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462

RULE 462 CONTINUOUS MONITORING SYSTEM PLAN

APPLICANT	Equilon Enterprises LLC dba Shell Oil Products
MAILING ADDRESS	8100 Haskell Avenue Van Nuys, CA 91406
EQUIPMENT LOCATION	8100 Haskell Avenue Van Nuys, CA 91406

BACKGROUND

The above application is for a Rule 462 plan. This application is change the existing 462 plan (a/n 343735) by replacing the existing stack analyzer, Summit, Model IR 1776, with an Infrared Industries, Model IR 8400. Also there are minor grammatical changes that will be corrected. Most of the grammatical changes consist of changing the wording from a Continuous Emissions Monitoring System (CEMS) to a Continuous Monitoring System (CMS), whereas Continuous Monitoring System is correct. (See attachment C submitted by the applicant for the mark up showing the changes). The applicant is requesting to change the stack analyzer due to the fact that the existing one is getting old and replacement parts are hard to find. There should not be any issues with this change and the replacement analyzer will operate in the same capacity as the one currently in operation. This system is used for a vapor recovery system, John Zink, high efficiency adsorption/absorption system permitted under permit no. G15482, in section D of the Title V permit. (A copy of the permit is included in this file)

This bulk loading facility is a Class "A" facility under District Rule 462. As such, the facility is required to equip its vapor recovery system with a Continuous Monitoring System (CMS) that is approved by the AQMD. Under 462(e)(1)(B) the facility is required to submit to the District a CMS Plan for approval. The CMS is required, under 462(f)(2) to be in compliance with Code of Federal Regulations Title 40 Part 63 Subpart R Section 63.427 and Code of Federal Regulations Title 40 Part 60 Appendix B, as applicable.

PROCESS DESCRIPTION

This facility is a petroleum products distribution terminal. The facility has a maximum loading rate of 1,138,000 gallons per day of gasoline. The two gasoline loading racks and two wastewater storage tanks at the site are served by a John Zink Carbon Adsorption/Absorption System Vapor Recovery System (VRS). The John Zink System (Model No. AA609-4-1313), which consists of two carbon bed vessels, utilizing principles of adsorption and absorption. In adsorption mode, the hydrocarbon vapors from the vapor return arms mixed with regenerative air (from the other carbon vessel which is undergoing regeneration) flow through one of the carbon vessels. The majority of hydrocarbon vapors are adsorbed and hydrocarbon-free air vents through the top of the unit. Regeneration of the carbon vessel not in use, is done by first applying a vacuum to the carbon vessel, followed by addition of purge air. The condensed liquids and gasoline vapors are

discharged to a separator/absorber tower and final product recovery is accomplished using liquid gasoline. From the carbon vessel undergoing regeneration, a small stream of vapors and air are recycled to the carbon vessel in service.

The vapor recovery system at this site includes a 30,000 cubic foot vapor holder tank, which is a fixed roof tank equipped with an internal diaphragm. Hydrocarbon rich vapors, at a maximum flow rate of 180 cfm, flow from the vapor holder tank to the carbon absorber vessels.

At this site, the Continuous Monitoring System (CMS) is a Continuous Emissions Monitoring System (CEMS) for Total Hydrocarbons (THC). The current analyzer will be replaced with a Infrared Industries, Model IR 8400 Gas Analyzer and will continue to us a Yokagawa DX 106-1 Recorder. The new analyzer will be operated in a range of 0-5% as methane, and 0-2 % as propane. The calibration gas is both methane and propane, the current cylinder is 3.00% CH4, 1.81 % C3H8. Based on the allowance of 96 hour for the performance of and necessary maintenance or repair, the facility had decided not to use a backup analyzer/recorder at this site.

The Yokagawa Daqstation DX100 Series Recorders are Paperless Chart Recorders (PCR). The DX100 come with high resolution 5.5 liquid crystal displays. The recorder may be integrated into a network for remote monitoring, file transfer and data logging over the network. Data display formats include trend display, bar graph display, numeric display, and overview display. The trend trend display shows trend lines, together with scale values, engineering units, and user selectable messages. The display shows digital numeric values, together with channel or tag number, industrial units, and alarm status.

The Yokagawa DX 100 series has an internal flash memory and does not require battery back-up. Therefore, data will not be lost in case of power interruption. Data will be downloaded monthly and saved on external media for long term storage.

Conditions on the vapor recovery system permit limits VOC emissions to a maximum of 0.08 lbs. per 1000 gallons loaded. This limit corresponds to a maximum Non-Methane Hydrocarbon (NMHC) concentration of 1.9%, measured as propane on an instantaneous basis, or 0.66%, measured as propane based on a rolling 15 minute average. (See sample permit for conditions.) These limits will continue to remain the same.

No other changes will be done to this equipment.

EMISSION CALCULATION

The emission calculations are the same as in the previous Rule 462 and are shown below for reference purposes only.

There will not be any changes in the emission calculations for this equipment. Based on the previous February 20, 1997 source test (from previous evaluation) the emission rate was as follows.

Emission Rate of VOC per 1000 gallons product loaded = 0.005 lbs/1000 gallons product loaded

The CARB Certification Test Report, for the test conducted one March 23 and 24, 1994 showed the following results.

Emission Rate of VOC per 1000 gallons product loaded = 0.0013 lbs/1000 gallons product loaded
Several Source tests were performed and the results are shown below:
VOC Testing Inc. Date: October 29, 1997

Parameter	Results
Test Time	5:00 AM – 2:15 PM
Volume of Gasoline loaded, gallons	183,050
Vapor Recovery Outlet Volume, scf	19,262
Vapor Recovery Outlet Methane Concentration %	2.5
Vapor Recovery Outlet Vent THC Concentration, % as C3	0.291
Vapor Recovery Outlet Vent NMHC Concentration, % as C3	0.042
Vapor Recovery Outlet, NMHC Emissions, lbs	0.89
NMHC Emissions Rate, lbs/1000 gallons	0.005

The THC concentration corresponding to the 0.08 lbs NMHC/1000 gallons loaded has been determined. The 2010 source test determined that the NMHC concentration corresponding to the 0.08 lbs/NMHC gallons loaded limit is 0.6637% as propane.

RECOMMENDATION

Issue the Rule 462 Continuous Monitoring System (CMS) plan. See plan in this folder for the equipment description and conditions