

**TERRA** AIR SERVICES

**FTIR Summary Report**

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

Monitoring Period

From: 09/01/1998 00:00:01  
 To: 09/30/1998 23:59:59  
 Total Hours: 720.00

**PETRIS**  
 TECHNOLOGY  
 2950 N. Loop W., Ste. 1050  
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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	0	0	0	450	0	350	0	0.039	0.218	0.013
1,3 Butadiene	0.000	0.000	0.000	3	0	3	50	0	10	0	0.030	0.339	0.013
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	1.378	37.872	0.312
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.862	3.895	0.226
Ammonia	0.000	0.000	0.000	215	0	215	100	0	3	0	0.015	0.101	0.007
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.621	2.738	0.143
Carbon monoxide	0.442	0.706	0.372	5923	3067	2856	400	0	20	0	0.282	4.369	0.128
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.006	0.133	0.002
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.020	0.124	0.007
Diethanol Amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.640	3.860	0.218
Dimethyl sulfide	0.000	0.000	0.000	0	0	0	500	0	50	0	0.371	2.383	0.184
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.295	1.070	0.064
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.519	1.621	0.136
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.031	0.217	0.015
Formaldehyde	0.000	0.000	0.000	0	0	0	2	0	3	0	0.030	0.233	0.001
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	3.861	16.632	1.445
Hydrogen chloride	0.000	0.000	0.000	3	0	3	20	0	1	0	0.049	0.384	0.006
Hydrogen cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.103	0.806	0.038
Methane	1.293	1.730	0.927	6793	6793	0	5000	0	1000	0	1.134	2.501	0.927
Methyl mercaptan	0.000	0.000	0.000	0	0	0	10	0	0.005	0	2.027	12.938	0.505
Methyl tert-butyl ether	0.294	0.720	0.169	66	31	35	200	0	40	0	0.125	0.755	0.042
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	0.890	4.604	0.211
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.516	2.511	0.116
Naphthalene	0.000	0.000	0.000	0	0	0	15	0	10	0	0.508	3.679	0.210

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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	0.005	0.129	0.001
Nitrous oxide***	0.231	0.331	0.164	6843	6843	0	NONE	na	NONE	na	0.000	0.000	0.000
Ozone**	0.000	0.000	0.000	2105	0	2105	NONE	na	NONE	na	0.056	0.336	0.026
Phenol	0.000	0.000	0.000	11	0	11	50	0	5	0	0.213	470.998	0.003
Phosgene	0.000	0.000	0.000	221	0	221	0.2	0	0.003	0	0.005	0.050	0.002
Propane	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.435	2.273	0.087

Number of Valid Spectra Collected and Analyzed: 6843

Online %:

80.8

Offline %:

19.2

**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	0.022	0.105	0.010
1,3 Butadiene	0.000	0.000	0.000	1	0	1	50	0	10	0	0.038	0.142	0.020
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	2.664	10.968	1.143
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.439	1.821	0.171
Ammonia	0.000	0.000	0.000	1580	0	1580	100	0	3	0	0.014	0.047	0.008
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.288	0.744	0.163
Carbon monoxide	0.442	0.517	0.405	3698	387	3311	400	0	20	0	0.298	1.588	0.167
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.009	0.053	0.002
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.013	0.057	0.005
Diethanol Amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.429	1.794	0.167
Dimethyl sulfide	0.000	0.000	0.000	0	0	0	500	0	50	0	0.318	1.184	0.171
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.128	0.320	0.073
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.272	0.695	0.154
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.028	0.107	0.015
Formaldehyde	0.000	0.000	0.000	4	0	4	2	0	3	0	0.032	0.142	0.002
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	4.998	28.564	2.192
Hydrogen chloride	0.000	0.000	0.000	20	0	20	20	0	1	0	0.047	0.210	0.003
Hydrogen cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.106	1.906	0.040
Methane	1.538	2.235	1.076	4418	4418	0	5000	0	1000	0	1.830	4.245	1.076

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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	1.014	2.610	0.569
Methyl tert-butyl ether	0.000	0.000	0.000	0	0	0	200	0	40	0	0.084	0.352	0.033
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	0.423	1.108	0.240
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.232	0.599	0.132
Naphthalene	0.000	0.000	0.000	1	0	1	15	0	10	0	0.488	2.549	0.153
Nickel carbonyl	0.000	0.000	0.000	0	0	0	0.16	0	0.09	0	0.007	0.045	0.002
Nitrous oxide***	0.187	0.311	0.154	4486	4486	0	NONE	na	NONE	na	0.213	0.266	0.154
Ozone**	0.000	0.000	0.000	356	0	356	NONE	na	NONE	na	0.044	0.163	0.024
Phenol	0.000	0.000	0.000	6	0	6	50	0	5	0	0.070	4.654	0.004
Phosgene	0.000	0.000	0.000	0	0	0	0.2	0	0.003	0	0.006	0.022	0.003
Propane	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.177	0.468	0.100

Number of Valid Spectra Collected and Analyzed: 4490

Online %: 53.7

Offline %: 46.3

\* 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