

FTIR Summary Report

TERRA AIR SERVICES
 2950 N. Loop West, Ste 1050
 Houston, Texas 77029
 Phone (713) 956-6250
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Customer: Tosco SFR

Monitoring Period

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

From: 2/1/98 12:00:01 AM

Total Hours: 672.00

To: 2/28/98 11:59:59 PM

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 | 0.041 | 0.310 | 0.018 |
| 1,3 Butadiene | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 50 | 0 | 10 | 0 | 0.052 | 0.219 | 0.027 |
| 2,2,4-Trimethylpentane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.875 | 34.456 | 1.382 |
| Acetaldehyde | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 150 | 0 | 25 | 0 | 0.829 | 5.940 | 0.465 |
| Ammonia | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 100 | 0 | 3 | 0 | 0.020 | 0.096 | 0.011 |
| Butane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 1000 | 0 | 800 | 0 | 0.566 | 3.249 | 0.206 |
| Carbon monoxide | 0.314 | 0.550 | 0.165 | 3847 | 3847 | 0 | 400 | 0 | 20 | 0 | 0.564 | 15.813 | 0.158 |
| Carbonyl sulfide | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 0.018 | 0.146 | 0.008 |
| Chlorodifluoromethane | 0.000 | 0.000 | 0.000 | 1 | 0 | 1 | 100 | 0 | 10 | 0 | 0.025 | 0.172 | 0.014 |
| Diethanol amine | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 6 | 0 | 0.46 | 0 | 0.812 | 5.308 | 0.454 |
| Dimethyl sulfide | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 500 | 0 | 50 | 0 | 0.505 | 2.535 | 0.259 |
| Ethane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 3000 | 0 | 1000 | 0 | 0.239 | 1.389 | 0.091 |
| Ethyl benzene | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 125 | 0 | 100 | 0 | 0.506 | 3.549 | 0.198 |
| Ethylene | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 2700 | 0 | 1000 | 0 | 0.044 | 0.217 | 0.023 |
| Formaldehyde | 0.000 | 0.000 | 0.000 | 48 | 0 | 48 | 2 | 0 | 0.3 | 0 | 0.056 | 0.630 | 0.002 |
| Furan | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 2300 | 0 | 230 | 0 | 2.075 | 11.746 | 0.883 |
| Hydrogen chloride | 0.000 | 0.000 | 0.000 | 36 | 0 | 36 | 20 | 0 | 1 | 0 | 0.083 | 1.480 | 0.006 |
| Hydrogen Cyanide | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 3 | 0 | 0.3 | 0 | 0.040 | 0.493 | 0.017 |
| Methane | 1.325 | 1.666 | 1.083 | 7030 | 7030 | 0 | 5000 | 0 | 1000 | 0 | 1.438 | 2.545 | 1.072 |
| Methyl mercaptan | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 10 | 0 | 0.005 | 0 | 1.975 | 14.860 | 0.750 |
| Methyl tert-butyl ether | 0.000 | 0.000 | 0.000 | 5 | 0 | 5 | 200 | 0 | 40 | 0 | 0.159 | 1.034 | 0.089 |
| n-Hexane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 75 | 0 | 50 | 0 | 0.818 | 5.416 | 0.306 |
| n-Octane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 375 | 0 | 75 | 0 | 0.447 | 2.937 | 0.168 |
| Naphthalene | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 15 | 0 | 10 | 0 | 0.913 | 4.531 | 0.351 |

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 |
| Nickel carbonyl | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 0.16 | 0 | 0.06 | 0 | 0.015 | 0.137 | 0.006 |
| Nitrous oxide*** | 0.223 | 0.349 | 0.180 | 7582 | 7582 | 0 | NONE | na | NONE | na | 0.349 | 0.521 | 0.180 |
| Ozone** | 0.000 | 0.000 | 0.000 | 111 | 0 | 111 | NONE | na | NONE | na | 0.072 | 0.381 | 0.036 |
| Phenol | 0.000 | 0.000 | 0.000 | 29 | 0 | 29 | 50 | 0 | 5 | 0 | 0.617 | 3468.775 | 0.006 |
| Phosgene | 0.000 | 0.000 | 0.000 | 6 | 0 | 6 | 0.2 | 0 | 0.003 | 0 | 0.008 | 0.038 | 0.004 |
| Propane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 2500 | 0 | 1000 | 0 | 0.359 | 2.737 | 0.127 |

