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**TERRA AIR SERVICES**  
**FTIR Summary Report**

Customer: Tosco SFAR  
Address: 1380 San Pablo Avenue  
Rodeo, CA 94572-1299  
Monitoring Period  
From: 11/01/98 00:00:01  
To: 11/30/98 23:59:59  
Total Hours: 720.00

**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	0	0	0	450	0	350	0	0.029	0.853	0.011
1,3 Butadiene	0.000	0.000	0.000	854	0	854	50	0	10	0	0.032	0.643	0.012
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	3.003	48.842	0.912
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.572	10.843	0.242
Ammonia	0.108	0.147	0.086	641	7	634	100	0	3	0	0.012	0.431	0.004
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.342	7.903	0.131
Carbon monoxide	0.408	0.729	0.372	5683	717	4966	400	0	20	0	1.184	26.080	0.183
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.014	0.199	0.002
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.017	0.383	0.007
Diethanol Amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.559	11.604	0.237
Dimethyl sulfide	0.000	0.000	0.000	23	0	23	500	0	50	0	0.321	8.535	0.137
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.147	2.249	0.059
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.304	4.643	0.124
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.029	0.837	0.012
Formaldehyde	0.000	0.000	0.000	10	0	10	2	0	3	0	0.044	1.238	0.002
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	4.988	24.127	0.984
Hydrogen chloride	0.000	0.000	0.000	43	0	43	20	0	1	0	0.064	2.632	0.005
Hydrogen cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.101	0.875	0.018
Methane	1.419	3.478	0.655	6312	6312	0	5000	0	1000	0	1.262	2.440	0.654
Methyl mercaptan	0.000	0.000	0.000	0	0	0	10	0	0.005	0	1.149	17.830	0.456
Methyl tert-butyl ether	0.259	0.492	0.168	29	14	15	200	0	40	0	0.110	2.214	0.046
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	0.493	7.034	0.192
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.270	3.650	0.105
Naphthalene	0.000	0.000	0.000	0	0	0	15	0	10	0	0.523	20.761	0.170

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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	0.011	0.181	0.001
Nitrous oxide***	0.272	0.649	0.119	6356	6356	0	NONE	na	NONE	na	0.553	0.880	0.119
Ozone**	0.000	0.000	0.000	2668	0	2668	NONE	na	NONE	na	0.047	1.318	0.027
Phenol	0.000	0.000	0.000	6	0	6	50	0	5	0	0.145	266.031	0.006
Phosgene	0.000	0.000	0.000	0	0	0	0.2	0	0.003	0	0.006	0.124	0.002
Propene	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.215	6.988	0.079

Number of Valid Spectra Collected and Analyzed: 6372

Online %: 75.3

Offline %: 24.7

### 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	5	0	5	450	0	350	0	0.037	0.199	0.015
1,3 Butadiene	0.000	0.000	0.000	0	0	0	50	0	10	0	0.039	0.213	0.015
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	4.043	48.511	1.325
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.800	5.511	0.363
Ammonia	0.000	0.000	0.000	679	0	679	100	0	3	0	0.017	0.077	0.007
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.569	4.174	0.151
Carbon monoxide	0.441	0.514	0.406	1302	176	1126	400	0	20	0	0.508	30.109	0.194
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.019	0.239	0.003
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.024	0.185	0.011
Diethanol Amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.781	5.852	0.353
Dimethyl sulfide	0.000	0.000	0.000	0	0	0	500	0	50	0	0.401	1.759	0.197
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.262	1.629	0.068
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.531	3.303	0.143
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.098	0.181	0.018
Formaldehyde	0.000	0.000	0.000	42	0	42	2	0	3	0	0.056	0.357	0.007
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	4.927	12.943	2.352
Hydrogen chloride	0.000	0.000	0.000	23	0	23	20	0	1	0	0.081	0.553	0.004
Hydrogen cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.097	0.276	0.044
Methane	1.458	1.786	0.728	7206	7206	0	5000	0	1000	0	1.262	1.975	0.721

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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	2.051	16.281	0.531
Methyl tert-butyl ether	0.000	0.000	0.000	0	0	0	200	0	40	0	0.153	1.118	0.070
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	0.848	6.306	0.222
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.467	3.387	0.121
Naphthalene	0.000	0.000	0.000	0	0	0	15	0	10	0	0.848	3.271	0.215
Nickel carbonyl	0.000	0.000	0.000	0	0	0	0.16	0	0.09	0	0.015	0.230	0.002
Nitrous oxide***	0.244	0.514	0.199	7299	7299	0	NONE	na	NONE	na	0.582	0.827	0.199
Ozone**	0.000	0.000	0.000	1383	0	1383	NONE	na	NONE	na	0.055	0.244	0.027
Phenol	0.000	0.000	0.000	10	0	10	50	0	5	0	0.139	21.127	0.005
Phosgene	0.000	0.000	0.000	0	0	0	0.2	0	0.003	0	0.007	0.065	0.002
Propane	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.361	3.340	0.091

Number of Valid Spectra Collected and Analyzed: 7313

Online %: 87.5

Offline %: 12.5

\* 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