

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 5	PAGE 1
	APPL NO 501173-6	DATE 8-24-09
	PROCESSED BY LLD	CHECKED BY 

OWNER/OPERATOR:

COID: 800278

SFPP, LP
1100 TOWN AND COUNTRY ROAD
ORANGE, CA 92868

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EQUIPMENT LOCATION:

SFPP (WATSON STATION)
20410 S. WILMINGTON
CARSON, CA 90810

EQUIPMENT DESCRIPTION

A/N 501173

STORAGE TANK NO. W-16, KEROSENE, DIESEL, 110'-0" DIA. BY 48'-0" H., 80,000 BBL. CAPACITY, INTERNAL FLOATING ROOF, SINGLE SEAL.

A/N 501174

STORAGE TANK NO. W-17, KEROSENE, DIESEL, 110'-0" DIA. BY 48'-0" H., 80,000 BBL. CAPACITY, INTERNAL FLOATING ROOF, SINGLE SEAL.

A/N 501175

STORAGE TANK NO. W-18, KEROSENE, DIESEL, 110'-0" DIA. BY 48'-0" H., 80,000 BBL. CAPACITY, INTERNAL FLOATING ROOF, SINGLE SEAL.

A/N 501176 (TV Revision) ✓

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INTRODUCTION:

These applications were submitted 8-7-09 as a Class I for change of conditions to three existing, identical kerosene tanks (previously permitted under A/N 349972-4) to add a new commodity (diesel). Since this is a TV facility (A/N 339253), an application is also included to incorporate these changes into a revised TV facility permit.

PROJECT DESCRIPTION:

These applications were submitted as follows:

A/N	Previous A/N : P/O	Equipment	Reason for application
501173	349972 : F46839 (kerosene) 667,200 bbl/mo AV30 = 2 lb/D R2DAY = 2.16 lb/D R2 = 0.09 lb/hr R1 = 0.09 lb/hr Yrly = 786.24 lb/yr	Tank No. W-16 (Internal FR)	Add diesel (change of conditions)
501174	349973 : F46840 (kerosene) 667,200 bbl/mo AV30 = 2 lb/D R2DAY = 2.16 lb/D R2 = 0.09 lb/hr R1 = 0.09 lb/hr Yrly = 786.24 lb/yr	Tank No. W-17 (Internal FR)	Add diesel (change of conditions)
501175	349974 : F46841 (kerosene) 667,200 bbl/mo AV30 = 2 lb/D R2DAY = 2.16 lb/D R2 = 0.09 lb/hr R1 = 0.09 lb/hr Yrly = 786.24 lb/yr	Tank No. W-18 (Internal FR)	Add diesel (change of conditions)
501176	339253 (March 4, 2009 - Rev. 1)	TV Facility Permit	TV Revision (Minor)

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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.

CALCULATIONS:

Previous application used TANKS (kerosene, TVP (max) = 0.01 psia to determine the following emissions:

$$\begin{aligned} \text{ROG (R1)} &= 0.09 \text{ lb/hr} \\ &= 2.16 \text{ lb/day} \end{aligned}$$

$$\begin{aligned} \text{ROG (R2)} &= 0.09 \text{ lb/hr} \\ &= 2.16 \text{ lb/day} \end{aligned}$$

$$\begin{aligned} \text{30day avg} &= 2 \text{ lb/day (rounded)} \\ \text{Annual Emission} &= 786.24 \text{ lb/yr} \end{aligned}$$

Since the TVP (max) of diesel is also 0.01 psia and the thruput amount will remain the same, the TANKS program (printout attached) shows NO emission increase with diesel:

$$\begin{aligned} \text{ROG (R1)} &= 0.09 \text{ lb/hr} \\ &= 2.05 \text{ lb/day} \end{aligned}$$

$$\begin{aligned} \text{ROG (R2)} &= 0.09 \text{ lb/hr} \\ &= 2.05 \text{ lb/day} \end{aligned}$$

$$\begin{aligned} \text{30day avg} &= 2.08 \text{ lb/day} \\ \text{Annual Emission} &= 747.3 \text{ lb/yr} \end{aligned}$$

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Toxic Emissions: With the addition of a new commodity (diesel), there is a potential of an increase in health risk.

Emissions from TANKS program dated 8/18/09

TAC emissions lb/yr = wt.% * (747.3 lb/yr)

TAC Emissions Loading (*Wt.% assumed based on SABs Diesel Speciation email July 16, 2009 from PetroDiamond A/N 496876*)

TAC	Wt.% in Vapor	Emissions, lbs/yr	Emissions, lb/hr
Benzene	0.20	1.49	1.71E-4
Ethylbenzene	0.32	2.39	2.73E-4
n-Hexane	0.04	0.30	3.41E-5
Toluene	2.3	17.2	1.96E-3
Naphthalene	0.13	0.97	1.11E-4

(from previous A/N 349972)

Stack Height: 48 feet

Tank radius = 55 ft

Area = 9499 sq. ft.

Residential receptor = 1000 meters

Commercial receptor = 25 meters

Based on Tier 2 screening (see attached spreadsheet)(Note that HRA was performed on the more conservative "total" risk instead of "increase in risk"):

MICR_{res} = 4.9E-9

MICR_{comm} = 4.48E-7

HIA < 1

HIC < 1

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EVALUATION:

Rules:

- 401: Visible emissions are not expected.
- 402: Nuisance is not expected with proper operational procedures and mitigation measures.
- 463: Since the TVP is 0.01 psia (less than the 0.5 psia specified in paragraph (c)), paragraph (c) does not apply. However, all other portions, including recordkeeping, do apply and tanks are expected to comply.
- 1149: This equipment is expected to continue to comply with this rule.
- 1178: Not applicable since TVP is 0.01 psia (less than 0.1 psia of rule). Note that this rule was "tagged" on previous permit, but this is an error.

Reg 13: There is no increase in emissions due to the additional commodity since the TVP and the thruput remains the same. Reg 13 is not triggered in this "change of conditions". However, the original permit to construct (issued November 1999) shows that BACT was a floating roof with a single or double seal. This equipment complies with the 1999 requirement.

1401: With the additional commodity, there is a potential for an increase in risk. A Tier 2 HRA was performed. MICR is less than one in a million (1E-6) and HIA and HIC are both less than one for each tank.

40CFR60Subpart Kb: Not applicable since the TVP is less than 0.5 psia. ✓

TV: These permits will be issued as a minor revision to the existing TV facility permit (revision 1 issued March 4, 2009). A 45-day EPA review period must be completed prior to issuance of the facility permit. ✓

This project will meet all District Rules and Regulations. It is recommended that Permits to Operate be granted subject to the attached conditions.