

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 5	PAGE 1
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OWNER/OPERATOR:

COID: 800057

KINDER MORGAN LIQUID TERMINALS
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CONSULTANT:

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APPLICATIONS IN THIS BATCH (grouped to TV A/N 522419)

A/N 416255 Tank 80077
A/N 416257 Tank 80078
A/N 416258 Tank 80079
A/N 416259 Tank 80080
(see draft permit(s))

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INTRODUCTION:

Kinder Morgan Liquids Terminals (KMLT), a subsidiary of Kinder Morgan Energy Partners, operates an existing petroleum product storage tank farm, gasoline bulk loading racks, and a pipeline transfer center at its Carson Terminal, located at the southeast corner of Alameda Street and Sepulveda Boulevard in the City of Carson. This is a major petroleum products terminal which consists of about 70 storage tanks, five gasoline loading racks, two vapor recovery and disposal systems, and other ancillary equipment. The total storage capacity is about 4.26 million barrels and the gasoline loading racks handle an average of 1.9 million gallons per day.

The tanks are connected by a pipeline system that allows products to move about the facility as well as with nearby refineries. In addition, large capacity shipping pumps connect the facility to the intrastate and interstate pipeline system from which petroleum products can be transferred to Southern California, Nevada, and Arizona.

The Carson Terminal is a Title V facility with an Initial Title V Application, A/N 338924, effective 5/17/10, and the facility is currently covered by Facility Permit ID 800057.

Facility Permit (Sections D and H) is currently under Revision 3 issued August 19, 2011,

As of 6/27/2011, there have been no NOVs, NCs, nor Complaints during the last three years.

These listed applications were issued P/Cs 5/20/05 and were part of the Phase I project to install nine of a total of 18 new tanks at the Carson facility. Installation of eight tanks were completed around early 2010 and product introduced into tanks around mid to late 2010. Per condition on the P/Cs, leakless valves were to be installed unless exempted by rule 1173 or exempted by District.

Per June 6, 2006 letter to KMLT, District staff exempted all but 4 gate valves for Tanks 80073-76. KMLT requested 26 weeks to procure and install these 4 leakless gate valves. Per email 7/12/2011, KMLT confirmed the installation of these 4 bellows-sealed valves in Tanks 80073, 80074, 80075, and 80076.

For Tanks 80077, 80078, 80079, and 80080, fugitive emissions were recalculated with lower allowable emissions to stay below the one pound per day BACT/LAER trigger for leakless valves. New calculations/spreadsheet with actual fugitive count and 400 ppm or 300 ppm limit was submitted to the District October 26, 2011.

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EVALUATION/EMISSIONS:

A/N 416255

STORAGE TANK NO. 80077, 115' DIA. BY 50' HIGH, 80,000 BBL CAPACITY, WELDED SHELL, PONTOON-TYPE INTERNAL FLOATING ROOF, WITH CATEGORY A LIQUID-MOUNTED MECHANICAL SHOE PRIMARY SEAL, CATEGORY A RIM-MOUNTED FLEX-A-SEAL SINGLE WIPER SECONDARY SEAL, WITH SLOTTED GUIDEPOLE EQUIPPED WITH GASKETED SLIDING COVER AND FLOAT SLEEVE WIPER

Per P/C evaluation dated 3/16/05 and NSR data sheet:

$$\begin{aligned}
 \text{Annual Emissions} &= 9260.16 \text{ lb/yr} \\
 &= 25.44 \text{ lb/day} \\
 &= 1.06 \text{ lb/hr}
 \end{aligned}$$

Fugitive emissions were recalculated at allowable emissions of 400 ppm and results are 0.99 lb/day (vs. 2.3 lb/day in P/C evaluation). BACT/LAER for fugitives (leakless) valves are not required. A condition limiting leaks will be changed from 500 ppm to 400 ppm to reflect this. Language referring to "leakless valves" will be removed. Although there is a one pound per day decrease, emissions NSR baseline from P/C will remain the same.

