



Interoffice Communication

To Anne Daubney, PED
From Rick McCalip, Refining
Date April 22, 1981
Subject Summary of Priority Pollutant Testing Data - Lake Charles Refinery

Attached is a list of the pollutants which have been analyzed by Research and Development and the Refining Technical Services Laboratory for completion of the applications for National Pollutant Discharge Elimination System permits. Data for outfalls 001 (lagoon) and 003 (ETF-Storm Water) are supplied.

(samples taken 1-27, 28-1981)

We have historically exercised caution in reporting test results in a "less-than" manner (for example <10 ppb). Such a result is generally reported as N.D. (none detected), with a footnote explanation. This should preclude any regulatory agency using the minimum detectable limit as the actual concentration found.

Test results for fecal coliform on outfall 001 may not be currently available, but our recollection is that the State Health Department may have on hand or be able to provide testing results for this requirement.

If you have any questions or require further data, please feel free to contact our group.

Rick McCalip

Rick McCalip

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Att.

cc: KCH-RSJ-F

MCD 000002601

OUTFALL 001

	<u>Pollutant</u>	<u>Concentration, ppm</u>	<u>No. of Analyses</u>
<u>Part A</u>			
1. a)	Biochemical Oxygen Demand (BOD)	(1)	(1)
b)	Chemical Oxygen Demand (COD)	(1)	(1)
c)	Total Organic Carbon (TOC)	(1)	(1)
d)	Total Suspended Solids (TSS)	(1)	(1)
e)	Ammonia (as N)	(1)	(1)
f)	Flow	(1)	(1)
g)	Temperature (winter)	(1)	(1)
h)	Temperature (summer)	(1)	(1)
i)	pH	(1)	(1)
<u>Part B</u>			
1. a)	Bromide	8	1
b)	Chlorine, Total Residual	Believed Absent	
c)	Color	40 (color units)	1
d)	Fecal Coliform	(3)?	
e)	Fluoride	0.6	1
f)	Nitrate-Nitrite (as N)	N.D. (2)	1
g)	Nitrogen, Total Organic (as N)	3	1
h)	Oil and Grease	(1)	(1)
i)	Phosphorus (as P), total	(3)	(3)
j)	Radioactivity	Believed Absent, all types	
k)	Sulfate (as SO ₄)	630	1
l)	Sulfide (as S)	(1)	(1)
m)	Sulfite (as SO ₃)	N.D. (2)	1
n)	Surfactants	1.9	1
o)	Aluminum, total	1.7	1
p)	Barium, total	0.24	1
q)	Boron, total	0.42	1
r)	Cobalt, total	0.13	1
s)	Iron, total	1.5	1
t)	Magnesium, total	31	1
u)	Molybdenum, total	N.D. (2)	1
v)	Manganese, total	0.51	1
w)	Tin, total	N.D. (2)	1
x)	Titanium, total	N.D. (2)	1

OUTFALL 001 (Cont'd)

<u>Pollutant</u>	<u>Concentration, ppm</u>	<u>No. of Analyses</u>
<u>Metals, Cyanide and Total Phenols</u>		
1m. Antimony, total	N.D. (2)	1
2m. Arsenic, total	0.004	1
3m. Beryllium, total	N.D. (2)	1
4m. Cadmium, total	0.004 ← N.D. (2)	1
5m. Chromium, total	(1)	(1)
6m. Copper, total	0.061	1
7m. Lead, total	N.D. (2)	1
8m. Mercury, total	N.D. (2)	1
9m. Nickel, total	0.10	1
10m. Selenium, total	0.003	1
11m. Silver, total	N.D. (2)	1
12m. Thallium, total	N.D. (2)	1
13m. Zinc, total	0.36	1
14m. Cyanide, total	(3)	(3)
15m. Phenols, total	(1)	(1)

Dioxin

2,3,7,8-Tetrachlorodibenzo-P-dioxin

Believed absent

GC/MS Fraction - Volatile Compounds

No concentrations above 10 ppb were detected for any of the compounds numbered 1 V thru 31 V.

