

## Monthly Report

February, 1998

### TOSCO Refinery at Rodeo Fenceline Monitor System

#### System Changes

A number of improvements were made to the data collection and display system. A new redundant hard drive system was installed in the south FTIR computer to replace the single drive that was experiencing intermittent record corruption. The North FTIR computer will be upgraded at a future date. The memory in the UV data collection computer was increased to improve performance, especially for remote monitoring and control performance. A new program was installed on the local server and configured to alarm Terra in the event of a failure of one of the network links. The TDLS units were updated to correct problems associated with low light conditions. The TDLS updates are discussed below.

#### FTIR System

##### Operation:

The North FTIR on stream efficiency was 96.1 percent including no weather related down time. Most of the down time (3.5% of total time) was due to maintenance and system upgrades. Short duration lapses (1-2 acquisition periods) accounted for the remaining downtime.

The South FTIR on stream efficiency was 89.8 percent including 6.9 hours or 0.9 percent weather related down time. Some of the reported down time resulted from the corruption of data files due to the difficulties with the computer hard drive. This drive was replaced with the redundant hard drives mentioned above. Short duration lapses (1-2 acquisition periods) also accounted for some of the downtime.

##### Data:

The ambient gas QA compound results for the North Sensor show the mean Nitrous Oxide concentration was 0.22 ppm with a 0.032 ppm or 14.4 percent standard deviation, and the mean Methane concentration was 1.33 ppm with a 0.009 ppm or 6.5 percent standard deviation.

The ambient gas QA compound results for the South Sensor show the mean Nitrous Oxide concentration was 0.25 ppm with a 0.041 ppm or 16.6 percent standard deviation, and the mean Methane concentration was 1.47 ppm with a 0.068 ppm or 4.6 percent standard deviation.

Data summary reports are attached.

### **TDLS System**

#### **OPERATION:**

The reported TDLS downtime was due to failure of the units in and after low light conditions, downtime associated with hardware and software upgrades to correct the low light problems, and off line time associated with calibration checks for each of the units. Hardware and software updates installed by Boreal Laser corrected most of the problems associated with low light conditions. The new software provides improved temperature compensation, and improved system fault and alarming information. One minor difficulty remains with low light transition data. During the transition to and from low light states, false positive data may be reported. Boreal is working on a fix for this as well as some additional software changes to improve sensitivity.

#### **DATA:**

Data summary reports are attached.

### **UV System**

#### **OPERATION:**

Reported UV downtime is due primarily to low light conditions. Realignment of the units improved performance slightly, but the sensor mounting mechanism does not offer sufficient control for fine tuning the system alignment.

#### **DATA:**

Data summary reports are attached.

### **VOC System**

#### **OPERATION:**

Recorded downtime was due to disabling of the data logging software. Much of the unlogged time was during system maintenance and upgrading activities. Some of the time was due to failure of the logging software.

#### **DATA:**

Data summaries are attached.