

**TERRA** AIR SERVICES

**FTIR Summary Report**

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

Monitoring Period

From: 10/01/1998 00:00:01  
 To: 10/31/1998 23:59:59  
 Total Hours: 744.00

**PETRIS**  
 TECHNOLOGY  
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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	2	0	2	450	0	350	0	0.033	0.337	0.014
1,3 Butadiene	0.000	0.000	0.000	0	0	0	50	0	10	0	0.038	0.354	0.020
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	4.365	17.669	1.070
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.688	6.704	0.269
Ammonia	0.000	0.000	0.000	188	0	188	100	0	3	0	0.014	0.213	0.008
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.425	3.649	0.151
Carbon monoxide	0.416	0.538	0.372	7667	447	7220	400	0	20	0	0.384	7.530	0.167
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.018	0.142	0.002
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.021	0.218	0.008
Diethanol Amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.683	6.620	0.264
Dimethyl sulfide	0.000	0.000	0.000	0	0	0	500	0	50	0	0.343	4.519	0.199
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.186	1.587	0.068
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.393	5.097	0.145
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.031	0.337	0.018
Formaldehyde	0.000	0.000	0.000	88	0	88	2	0	3	0	0.050	0.751	0.005
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	5.025	17.011	2.588
Hydrogen chloride	0.000	0.000	0.000	6	0	6	20	0	1	0	0.074	1.248	0.002
Hydrogen cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.104	0.737	0.048
Methane	1.366	2.061	0.726	7483	7483	0	5000	0	1000	0	1.345	1.983	0.726
Methyl mercaptan	0.000	0.000	0.000	0	0	0	10	0	0.005	0	1.659	17.213	0.542
Methyl tert-butyl ether	0.339	0.918	0.176	26	20	6	200	0	40	0	0.134	1.280	0.052
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	0.647	7.682	0.224
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.356	4.047	0.123
Naphthalene	0.000	0.000	0.000	0	0	0	15	0	10	0	0.556	9.785	0.287

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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	0.014	0.143	0.001
Nitrous oxide***	0.243	0.477	0.219	7997	7997	0	NONE	na	NONE	na	0.291	0.364	0.219
Ozone**	0.000	0.000	0.000	308	0	308	NONE	na	NONE	na	0.048	0.766	0.027
Phenol	0.000	0.000	0.000	51	0	51	50	0	5	0	0.139	32.108	0.002
Phosgene	0.000	0.000	0.000	25	0	25	0.2	0	0.003	0	0.005	0.065	0.002
Propane	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.267	4.151	0.091

Number of Valid Spectra Collected and Analyzed: 7999

Online %:

91.4

Offline %:

8.6

### 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	0.058	0.016
1,3 Butadiene	0.000	0.000	0.000	2	0	2	50	0	10	0	0.032	0.047	0.020
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	3.698	10.360	1.191
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.693	1.311	0.318
Ammonia	0.000	0.000	0.000	192	0	192	100	0	3	0	0.015	0.022	0.010
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.445	0.985	0.163
Carbon monoxide	0.431	0.458	0.413	232	5	227	400	0	20	0	0.360	1.682	0.223
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.016	0.091	0.003
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.021	0.040	0.010
Diethanol Amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.673	1.292	0.310
Dimethyl sulfide	0.000	0.000	0.000	0	0	0	500	0	50	0	0.356	0.521	0.216
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.204	0.438	0.074
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.423	0.939	0.157
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.032	0.046	0.019
Formaldehyde	0.000	0.000	0.000	6	0	6	2	0	3	0	0.044	0.147	0.007
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	4.444	11.718	2.061
Hydrogen chloride	0.000	0.000	0.000	63	0	63	20	0	1	0	0.063	0.211	0.007
Hydrogen cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.086	0.223	0.040
Methane	1.615	1.935	1.335	6592	6592	0	5000	0	1000	0	1.726	1.978	1.335

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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
Methyl mercaptan	0.000	0.000	0.000	0	0	0	10	0	0.005	0	1.554	3.802	0.576
Methyl tert-butyl ether	0.000	0.000	0.000	0	0	0	200	0	40	0	0.132	0.252	0.060
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	0.659	1.488	0.242
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.361	0.818	0.133
Naphthalene	0.000	0.000	0.000	0	0	0	15	0	10	0	0.573	1.123	0.252
Nickel carbonyl	0.000	0.000	0.000	0	0	0	0.16	0	0.09	0	0.012	0.072	0.002
Nitrous oxide***	0.244	0.413	0.207	6605	6605	0	NONE	na	NONE	na	0.000	0.000	0.000
Ozone**	0.000	0.000	0.000	5028	0	5028	NONE	na	NONE	na	0.050	0.075	0.036
Phenol	0.000	0.000	0.000	23	0	23	50	0	5	0	0.144	292.379	0.003
Phosgene	0.000	0.000	0.000	0	0	0	0.2	0	0.003	0	0.004	0.008	0.002
Propane	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.273	0.625	0.099

Number of Valid Spectra Collected and Analyzed: 6605

Online %: 76.5

Offline %: 23.5

\* 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