

TERRA AIR SERVICES
FTIR Summary Report

Customer: Tosco SFR
 Address: 1380 San Pablo Avenue
 Rodeo, CA 94572-1299

Monitoring Period
 From: 06/01/1998 00:00:01
 To: 06/30/1998 23:59:59
 Total Hours: 720.00

PETRIS
 TECHNOLOGY
 2950 N. Loop W., Ste. 1050
 Houston, Texas 77092
 Phone (713) 956-2165
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North Fenceline

Compound	Path - Average Conc. (ppm)			Detections			Alarms				Path - MDL (ppm)		
	Avg.*	Max*	Min*	Number	Confirmed	False Positive	High Level (ppm)	#	Low Level (ppm)	#	Avg Detect Limit	Max Detect Limit	Min Detect Limit
1,1,1 Trichloroethane	0.000	0.000	0.000	1	0	1	450	0	350	0	0.051	0.543	0.021
1,3 Butadiene	0.000	0.000	0.000	0	0	0	50	0	10	0	0.067	0.583	0.028
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	1.995	24.270	1.070
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.912	11.284	0.408
Ammonia	0.000	0.000	0.000	3	0	3	100	0	3	0	0.024	0.276	0.010
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.353	3.289	0.181
Carbon monoxide	0.251	0.441	0.191	5564	5564	0	400	0	20	0	0.377	3.944	0.191
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.008	0.073	0.003
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.028	0.357	0.012
Diethanol amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.890	11.441	0.397
Dimethyl sulfide	0.000	0.000	0.000	0	0	0	500	0	50	0	0.585	5.996	0.233
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.155	1.400	0.079
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.323	2.723	0.166
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.052	0.814	0.021
Formaldehyde	0.000	0.000	0.000	7	0	7	2	0	0.3	0	0.046	0.726	0.012
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	3.753	22.841	1.589
Hydrogen chloride	0.000	0.000	0.000	14	0	14	20	0	1	0	0.067	1.390	0.010
Hydrogen Cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.078	1.637	0.031
Methane	1.375	1.848	1.093	4746	4746	0	5000	0	1000	0	1.408	2.815	1.059
Methyl mercaptan	0.000	0.000	0.000	0	0	0	10	0	0.005	0	1.178	9.935	0.619
Methyl tert-butyl ether	0.000	0.000	0.000	0	0	0	200	0	40	0	0.175	2.257	0.078
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	0.507	5.235	0.261
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.277	2.885	0.143
Naphthalene	0.000	0.000	0.000	0	0	0	15	0	10	0	0.784	10.899	0.226

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	Avg.*	Max*	Min*	Number	Confirmed	False Positive	High Level (ppm)	#	Low Level (ppm)	#	Avg Detect Limit	Max Detect Limit	Min Detect Limit
Nickel carbonyl	0.000	0.000	0.000	0	0	0	0.16	0	0.09	0	0.007	0.063	0.002
Nitrous oxide***	0.186	0.223	0.171	5666	5666	0	NONE	na	NONE	na	0.332	0.332	0.171
Ozone**	0.000	0.000	0.000	0	0	0	NONE	na	NONE	na	0.076	0.818	0.031
Phenol	0.000	0.000	0.000	6	0	6	50	0	5	0	0.094	53.084	0.012
Phosgene	0.000	0.000	0.000	1	0	1	0.2	0	0.003	0	0.011	0.087	0.004
Propane	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.219	2.076	0.112

Number of Valid Spectra Collected and Analyzed: 5667

Online %: 66.9

Offline %: 33.1

South Fenceline

Compound	Path - Average Conc. (ppm)			Detections			Alarms				Path - MDL (ppm)		
	Avg.*	Max*	Min*	Number	Confirmed	False Positive	High Level (ppm)	#	Low Level (ppm)	#	Avg Detect Limit	Max Detect Limit	Min Detect Limit
1,1,1 Trichloroethane	0.000	0.000	0.000	0	0	0	450	0	350	0	0.034	0.127	0.017
1,3 Butadiene	0.000	0.000	0.000	0	0	0	50	0	10	0	0.043	0.158	0.026
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	3.114	33.493	1.033
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.683	2.389	0.411
Ammonia	0.000	0.000	0.000	0	0	0	100	0	3	0	0.016	0.055	0.010
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.737	1.256	0.153
Carbon monoxide	0.235	0.449	0.081	132	132	0	400	7	20	0	0.280	4.875	0.081
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.016	0.134	0.002
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.021	0.072	0.013
Diethanol amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.673	2.330	0.404
Dimethyl sulfide	0.000	0.000	0.000	0	0	0	500	0	50	0	0.389	1.301	0.241
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.328	0.526	0.069
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.654	1.057	0.145
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.034	0.116	0.021
Formaldehyde	0.000	0.000	0.000	0	0	0	2	0	0.3	0	0.059	0.152	0.003
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	4.981	18.498	1.056
Hydrogen chloride	0.000	0.000	0.000	1	0	1	20	0	1	0	0.084	0.217	0.004
Hydrogen Cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.099	0.254	0.021
Methane	0.920	1.174	0.704	1574	1574	0	5000	0	1000	0	1.158	3.186	0.704

South Fenceline

Compound	Path - Average Conc. (ppm)			Detections			Alarms				Path - MDL (ppm)		
	Avg.*	Max*	Min*	Number	Confirmed	False Positive	High Level (ppm)	#	Low Level (ppm)	#	Avg Detect Limit	Max Detect Limit	Min Detect Limit
Methyl mercaptan	0.000	0.000	0.000	0	0	0	10	0	0.005	0	2.463	5.044	0.533
Methyl tert-butyl ether	0.000	0.000	0.000	0	0	0	200	0	40	0	0.132	0.459	0.079
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	1.081	1.868	0.225
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.591	1.036	0.123
Naphthalene	0.000	0.000	0.000	0	0	0	15	0	10	0	0.648	2.156	0.273
Nickel carbonyl	0.000	0.000	0.000	0	0	0	0.16	0	0.09	0	0.012	0.126	0.002
Nitrous oxide***	0.182	0.390	0.107	4350	4350	0	NONE	na	NONE	na	0.340	0.340	0.107
Ozone**	0.000	0.000	0.000	17	0	17	NONE	na	NONE	na	0.054	0.184	0.034
Phenol	0.000	0.000	0.000	5	0	5	50	0	5	0	0.116	132.523	0.004
Phosgene	0.000	0.000	0.000	1	0	1	0.2	0	0.003	0	0.007	0.023	0.004
Propane	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.422	0.774	0.092

Number of Valid Spectra Collected and Analyzed: 4351

Online %: 52.1

Offline %: 47.9

* Zero (0.000) values indicate all concentrations less than the minimum detection limit (<MDL)

** Included as an interfering compound

*** Included as an ambient quality assurance check compound