



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES

23

PAGE

1

APPL. NO.

544561

DATE

12/3/2012

PROCESSED BY

SAAndrewis

CHECKED BY

CHANGE OF CONDITIONS/PERMIT TO OPERATE

COMPANY NAME

TESORO REFINING AND MARKETING CO
P.O. BOX 817, WILMINGTON, CA 90748-0817

EQUIPMENT LOCATION

2101 E. PACIFIC COAST HIGHWAY
WILMINGTON, CA 90744
Facility ID#: 800436 Facility Type: NOx & SOx RECLAIM (Cycle 1), Title V

EQUIPMENT DESCRIPTION

Additions are shown as underlined and deletions are shown as ~~strikeouts~~.
Section D: Permit to Construct/ Permit to Operate

Equipment	ID No.	Connect ed To	RECLAIM Source Type / Monitoring Unit	Emissions and Requirements	Conditions
PROCESS 15: STORAGE TANKS					P13.1
SYSTEM -7 : INTERNAL FLOATING ROOF TANKS					S13.7
STORAGE TANK, INTERNAL FLOATING ROOF, NO. 80072, WITH INTERNAL HEATING COILS AND A MIXER, 79965 BBL; DIAMETER: 117 FT ; HEIGHT:41 FT 10 IN	D614			HAP: (10) [40CFR 63 Subpart CC, #3A,, 6-23-2003] VOC: 500 PPMV (8) [40CFR 60 Subpart Kb, 10-15- 2003] BENZENE: (10) [40CFR 61 Subpart FF #1, 12- 4-2003]; VOC: 500 PPMV (8) [40CFR 61 Subpart FF, 12-4- 2003]	B59.8, C1.54, <u>C1.40,</u> C6.4, H23.1, K67.15, K171.3,
FLOATING ROOF, PONTOON, WELDED SHELL					
PRIMARY SEAL, CATEGORY A, METALLIC SHOE					
SECONDARY SEAL, RIM MOUNTED, MULTIPE WIPERS TYPE					
GUIDEPOLE, SLOTTED, WITH GASKETED SLIDING COVER WITH FLOAT POLE WIPER					
A/N: 5-15442, <u>544561</u>					

- * (1) Denotes RECLAIM emission factor
- (2) Denotes RECLAIM emission rate
- (3) Denotes RECLAIM concentration limit
- (4) Denotes BACT emission limit
- (5)(5A)(5B) Denotes command and control emission limit
- (6) Denotes air toxic control rule limit
- (7) Denotes NSR applicability limit
- (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (9) See App B for Emission Limits
- (10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FEE ANALYSIS

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 2
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrewis	CHECKED BY

All fees shown in Table 1 have been paid by the applicant.

Table 1 – Summary of Fee Analysis

A/N	Equipment Description	BCAT/CCAT	Fee Schedule	Fee Type	Fee	XPP Fee	Total Fee
544561	Storage tank	251906	C	Change of Condition	\$3,440.06	\$1,720.03	\$5,160.09
544560	Permit Amendment	555009 (BCAT)		FP RECLAIM/ Title V Significant Amendment	\$1,789.12		\$1,789.12
Total					\$5,229.18	\$1,720.03	\$6,949.21

BACKGROUND AND PROCESS DESCRIPTION

This application was received by the AQMD on November 15, 2012 from Tesoro Refining and Marketing Co for the Change of condition of storage tank 80072 (D614). This application requests to store light crude oil with vapor pressure up to 7.5 psia in addition to the current product which is heavy crude oil, and to increase in the monthly throughput limit for tank 500,000 barrels per month to 600,000 barrels per month.

