

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 5	PAGE 1
	APPL NO 514946-7	DATE 9-27-11
	PROCESSED BY LLD	CHECKED BY

OWNER/OPERATOR:

COID: 800056

KINDER MORGAN LIQUID TERMINALS
1100 TOWN AND COUNTRY ROAD
ORANGE, CA 92868

CONTACT PERSON: YIJIN WANG
MANAGER, AIR QUALITY
(714) 560-4886

EQUIPMENT LOCATION:

LA HARBOR
1900 WILMINGTON – SAN PEDRO ROAD
WILMINGTON, CA 90744

CONTACT: MIKE TILTON
AREA MANAGER
(310) 984-3816

EQUIPMENT DESCRIPTION

A/N 514946

TV Minor Revision

Change of Conditions (Page 2)

<i>Application No.</i>	<i>Equipment</i>	<i>Action</i>
514947 (previous A/N 462624 F98214)	BULK LOAD/UNLOAD TANK TRUCK (NORTHWEST)	Remove annual source testing requirement Add commodity thruput condition.

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A/N 514947 - BULK LOAD/UNLOAD TANK TRUCK (NORTHWEST)

INTRODUCTION:

This application was submitted 9-23-10 as a Class III for change of conditions (to A/N 462624) to remove the annual source test requirement on the loading/unloading rack (basic equipment) since the corresponding VRU permit (A/N 303178) was approved with an “every three years” requirement upon the issuance of the Initial TV permit in January 2009. The “draft” facility permit issued in June 2004 also had the 3-year test requirement on the VRU permit. This 3-yr schedule is consistent with TV Periodic Monitoring requirements. Additionally, the facility’s current Rule 462 Plan requires continuous temperature monitoring and recording.

Since this is a TV facility (A/N 339902- Initial issued January 26, 2009), an application is also included to incorporate these changes into a revised TV facility permit.

PROJECT DESCRIPTION:

This is a tank truck loading/unloading rack for petroleum distillates (including AVGAS) northwest location at KM’s LA Harbor facility.

There have been no NOV’s or NC’s within the last three years for this facility.
There are no schools within 1000 feet of this facility.

PERMIT HISTORY:

A/N 514947 (current application for rack) submitted to correct inconsistencies in test schedule between VRU and rack.

Initial TV Permit issued January 26, 2009 with “every three year” testing on the VRU (as required by TV Periodic Monitoring) and “annual” testing on the rack.

A/N 462624 –P/O issued 7/24/08 for Admin Change (to A/N 303180) of conditions to clarify that petroleum distillates include AVGAS. On this permit, a condition requiring annual testing was imposed. This change of conditions did not trigger BACT as there were no increases. The Initial TV permit issued January 26, 2009 tagged this annual test condition as a R462 requirement. However, R462 DOES NOT require annual testing.

Draft Facility Permit issued June 2004. Included “every three years” test condition for the VRU Device C44 (A/N 303178) under condition D28.2 as part of the Periodic Monitoring requirement of Title V. There was no source test condition requirement on the rack Device D40 (A/N 303180).....

A/N 338921 Rule 462 Plan approved March 3, 2004

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A/N 303180:F8784 – Modification to A/N 134407 to include Avgas (product with vapor pressure >1.5 psia).P/O issued 8/19/97. There was no requirement for any source testing. The VRU (new construction to control emissions from rack since Avgas has VP >1.5 psia), however, under A/N 303178 contained a one-time performance test on the Permit to Construct issued 6/8/95. The testing condition was not carried over to the final P/O. At time of VRU P/C, the VOC requirement was 0.29 lb/1000 gal. At P/O issuance, applicant was informed that R462 will lower VOC to 0.08 lb/1000 gal next year.

A/N 134407:M61326: - Modification to M01835 to convert existing “top loading” rack to “bottom loading” rack, replace pumps and install filtering system. No testing requirement on final P/O (issued 3/24/88) nor on P/C (issued 8/9/85). Equipment only loads commodity with VP less than 1.5 psia.