Number of Valid Spectra Collected and Analyzed: 7592

Online %:

96.1

Offline %:

3.9

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 | 1 | 0 | 1 | 450 | 0 | 350 | 0 | 0.033 | 0.883 | 0.014 |
| 1,3 Butadiene | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 50 | 0 | 10 | 0 | 0.036 | 0.397 | 0.022 |
| 2,2,4-Trimethylpentane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.477 | 55.443 | 1.035 |
| Acetaldehyde | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 150 | 0 | 25 | 0 | 0.616 | 12.299 | 0.258 |
| Ammonia | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 100 | 0 | 3 | 0 | 0.017 | 0.278 | 0.010 |
| Butane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 1000 | 0 | 800 | 0 | 0.261 | 2.518 | 0.135 |
| Carbon monoxide | 0.372 | 0.560 | 0.256 | 2731 | 2731 | 0 | 400 | 0 | 20 | 0 | 0.558 | 19.535 | 0.256 |
| Carbonyl sulfide | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 0.013 | 0.205 | 0.003 |
| Chlorodifluoromethane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 100 | 0 | 10 | 0 | 0.019 | 0.575 | 0.008 |
| Diethanol amine | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 6 | 0 | 0.46 | 0 | 0.607 | 13.704 | 0.252 |
| Dimethyl sulfide | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 500 | 0 | 50 | 0 | 0.402 | 6.717 | 0.226 |
| Ethane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 3000 | 0 | 1000 | 0 | 0.119 | 1.432 | 0.062 |
| Ethyl benzene | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 125 | 0 | 100 | 0 | 0.252 | 2.891 | 0.132 |
| Ethylene | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 2700 | 0 | 1000 | 0 | 0.036 | 0.673 | 0.020 |
| Formaldehyde | 0.000 | 0.000 | 0.000 | 2 | 0 | 2 | 2 | 0 | 0.3 | 0 | 0.031 | 1.444 | 0.003 |
| Furan | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 2300 | 0 | 230 | 0 | 4.749 | 24.021 | 2.075 |
| Hydrogen chloride | 0.000 | 0.000 | 0.000 | 36 | 0 | 36 | 20 | 0 | 1 | 0 | 0.046 | 2.375 | 0.003 |
| Hydrogen Cyanide | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 3 | 0 | 0.3 | 0 | 0.096 | 0.466 | 0.041 |
| Methane | 1.476 | 1.804 | 1.236 | 6266 | 6266 | 0 | 5000 | 0 | 1000 | 0 | 2.079 | 7.572 | 1.236 |

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 | 0.955 | 15.698 | 0.488 |
| Methyl tert-butyl ether | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 200 | 0 | 40 | 0 | 0.120 | 2.913 | 0.050 |
| n-Hexane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 75 | 0 | 50 | 0 | 0.388 | 5.550 | 0.200 |
| n-Octane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 375 | 0 | 75 | 0 | 0.213 | 3.126 | 0.110 |
| Naphthalene | 0.000 | 0.000 | 0.000 | 17 | 0 | 17 | 15 | 0 | 10 | 0 | 0.677 | 8.582 | 0.233 |
| Nickel carbonyl | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 0.16 | 0 | 0.09 | 0 | 0.011 | 0.179 | 0.002 |
| Nitrous oxide*** | 0.247 | 0.491 | 0.196 | 7004 | 7004 | 0 | NONE | na | NONE | na | 0.620 | 0.957 | 0.196 |
| Ozone** | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | NONE | na | NONE | na | 0.055 | 0.783 | 0.037 |
| Phenol | 0.000 | 0.000 | 0.000 | 14 | 0 | 14 | 50 | 0 | 5 | 0 | 0.066 | 12.607 | 0.002 |
| Phosgene | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 0.2 | 0 | 0.003 | 0 | 0.006 | 0.207 | 0.003 |
| Propane | 0.000 | 0.000 | 0.000 | 0 | 0 | 0 | 2500 | 0 | 1000 | 0 | 0.161 | 1.778 | 0.082 |

Number of Valid Spectra Collected and Analyzed: 7007

Online %:

89.8

Offline %:

10.2

* 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