Permitting history for this tank:

- This subject tank is currently covered by permit no. G11714 (A/N 515442).
- This tank was constructed in 1964 storing crude oil under A/N A-23709 (P04632) and vented to vapor recovery system.
- In 1985, there was a change of ownership from Texaco Inc to Texaco Refining & Marketing Inc under A/N 136875 (M46924).
- In 1998, there was a change of ownership from Texaco Refining & Marketing Inc to Equilon Enter LLC, Shell Oil Products US under A/N 346338 (F17929).
- In 2007, there was a change of ownership from Equilon Enter LLC, Shell Oil Pro US to Tesoro Refining & Marketing Company under A/N 470112 (G2094)
- In 2011, this tank was modified by replacing its fixed roof with internal floating roof with approved seals and by increasing the throughput to 500,000 barrels per month under A/N 515442 (G11714).



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES

23

PAGE

3

APPL. NO.

544561

DATE

12/3/2012

PROCESSED BY

SAAndrawis

CHECKED BY

Table 2 lists the application submitted along with the equipment description and the proposed change of condition. See Attachment 2 for MSDS sheet.

Table 2

<i>A/N</i>	<i>Device ID No.</i>	<i>Current A/N</i>	<i>Current Equipment Description</i>	<i>Current Permit limit</i>	<i>Proposed Change</i>
544561	D614	515442	Storage tank, No. 80072, Internal Roof with primary and secondary seals category "A" Heavy Crude Oil	500,000 bbls/month	<ul style="list-style-type: none"> • Increase Throughput limit from 500, 000 barrels per month to 600, 000 barrels per month. • Store light crude oil (TVP7.5 psia) , diesel, light cycle oil, gas oil in addition to heavy crude oil.

COMPLIANCE RECORD REVIEW

A three year printout of the facility's compliance history is shown in Attachment 1. All NOV's issued to this facility are listed as either in compliance or closed. There are no open NOV's currently.

EMISSIONS CALCULATIONS

The emissions from tank 80072 were calculated using EPA tanks 4.09 program (Attachment 3). The Tank currently stores crude oil with a throughput limit of 500,000 bbls/month. The tank was subject to Regulation XIII because it was modified in 2011 under A/N 515442 to replace the fixed roof with internal roof and to store heavy crude oil and a throughput of 500,000 barrels per month. C1.54 specifies a throughput condition of 500,000 barrels/month and B59.8 specifies to store heavy crude oil only.

In this modification, Tesoro is requesting to store light gas oil, Heavy gas oil, light cycle oil, diesel and light crude oil with TVP of 7.5 psia in addition to the current product heavy crude oil and to increase the monthly throughput from 500,000 barrels per month to a maximum monthly throughput of 600,000 barrels per month

See Attachment 2 for the MSDS submitted by Tesoro.



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES
23

PAGE
4

APPL. NO.
544561

DATE
12/3/2012

PROCESSED BY
SAAndrewis

CHECKED BY

See Table 3 for Maximum Potential change for VOC emissions

Table 3: Max. Potential change in VOC emissions

Tank No.	Current Product	Current Throughput (barrels/month)	Emissions with internal floating roof & heavy crude oil & current throughput lbs/yr (lbs/day)	Proposed Product	Proposed Throughput (barrels/month)	Emissions with proposed products & new throughput	Change
80072 D614	<i>TSO heavy Crude Oil TVP=2.1 psia</i>	<i>500,000 barrels/month</i>	<i>2,594.9 lbs/yr 7.11 lbs/day*</i>	TSO Light Crude Oil TVP=7.5 psia	<i>600,000 barrels/Month</i>	<i>3,982.84 lbs/yr 10.91 lbs/day</i>	<i>+1387.94 lbs/yr +3.8 lbs/day</i>
				TSO Light Gas Oil	<i>600,000 barrels/Month</i>	<i>2,131.67 lbs/yr 5.84 lbs/day</i>	<i>-463.24 lbs/yr -1.27 lbs/day</i>
				TSO Heavy Gas Oil	<i>600,000 barrels/month</i>	<i>1,401.68 lbs/yr 3.84 lbs/day</i>	<i>-1193.23 lbs/yr -3.27 lbs/day</i>
				Diesel	<i>600,000 barrels/month</i>	<i>652 lbs/yr 1.78 lbs/day</i>	<i>-1942.91 lbs/yr -5.32 lbs/day</i>

