

Monthly Report

November, 1997

TOSCO Refinery at Rodeo Fenceline Monitor System

FTIR System

Operation:

The North FTIR on stream efficiency was 89.0 percent including 5.5 hours or 0.8 percent weather related down time. Most of the down time was due to maintenance and software difficulties that have been resolved.

The South FTIR on stream efficiency was 89.1 percent including 9.8 hours or 1.4 percent weather related down time. Most of the down time was due to maintenance and software difficulties that have been resolved. The primary hard drive on FTIR computer has been showing occasional bad sectors. In some cases it has caused problems with file transfers, requiring extra time to repair database files. Since it does not show signs of complete failure, it will be replaced as part of regular maintenance.

There have been occasional difficulties with software errors resulting in acquisition failures. One of the causes has been traced to remote control software links with the FTIR Windows 3.11 systems. If more than one link is established to the computer, the ETG software will sometimes fail when one link is closed. This is being corrected procedurally by establishing only one link at a time.

Data:

The ambient gas QA compound results for the North Sensor show the mean Nitrous Oxide concentration was 0.19 ppm with a 0.021 ppm or 10.8 percent standard deviation, and the mean Methane concentration was 1.57 ppm with a 0.18 ppm or 11.7 percent standard deviation.

The ambient gas QA compound results for the South Sensor show the mean Nitrous Oxide concentration was 0.29 ppm with a 0.029 ppm or 9.9 percent standard deviation, and the mean Methane concentration was 1.53 ppm with a 0.08 ppm or 5.3 percent standard deviation.

Data summary reports are attached.

TDLS System

OPERATION:

Operational on stream efficiency was in excess of 99 percent for all of the units. Reported down time was due to unusable readings and recording lapses due to computer system maintenance. Much of the reported downtimes were due to a previously reported instrument software problem that was observed after brief power outages. The instruments may fail to find the correct absorbance feature for measurement when powered up. This has now been observed after prolonged weather blackouts. The measurement problem can be corrected by cycling the power or by warming the instrument to near its original calibration temperature and restarting it. Boreal has been advised. The new software version containing the fix for this problem has been delayed due to problems found in testing. The new version is currently back in testing and will be installed as soon as it is released.

The TDLS alarms were reconfigured to use one minute averages and to require the average R^2 value to be within established quality assurance limits.

DATA:

Data summary reports are attached. There were intermittent occurrences of higher than usual Hydrogen Sulfide results from the north TDLS. Site investigation on several occasions showed these to be false positives. Instrument malfunction is strongly suspected. However, unlike previous occasions, the high results occurred in small groups of data over a long period of time, and current data screening parameters were valid for many of them. Several false positives were eliminated based on the instrument performance before and after the reported value and are not reflected in the report.

UV System

OPERATION:

Problems with the UV system have not been fully resolved. Excessive downtime is still being logged for all of the units. One of the four units is currently not operational due to hardware and software failure. Difficulties with telephone links have been resolved. Sci-Tec can reliably establish a network link with the system and is working on the problems.

DATA:

Data summary reports are attached.

VOC System

OPERATION:

There is still a slight baseline drift related to temperature changes. Sensor Electronics suggests increasing the sensor range from 25 percent LEL to 50 or 100 percent LEL. This was done on operational units. They are also shipping some replacement components for testing. They returned one of the two units sent for repair and evaluation for the drift problem. It was installed at the Salt Water Pump-house.

01/07/98

After moisture was found in the electronic components at the North Sensor Shed, electrical conduit connections were checked and tightened where appropriate, and a replacement sensor was installed. When the new unit failed water was again found in the system. Attempts to locate the leak were unsuccessful. Sealer was applied to each conduit connector. The sensor unit was sent for repair.

Detector error conditions were previously reporting as high concentration values. They are now being reported as errors.

The 6.23 percent downtime reported on four of the six units was due to computer system maintenance and troubleshooting associated with upgrades the installation of the community monitor station.

DATA:

There were a number of false positive values occurring before detector failure. Most of these occurred on November 25 and 26. Data summaries are attached.