

# ***TD\*X ASSOCIATES PERFORMANCE DATA***

## **INDIRECT THERMAL DESORPTION UNITS Test Results - Dioxins/Furans, PCBs and Their Precursors**

Constituent	Media	Concentration (ppm)		Test Scale
		Feed	Product	
Total PCB		50	<2	Lab
Total PCB		66	<2	Lab
Total PCB		97	<2	Lab
Total PCB		114	<2	Lab
Total PCB	Sandy-Silty soil	25-13,000	<2	Full Scale
Total PCB		293	<2	Lab
Total PCB		320	<2	Lab
Total PCB		390	<2	Lab
Total PCB		454	<2	Lab
Total PCB		1,838	<2	Lab
Total PCB		2,400	<2	Lab
Total PCB		3,166	<2	Lab
Total PCB		3,583	<2	Lab
Total PCB	Clay soil, Al(OH) <sub>x</sub> sludge	25-36,000	<2	Full Scale
Total PCB	Lagoon sludge	36,734	<2	Lab
Total PCB	Sump Sludge	102,000	<2	Pilot

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## **AIR EMISSIONS DATA INDIRECT THERMAL DESORPTION UNITS**

**4.9 ton/hr @8.1% soil moisture; May, 1992.**

COMPOUND	FEED mg/hr (mg/kg)* (4088kg/hr)	PROCESS VENT mg/hr (ng/m3)* 63m3/hr) *e-6	"Chute-to- Stack" REMOVAL %
PCB (Total)	1,010,000	<0.0022	99.999998
PCDD (2,3,7,8-TCDD TEQ)	0.118	0.000000003	99.999998
Acetone	462	0.0239	99.995
Trichloroethene	20.4	0.00567	99.97
Benzene	155	0.0183	99.99
Tetrachloroethene	1,560	0.0353	99.998
Toluene	3,400	0.0504	99.998
Ethylbenzene	2,990	0.00063	99.99998
Total xylenes	13,600	0.00882	99.99994
1,2-Dichlorobenzene	57	nr	n/a
Bis (2-ethylhexyl)phthalate	5,990	0.0529	99.9991

These data were taken on full-scale indirect TDU with condensation train; designed, constructed and operated by TD\*X staff

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## **INDIRECT THERMAL DESORPTION UNITS Test Results - Refinery Waste Constituents (K048-K052, F037, F038)**

Constituent	Concentration (ppm)		LDR UTS note 1
	Feed	Product	
acenaphthene	951	<0.004	na
anthracene	9.2	0.37	3.4
benzene	980 - 7.2	<0.21	10
benz(a)anthracene	20	0.51	3.4
benzo(a)pyrene	538	<0.01	3.4
bis(2-ethylhexyl)phthalate	3,347	<1	28
carbon disulfide	<2	0.19	na
chrysene	87	0.2	3.4
2,4-dimethylphenol	bdl	bdl	na
di-n-butyl phthalate	558	<0.33	28
ethylbenzene	120 - 40	<0.50	10
fluorene	148	<0.006	na
naphthalene	1,750 - 50	<0.41	5.6
o-cresol	nr	nr	5.6
phenanthrene	1,655 - 56	<1.6	5.6
phenol	15	<0.33	6.2
pyrene	296	<0.35	8.2
toluene	3,179 - 45	2.2 - <0.024	10
xylenes	14,626 - 68	<1	30
chromium TCLP (mg/l)	<0.015	<0.015	0.86 tclp
cyanides ppm	0.5	0.9	590
lead TCLP (mg/l)	<0.24	0.493	na
nickel TCLP (mg/l)	0.25	0.55	5.0 tclp
oil & grease	to 226,000		na

Note 1. LDR UTS is the Universal Treatment Standard promulgated by USEPA under the Land Disposal Restrictions of the Resource Conservation and Recovery Act, 40 CFR 268.