* From A/N 515442

RULES EVALUATION

Regulation II- PERMITS

Rule 212: Standards for approving and Issuing Public Notice (Amended Nov. 14, 1997)

212 (a) The applicant is required to show that the equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of provisions of Division 26 of the State Health and Safety Code



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES
23

PAGE
5

APPL. NO.
544561

DATE
12/3/2012

PROCESSED BY
SAAndrawis

CHECKED BY

of these rules. The operation of the storage tank is expected to comply with this requirement.

212(c)(1) Public notification is required if any new or modified permit unit, source under Regulation XX, or equipment under Regulation XXX may emit air contaminants located within 1000 feet from the outer boundary of a school. The source is not within 1000 feet of a school, public notification is therefore not required.

212(c)(2) Public notification is required if any new or modified facility has on-site increases exceeding any of the daily maximums specified in subdivision (g) of this rule. The increase in emissions with the operation of the storage tank does not exceed any of the daily maximum specified; public notification is therefore not required.

212(c)(3) Public notification is required if the maximum individual cancer risk (MICR), based on Rule 1401, exceeds one in a million (1×10^{-6}), due to a project's new construction or proposed modification. This proposed modification does not result in MICR exceeding one in a million, public notification is therefore not required. (See Attachment 7 for health risk assessment results)

212(g) This subdivision sets forth the process for federal public notification and distribution and specifies the daily maximum emissions increase as follows:

<u>Air Contaminant</u>	<u>Daily Maximum in lbs/day</u>
Volatile Organic Compounds	30
Nitrogen Oxides	40
PM10	30
Sulfur Dioxide	60
Carbon Monoxide	220
Lead	3

Since the increase in emissions does not exceed the daily maximum specified, federal public notification is not required.

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 6
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrawis	CHECKED BY

Regulation IV PROHIBITIONS

Rule 401 Visible Emissions (Amended November 9, 2001)

Operation of the storage tank is not expected to result in visible emissions. Therefore, compliance with this rule is expected.

Rule 402 Nuisance (Adopted May 7, 1976)

Operation of the storage tank is not expected to result in a public nuisance. Therefore, compliance with this rule is expected.

Rule 463 Organic Liquid Storage (Amended November 4, 2011)

This rule applies to any above-ground tank with a capacity of 19,815 gallons or greater for storing organic liquids. The internal floating roof tanks are subject to the requirements of Rule 463 (c)(2)(B).

463(c)(2)(B) A fixed roof tank which has an internal floating-type cover installed, modified, or replaced after June 1, 1984, shall have a closure device which consists of either a single liquid mounted primary seal or a primary and a secondary seal. All openings and fittings shall be fully gasketed or controlled in a manner specified by the Executive Officer. The closure device shall control vapor loss with an effectiveness equivalent to a closure device which meets the requirements of subparagraph (c) (1) (A). Seal designs not identified on the current list of seals approved by the Executive Officer shall not be installed or used.

The internal floating roof is equipped with category A primary and secondary seals that meet the requirement of this rule

All openings and fittings are gasketed and controlled in a manner that meets Rule 1178 requirements, which are more specific than the requirements of this rule. Additional specification of the seal and opening fittings/controls is contained in the Rule 1178 evaluation.

463(d)(1) Requires a pressure –vacuum valve to be set within 10 percent of the maximum working pressure of the



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES
23

PAGE
7

APPL. NO.
544561

DATE
12/3/2012

PROCESSED BY
SAAndrawis

CHECKED BY

tank, for storage tanks between 251 and 19,815 gallons. This requirement does not apply to the subject tank since its capacity is greater than 19,815 gallons.