A/N 416257

STORAGE TANK NO. 80078, 115' DIA. BY 50' HIGH, 80,000 BBL CAPACITY, WELDED SHELL, PONTOON-TYPE INTERNAL FLOATING ROOF, WITH CATEGORY A LIQUID-MOUNTED MECHANICAL SHOE PRIMARY SEAL, CATEGORY A RIM-MOUNTED FLEX-A-SEAL SINGLE WIPER SECONDARY SEAL, WITH SLOTTED GUIDEPOLE EQUIPPED WITH GASKETED SLIDING COVER AND FLOAT SLEEVE WIPER

Per P/C evaluation dated 3/16/05 and NSR data sheet:

$$\begin{aligned}
 \text{Annual Emissions} &= 9260.16 \text{ lb/yr} \\
 &= 25.44 \text{ lb/day} \\
 &= 1.06 \text{ lb/hr}
 \end{aligned}$$

Fugitive emissions were recalculated at allowable emissions of 300 ppm and results are 0.94 lb/day (vs. 2.3 lb/day in P/C evaluation). BACT/LAER for fugitives (leakless) valves are not required. A condition limiting leaks will be changed from 500 ppm to 300 ppm to reflect this. Language referring to "leakless valves" will be removed. Although there is a one pound per day decrease, emissions NSR baseline from P/C will remain the same.

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A/N 416258

STORAGE TANK NO. 80079, 115' DIA. BY 50' HIGH, 80,000 BBL CAPACITY, WELDED SHELL, PONTOON-TYPE INTERNAL FLOATING ROOF, WITH CATEGORY A LIQUID-MOUNTED MECHANICAL SHOE PRIMARY SEAL, CATEGORY A RIM-MOUNTED FLEX-A-SEAL SINGLE WIPER SECONDARY SEAL, WITH SLOTTED GUIDEPOLE EQUIPPED WITH GASKETED SLIDING COVER AND FLOAT SLEEVE WIPER

Per P/C evaluation dated 3/16/05 and NSR data sheet:

$$\begin{aligned}
 \text{Annual Emissions} &= 9260.16 \text{ lb/yr} \\
 &= 25.44 \text{ lb/day} \\
 &= 1.06 \text{ lb/hr}
 \end{aligned}$$

Fugitive emissions were recalculated at allowable emissions of 300 ppm and results are 0.94 lb/day (vs. 2.3 lb/day in P/C evaluation). BACT/LAER for fugitives (leakless) valves are not required. A condition limiting leaks will be changed from 500 ppm to 300 ppm to reflect this. Language referring to "leakless valves" will be removed. Although there is a one pound per day decrease, emissions NSR baseline from P/C will remain the same.

A/N 416259

STORAGE TANK NO. 80080, 115' DIA. BY 50' HIGH, 80,000 BBL CAPACITY, WELDED SHELL, PONTOON-TYPE INTERNAL FLOATING ROOF, WITH CATEGORY A LIQUID-MOUNTED MECHANICAL SHOE PRIMARY SEAL, CATEGORY A RIM-MOUNTED FLEX-A-SEAL SINGLE WIPER SECONDARY SEAL, WITH SLOTTED GUIDEPOLE EQUIPPED WITH GASKETED SLIDING COVER AND FLOAT SLEEVE WIPER

Per P/C evaluation dated 3/16/05 and NSR data sheet:

$$\begin{aligned}
 \text{Annual Emissions} &= 9260.16 \text{ lb/yr} \\
 &= 25.44 \text{ lb/day} \\
 &= 1.06 \text{ lb/hr}
 \end{aligned}$$

Fugitive emissions were recalculated at allowable emissions of 300 ppm and results are 0.94 lb/day (vs. 2.3 lb/day in P/C evaluation). BACT/LAER for fugitives (leakless) valves are not required. A condition limiting leaks will be changed from 500 ppm to 300 ppm to reflect this. Language referring to "leakless valves" will be removed. Although there is a one pound per day decrease, emissions NSR baseline from P/C will remain the same.

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CONCLUSION and RECOMMENDATION

These four tanks opted to take a lower fugitive emission limit (from 500 ppm down to 400 ppm or 300 ppm) to stay below the one pound per day threshold for BACT/LAER which is installation of leakless valves. With the lower fugitive limit, there is actually a decrease in emissions of about one pound per day for each tank.

NSR will remain the same as calculated during the P/C stage. The emission increases from these new tanks were offset using KMLT's ERCs during the P/C stage.

Since this change resulted in a re-evaluation of BACT requirements, it will be subject to a 45-day EPA notice.