

# FTIR Summary Report

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

Monitoring Period

From: 12/01/98 00:00:01  
 To: 12/31/98 23:59:59

Total Hours: 744.00



2950 N. Loop W., Ste. 1050  
 Houston, Texas 77092  
 Phone (713) 956-2165  
 Fax (713) 956-2185

## 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	0.026	0.792	0.013
1,3 Butadiene	0.000	0.000	0.000	1125	0	1125	50	0	10	0	0.021	1.129	0.009
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	3.403	37.622	0.793
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.569	11.543	0.246
Ammonia	0.000	0.000	0.000	1331	0	1331	100	0	3	0	0.009	0.535	0.003
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.427	6.585	0.116
Carbon monoxide	0.416	3.450	0.372	7037	1993	5044	400	0	20	0	2.105	20.625	0.236
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.017	0.260	0.002
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.017	0.498	0.008
Diethanol Amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.555	13.496	0.240
Dimethyl sulfide	0.000	0.000	0.000	0	0	0	500	0	50	0	0.258	6.732	0.158
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.190	1.530	0.058
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.387	4.655	0.123
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.023	0.980	0.014
Formaldehyde	0.000	0.000	0.000	26	0	26	2	0	0.3	0	0.043	1.196	0.003
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	2.705	32.875	1.014
Hydrogen chloride	0.000	0.000	0.000	99	0	99	20	0	1	0	0.061	2.635	0.007
Hydrogen cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.055	0.446	0.020
Methane	1.387	1.842	0.785	7181	7181	0	5000	0	1000	0	1.181	3.825	0.508
Methyl mercaptan	0.000	0.000	0.000	0	0	0	10	0	0.005	0	1.458	19.285	0.454
Methyl tert-butyl ether	0.000	0.000	0.000	1	0	1	200	0	40	0	0.109	2.522	0.047
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	0.622	8.678	0.181
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.340	4.838	0.099
Naphthalene	0.000	0.000	0.000	0	0	0	15	0	10	0	0.393	16.577	0.145

**North Fenceline**

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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	0.013	0.233	0.001
Nitrous oxide***	0.245	0.482	0.193	7201	7201	0	NONE	na	NONE	na	0.523	0.600	0.193
Ozone**	0.000	0.000	0.000	3769	0	3769	NONE	na	NONE	na	0.035	1.019	0.025
Phenol	0.000	0.000	0.000	25	0	25	50	0	5	0	0.137	66.061	0.007
Phosgene	0.000	0.000	0.000	0	0	0	0.2	0	0.003	0	0.005	0.129	0.001
Propane	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.260	3.849	0.068

Number of Valid Spectra Collected and Analyzed: 7212

Online %:

83.2

Offline %:

16.8

**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	0.036	0.211	0.018
1,3 Butadiene	0.000	0.000	0.000	0	0	0	50	0	10	0	0.051	0.200	0.029
2,2,4-Trimethylpentane	0.000	0.000	0.000	0	0	0	0	0	0	0	3.919	41.496	1.136
Acetaldehyde	0.000	0.000	0.000	0	0	0	150	0	25	0	0.756	3.721	0.408
Ammonia	0.000	0.000	0.000	245	0	245	100	0	3	0	0.020	0.073	0.010
Butane	0.000	0.000	0.000	0	0	0	1000	0	800	0	0.574	2.495	0.175
Carbon monoxide	0.000	0.000	0.000	6	0	6	400	0	20	0	0.541	23.565	0.165
Carbonyl sulfide	0.000	0.000	0.000	0	0	0	10	0	1	0	0.020	0.231	0.003
Chlorodifluoromethane	0.000	0.000	0.000	0	0	0	100	0	10	0	0.023	0.116	0.012
Diethanol Amine	0.000	0.000	0.000	0	0	0	6	0	0.46	0	0.742	3.693	0.399
Dimethyl sulfide	0.000	0.000	0.000	0	0	0	500	0	50	0	0.425	1.757	0.233
Ethane	0.000	0.000	0.000	0	0	0	3000	0	1000	0	0.260	1.007	0.079
Ethyl benzene	0.000	0.000	0.000	0	0	0	125	0	100	0	0.536	2.219	0.168
Ethylene	0.000	0.000	0.000	0	0	0	2700	0	1000	0	0.039	0.173	0.021
Formaldehyde	0.000	0.000	0.000	55	0	55	2	0	0.3	0	0.053	0.489	0.001
Furan	0.000	0.000	0.000	0	0	0	2300	0	230	0	5.023	12.689	2.672
Hydrogen chloride	0.000	0.000	0.000	72	0	72	20	0	1	0	0.078	0.760	0.002
Hydrogen cyanide	0.000	0.000	0.000	0	0	0	3	0	0.3	0	0.102	0.238	0.050
Methane	1.354	1.729	0.603	6949	6949	0	5000	0	1000	0	1.128	1.425	0.603

**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	2.029	9.493	0.625
Methyl tert-butyl ether	0.000	0.000	0.000	0	0	0	200	0	40	0	0.145	0.731	0.078
n-Hexane	0.000	0.000	0.000	0	0	0	75	0	50	0	0.848	3.417	0.260
n-Octane	0.000	0.000	0.000	0	0	0	375	0	75	0	0.466	1.846	0.142
Naphthalene	0.000	0.000	0.000	0	0	0	15	0	10	0	0.685	3.361	0.246
Nickel carbonyl	0.000	0.000	0.000	0	0	0	0.16	0	0.09	0	0.016	0.213	0.002
Nitrous oxide***	0.237	0.453	0.197	7011	7011	0	NONE	na	NONE	na	0.532	0.821	0.197
Ozone**	0.000	0.000	0.000	248	0	248	NONE	na	NONE	na	0.057	0.239	0.034
Phenol	0.000	0.000	0.000	18	0	18	50	0	5	0	0.144	35.443	0.003
Phosgene	0.000	0.000	0.000	0	0	0	0.2	0	0.003	0	0.009	0.041	0.005
Propane	0.000	0.000	0.000	0	0	0	2500	0	1000	0	0.361	1.779	0.105

Number of Valid Spectra Collected and Analyzed: 7050

Online %: 83.4

Offline %: 16.6

\* 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