



Monthly Report

May, 1998

TOSCO Refinery at Rodeo Fenceline Monitor System

A handwritten signature in cursive script, reading "Ted R. McKelvey". The signature is written in black ink and is positioned above a horizontal line.

Ted R. McKelvey

06/19/1998
Date

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TOSCO Refinery at Rodeo Fenceline Monitor System

FTIR System

Operation:

The North FTIR on stream efficiency was 95.0 percent with no weather related down time. Most of the down time was due to short duration lapses (1-2 acquisition periods). The cryocooler/detector assembly was replaced with a loaned unit from ETG on 21May98 during scheduled maintenance at the end of its service life. The spare assembly which was intended to go into the North FTIR was installed in the South FTIR to replace that failed unit (see below).

The South FTIR on stream efficiency was 56.4 percent with no weather related down time. Downtime was due to maintenance, hardware and software failures, and diagnostics. Most of the downtime was due to cryocooler failure. The malfunction began on 10May98 and it completely failed on 13May98. The failed unit was replaced with the spare that had just been recharged and returned by ETG. The FTIR was returned to on-line operation on 22May98. Short duration lapses (1-2 acquisition periods), routine hardware and system maintenance, and brief computer lock-ups accounted for the remaining downtime.

Data:

The ambient gas QA compound results for the North Sensor show the mean Nitrous Oxide concentration was 0.17 ppm with a 0.013 ppm or 7.82 percent standard deviation, and the mean Methane concentration was 1.38 ppm with a 0.11 ppm or 7.95 percent standard deviation.

The ambient gas QA compound results for the South Sensor show the mean Nitrous Oxide concentration was 0.24 ppm with a 0.051 ppm or 21.47 percent standard deviation (see cryocooler failure above), and the mean Methane concentration was 1.14 ppm with a 0.202 ppm or 17.72 percent standard deviation.

Data summary reports are attached.

UV System

OPERATION:

Downtime for the UV systems was partially due to intermittent beam blocks. The susceptibility to beam block is decreased by careful alignment of the receiver units. Potential improvements to the alignment mechanism are being evaluated. Other, unit specific, causes of downtime are outlined below. Both UV source lamps were replaced at the end of their normal 60-day life cycle on 19May98.

The north unit PUV-04 experienced a power supply failure causing the instrument to go into fault on the morning of April 14. The cause of this was identified as an electrical short possibly resulting from water condensation accumulating in the power supply box. This was repaired in the field and the box made more weather resistant. The system was put back on-line the evening of May 21.

South unit PUV-06 went into system fault condition and stopped logging data on March 23. Error files and system log files were sent to Sci-Tec for troubleshooting. The unit was back on-line on May 13.

DATA:

Data summary reports are attached.

TDLS System

OPERATION:

None of the TDLS units experienced any significant downtime due to hardware or software failure. The downtime reported here was due to system backup and maintenance activities.

DATA:

The data summary report is attached.

VOC System

OPERATION:

With the exception of the AT-2 detector in seasonal storage, the VOC detector units functioned normally throughout the month. Except for AT-2, the reported downtime was due to system backup and maintenance activities. The AT-2 detector has significantly more downtime and required a gain adjustment to bring it back on-line. This was done on 25May98.

New alarm strobe lenses were installed to replace the patched leaking units in service since April. Half of the replacement lenses still leak and were sent back to the factory for corrective action. Additionally, new strobe circuit boards were installed to replace those units that were water damaged when their lens covers leaked.

DATA:

The data summary report is attached.