



Monthly Report

September, 1998

TOSCO Refinery at Rodeo Fenceline Monitor System

A handwritten signature in cursive script, reading "Ted R. McKelvey".

Ted R. McKelvey

11/04/1998
Date

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System Changes

An improved notification system was installed on September 14. This system automatically provides detailed system information in the event of a monitoring system interruption or failure. This should improve on-stream efficiency (OSE) by reducing unexpected downtime.

FTIR System

Operation:

Computer system maintenance accounted for approximately 0.6% downtime for each unit.

The North fenceline FTIR on-stream efficiency was 80.8% with no weather-related downtime. Instrument calibration and maintenance resulted in approximately 3% downtime. Approximately 15% of the downtime was due to a recurring software error ("Bomem= -305") that causes the unit to fall out of *Continuous Monitor* mode. The source of this error has been identified as the ETG software code. We have contacted one of the original program developers and he is investigating the cause. Our improved automatic notification system should help minimize OSE impact until the problem can be resolved.

The South fenceline FTIR on-stream efficiency was 53.7% with no weather-related down time. Instrument calibration and maintenance resulted in approximately 2% downtime. Approximately 5% of the downtime was due to a recurring software error as described above. The remaining downtime was due to a detector failure on September 19. A new cryocooler/detector assembly was installed on October 6, when a replacement unit became available.

Data:

The ambient gas QA compound results for the North Sensor show the mean Methane concentration was 1.29 ppm with a 0.16 ppm or 12.71 % standard deviation. The mean Nitrous Oxide concentration was 0.231 ppm with a 0.035 ppm or 15.21 % standard deviation.

The ambient gas QA compound results for the South Sensor show the mean Methane concentration was 1.58 ppm with a 0.24 ppm or 15.27 % standard deviation. The mean Nitrous Oxide concentration was 0.187 ppm with a 0.012 ppm or 6.65 % standard deviation.

Data summary reports are attached.

UV System

OPERATION:

UV system downtime was due largely to beam-block conditions in the instruments and intermittent lapses in the UV logging software. The receiver units were carefully realigned to in an attempt to decrease susceptibility to beam-blocks. This unfortunately has not resolved that issue (see below). The software lapses are a known bug in the Sci-Tec software and is supposed to be resolved in the pending upgrade.

Based on system checks and observations in mid-September, all of the PerspectUV units have been scheduled to rotate back to the factory for diagnostics, calibration and upgrade. This should begin in early December. Sci-Tec should be able to determine the current reliability of the instruments once they return to the factory. The UV data presented here should be used with caution. We cannot vouch for the validity of the data obtained from them at this time.

DATA:

Data summary reports are attached.

TDLS System

OPERATION:

All units incurred approximately 5% downtime due to system testing, maintenance and backup activities. A further 6% downtime was due to intermittent software logging errors.

The North TDLS units experienced further downtime due to increased intermittent "error" states within the monitor units. These units were later sent back to Boreal for annual factory calibration in mid-October, when loaner units were made available.

DATA:

The data summary report is attached.

CGD System

OPERATION:

All Combustible Gas Detector (CGD) units functioned normally throughout the month. Approximately 5% downtime was due to system testing, maintenance and backup activities. The remaining 6% downtime was due to intermittent software logging errors.

None of the CGD units experienced any hardware failures or hardware related downtime.

DATA:

The data summary report is attached.