GC/MS Fraction - Acid Compounds

No concentrations above 10 ppb were detected for any of the compounds numbered 1 A thru 11 A.

GC/MS Fraction - Base/Neutral Compounds

No concentrations above 10 ppb were detected for any of the compounds numbered 1 B thru 46 B.

GC/MS Fraction - Pesticides

No pesticides were detected in concentrations above 10 ppb.

MCD 000002603

OUTFALL 003

	<u>Pollutant</u>	<u>Concentration, ppm</u>	<u>No. of Analyses</u>
<u>Part A</u>			
1.	a) Biochemical Oxygen Demand (BOD)	(1)	(1)
	b) Chemical Oxygen Demand (COD)	(1)	(1)
	c) Total Organic Carbon (TOC)	(1)	(1)
	d) Total Suspended Solids (TSS)	(1)	(1)
	e) Ammonia (as N)	(1)	(1)
	f) Flow	(1)	(1)
	g) Temperature (winter)	(1)	(1)
	h) Temperature (summer)	(1)	(1)
	i) pH	(1)	(1)
<u>Part B</u>			
1.	a) Bromide	1.5	1
	b) Chlorine, Total Residual	Believed absent	
	c) Color	40(Color units)	1
	d) Fecal Coliform	Believed absent	
	e) Fluoride	0.2	1
	f) Nitrate - Nitrite (as N)	N.D. (2)	1
	g) Nitrogen, Total Organic (as N)	3	1
	h) Oil and Grease	(1)	(1)
	i) Phosphorus (as P), total	1	1
	j) Radioactivity	Believed absent, all kinds	
	k) Sulfate (as SO ₄)	95	1
	l) Sulfide (as S)	(1)	(1)
	m) Sulfite (as SO ₃)	N.D. (2)	1
	n) Surfactants	0.23	1
	o) Aluminum, total	0.18	1
	p) Barium, total	0.14	1
	q) Boron, total	0.051	1
	r) Cobalt, total	N.D. (2)	1
	s) Iron, total	0.72	1
	t) Magnesium, total	19	1
	u) Molybdenum, total	N.D. (2)	1
	v) Manganese, total	0.34	1
	w) Tin, total	N.D. (2)	1
	x) Titanium, total	N.D. (2)	1

OUTFALL 003 (Cont'd)

<u>Pollutant</u>	<u>Concentration, ppm</u>	<u>No. of Analyses</u>
<u>Part B (cont'd)</u>		
<u>Metals, Cyanide, and Total Phenols</u>		
1m. Antimony, total	N.D. (2)	1
2m. Arsenic, total	N.D. (2)	1
3m. Beryllium, total	N.D. (2)	1
4m. Cadmium, total	N.D. (2)	1
5m. Chromium, total	(3)	(3)
6m. Copper, total	N.D. (2)	1
7m. Lead, total	N.D. (2)	1
8m. Mercury, total	N.D. (2)	1
9m. Nickel, total	N.D. (2)	1
10m. Selenium, total	N.D. (2)	1
11m. Silver, total	N.D. (2)	1
12m. Thallium, total	N.D. (2)	1
13m. Zinc, total	0.032	1
14m. Cyanide, total	(3)?	(3)?
15m. Phenols, total	(1)	(1)

Dioxin

2,3,7,8-Tetrachlorodibenzo-P-dioxin

Believed absent

GC/MS Fraction - Volatile Compounds

No concentrations above 10 ppb were detected for any of the compounds numbered 1 V thru 31 V.

GC/MS Fraction - Acid Compounds

No concentrations above 10 ppb were detected for any of the compounds numbered 1 A thru 11 A.

GC/MS Fraction - Base/Neutral Compounds

No concentrations above 10 ppb were detected for any of the compounds numbered 1 B thru 46 B.

GC/MS Fraction - Pesticide

No pesticide were detected in concentrations above 10 ppb.

Notes:

- (1) Data should be acquired from routine testing data for compliance with the current (or past for 003) NPDES permits.
- (2) None detected in concentration greater than the minimum detectable limit of the method.
- (3) Data is available from the Lake Charles Refinery Laboratory.

MCD 000002605