 Ditch on April 2, 2019 at 8:00 AM	Gate 13 Ditch on April 2, 2019 at 10:00 AM
Number of Constituents	117	117	117
Number of constituents analyzed but not detected (not detected above the method detection limit or quantitation limit)	111	111	111
Number of constituents detected above the method detection limit or quantitation limit	5	6	6
Number of constituents detected but below their known PCLs	0	0	1
Number of constituents that exceeded their known PCLs	5	6	5
Number of constituents that are still pending further TCEQ evaluation	0	0	0
Number of constituents that do not have a PCL or are assessed with other constituents	0	0	0

Below are tables of constituents that exceeded their known PCLs at each of the sampling times.

Table 2. Summary of Constituents Exceeding PCLs for April 1, 2019 at 10:00 AM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	120000	581
COD	4000000	150000*
Toluene	24000	1000
Oil and Grease	312000	28000
Xylenes, Total	6000	850
Naphthalene	350	125

Table 3. Summary of Constituents Exceeding PCLs for April 1, 2019 at 12:00 PM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	130000	581
COD	3900000	150000*
Toluene	26000	1000
Oil and Grease	215000	28000
Xylenes, Total	6500	850
Naphthalene	500	125

Table 4. Summary of Constituents Exceeding PCLs for April 1, 2019 at 2:00 PM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	130000	581
COD	3500000	150000*
Toluene	27000	1000
Xylenes, Total	6500	850
Oil and Grease	51700	28000

Table 5. Summary of Constituents Exceeding PCLs for April 1, 2019 at 4:00 PM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	120000	581
COD	4000000	150000*
Toluene	25000	1000
Xylenes, Total	6100	850
Oil and Grease	30400	28000

Table 6. Summary of Constituents Exceeding PCLs for April 1, 2019 at 6:00 PM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	130000	581
COD	4200000	150000*
Toluene	25000	1000
Xylenes, Total	6300	850
Oil and Grease	31200	28000

Table 7. Summary of Constituents Exceeding PCLs for April 1, 2019 at 8:00 PM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	130000	581
COD	3500000	150000*
Toluene	33000	1000
Xylenes, Total	6500	850
Naphthalene	440	125
Oil and Grease	49600	28000

Table 8. Summary of Constituents Exceeding PCLs for April 1, 2019 at 10:00 PM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	130000	581
COD	3500000	150000*
Toluene	35000	1000
Xylenes, Total	6500	850
Oil and Grease	33300	28000

Table 9. Summary of Constituents Exceeding PCLs for April 1, 2019 at 11:59 PM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	130000	581
COD	3000000	150000*
Toluene	38000	1000
Xylenes, Total	6800	850
Naphthalene	590	125
Oil and Grease	30800	28000

Table 10. Summary of Constituents Exceeding PCLs for April 2, 2019 at 2:00 AM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	99000	581
COD	3400000	150000*
Toluene	27000	1000
Xylenes, Total	5500	850
Naphthalene	590	125
Oil and Grease	30000	28000

Table 11. Summary of Constituents Exceeding PCLs for April 2, 2019 at 4:00 AM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	99000	581
COD	2900000	150000*
Toluene	27000	1000
Xylenes, Total	5500	850
Naphthalene	570	125
Oil and Grease	33300	28000

Table 12. Summary of Constituents Exceeding PCLs for April 2, 2019 at 6:00 AM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	91000	581
COD	2900000	150000*
Toluene	25000	1000
Naphthalene	710	125
Oil and Grease	31700	28000

Table 13. Summary of Constituents Exceeding PCLs for April 2, 2019 at 8:00 AM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	100000	581
COD	3100000	150000*
Toluene	30000	1000
Xylenes, Total	5900	850
Naphthalene	840	125
Oil and Grease	28300	28000

Table 14. Summary of Constituents Exceeding PCLs for April 2, 2019 at 10:00 AM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	100000	581
COD	2600000	150000*
Toluene	28000	1000
Xylenes, Total	5500	850
Naphthalene	490	125

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.