EMISSIONS AND CALCULATIONS:

Previous VOC tests results are as follows:

Test Date	SCAQMD Method 25.1 <lb/1000 gal>	CARB Method 203.1 <lb/1000 gal>
12/30/09	0.0108	Not tested
10/29/08	0.0004	0.039
10/31/07	0.0016	0.0013
1/20/06	0.0017	0.0034
2/2/05	0.004	0.003
1/23/04	0.0035	0.005
11/20/01	0.037	0.03

All previous test results show compliance with the Rule 462 limit of 0.08 lb/1000 gal.

From info in A/N 303178 (new construction for the VRS) “General Supplemental Information” pg 2-3), the maximum throughput of avgas is 5000 bbl/day (or 210,000 gal/day or 150,000 bbl/month) and the average is 1000 bbl/day (42,000 gal/day or 30,417 bbl/mo). Emissions currently entered into NSR are based on 5000 bbl/day. Condition will be added limiting throughput to 5000 bbl/day and tagged as BACT condition.

$$\begin{aligned}
 \text{ROG (R2)} &= (5000 \text{ bbl/day})(42 \text{ gal/bbl})(0.08 \text{ lb/1000 gal}) \\
 &= 16.8 \text{ lb/day} \\
 *1/24 &= 0.7 \text{ lb/hr}
 \end{aligned}$$

$$\text{ROG(R1)} = (0.7 \text{ lb/hr})(1/1-0.98) = 35 \text{ lb/hr (assume 98\% DRE)}$$

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Note that the ROG emissions are also entered into the NSR under the VRU Control equipment (A/N 303178) in addition to the NSR Rack Basic, which is the source of the ROG emissions (i.e. emissions are double counted). Additionally, it is noted that under the Basic equipment's NSR account (A/N 303180 and transferred to A/N 462624), the ROG emissions entered is the "sum of the natural gas combustion emission factor from Form B-1 and the Rule 462 rule limit". i.e.:

$$ROG(1) = 7 \text{ lb/mmcf} * 35.5 \text{ mmbtu} * \text{cf}/1050 \text{ btu} = 0.24 \text{ lb/hr}$$

$$ROG(2) = 5000 \text{ bbl/day} * 42 \text{ gal/bbl} * 0.08 \text{ lb}/1000 \text{ gal} = 0.7 \text{ lb/hr}$$

$$TOTAL \text{ } ROG(1+2) = 0.94 \text{ lb/hr} = 23 \text{ lb/day}$$

This is inconsistent with current practice and should be corrected as there is no method of "separating" the two ROG emissions. A limit of 17 lb/day will be entered into NSR and represents a "combined" limit.

Toxic Emissions: There are no emission increases with this change of conditions, so there is no increase in toxic emissions.

EVALUATION:

Rules:

401: Visible emissions are not expected.

402: Nuisance is not expected with proper operational procedures and mitigation measures.

462: This equipment meets the 0.08 lb/1000 gal limit of this rule and will continue to comply with all applicable requirements of the rule. The facility currently has an approved R462 Plan under A/N 338921 which requires continuous monitoring of temperature to ensure compliance with emission limits.

Reg 13: There is no increase in emissions. Reg 13 is not triggered in this "change of conditions". However, a BACT thrupt limit of 5000 bbl/day will be added since this was left out when final permit A/N 303180:F8784 was issued (rack VP >1.5 psia) in 1997.

1401: There is no increase in risk with this change of condition

TV: This permit will be issued as a "minor" revision to the existing TV facility permit (revision 0 issued January 26, 2009). Although the source testing requirement has been removed from the rack, the VRU still maintains the "every three

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years” requirement which is consistent with TV Periodic Monitoring. Additionally, the facility’s R462 Plan, which continuously measures and records operating temperature, along with the testing every three years is equivalent to the annual testing.

A 45-day EPA review period must be completed prior to issuance of the facility permit.

DISCUSSION AND CONCLUSION:

This project meets all District Rules and Regulations. It is recommended that a Permit to Operate be granted to remove the annual test condition from the rack permit as this is not a Rule 462 requirement nor a BACT requirement at the time the condition was imposed. An “every three year” test requirement is currently on the associated control equipment (A/N 303178:P/O F8785). It is also recommended that a condition limiting throughput be added to clarify the emission baseline.

This is a “minor revision” to the TV permit and is subject to 45-day EPA review.