463(d)(2) Requires the roof to float on the stored organic liquid at all time, except when emptied for cleaning or repair. Tesoro is expected to comply with this requirement.

463(d)(3) Requires that a tank that has been gas-freed and is to be refilled with gasoline, the roof shall be refloated with water or by an equivalent procedure approved by the executive Officer. The tank does not store gasoline. This paragraph does not apply.

463(d)(4) Limits the maximum vapor pressure to no more than 11 psia. The permit of this tank will include condition B59.8, which limits the storage tank commodity to light crude oil or heavy crude oil. Compliance with this requirement is expected.

463(d)(5) Requires replacement seals to be chosen from a list approved by the Executive Officer. The applicant is expected to comply with this requirement.

463(e) Contains self inspection requirements and 463(f) contains reporting requirements. Tesoro submitted Rule 463 plan under A/N 474583 and it is was approved and was issued 2/15/2013. This plan was submitted to comply with the requirements of for self-inspection of floating roof tanks, According to the plan, compliance with these inspections and reporting requirements is expected.

Compliance with Rule 463 is expected with proper recordkeeping and inspections

Regulation XI - SOURCE SPECIFIC STANDARDS

Rule 1149: Storage Tank Cleaning and Degassing (Amended May 2, 2008)

This Rule has requirements for tank cleaning and degassing operations. Emissions from above ground tanks are required to be controlled by one of the following methods: liquid balance, negative pressure displacement and subsequent incinerations,



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES
23

PAGE
8

APPL. NO.
544561

DATE
12/3/2012

PROCESSED BY
SAAndrawis

CHECKED BY

vapor condensation with a refrigeration system, or any other method which controls VOC by at least 90%. Permit condition S13.7 requires compliance with this rule. Continued compliance is expected.

Rule 1173: Fugitive Emissions of volatile Organic Compounds (Amended February 6, 2009)

This rule specifies leak control, identification, operator inspection, maintenance, and recordkeeping requirements for valves pumps, compressors, pressure relief valves, and other components from which fugitive VOC emissions may emanate. Since this modification does not involve a change to any component outside of the storage tank, no change in fugitive VOC emissions is expected.

Rule 1178: Further Reductions of VOC Emissions from Storage Tanks at Petroleum Refineries (Amended April 7, 2006)

This Rule applies to facilities which VOC emissions exceeding 20 tons in their Annual emissions Report (AER) for any year starting with 2000. Tesoro/Shell AER for the year 2000 exceeded 20 tons VOC. Therefore, this rule applies to the subject tank. Section (d)(3) of this rule requires that the Internal Floating Roof Tank shall be equipped as follows:

- (a) Equip each fixed roof support column and well with a sliding cover that is gasketed or with flexible fabric sleeves;
- (b) Equip each ladder well with a gasketed cover. The cover shall be closed at all times, with no visible gaps, except when the well must be opened for access;
- (c) Equip and maintain other roof openings according to the specifications listed in subparagraph (d)(1)(A) or (d)(1)(C);
- (d) Equip the tank with a rim seal system consisting of either a primary and a secondary seal meeting the specifications listed in subparagraph (d)(1)(B); and
- (e) Ensure that the concentration of organic vapor in the vapor space above the internal floating roof shall not exceed 50 percent of its lower explosive limit (LEL) for those installed



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES
23

PAGE
9

APPL. NO.
544561

DATE
12/3/2012

PROCESSED BY
SAAndrawis

CHECKED BY

prior to June 1, 1984 and 30 percent of its LEL for those installed after June 1, 1984. A permit condition C6.4 with this requirement will be imposed.

As shown in the table below, the fittings and seals for the proposed pontoon type internal roof meet the requirements of this rule.

Summary of Roof Opening /Fitting Controls and seals

Roof opening/ Fitting or seal type	Roof Seal and Opening /Fitting configuration		Applicable Rule 1178
	No	Type	
Support Column and well	8	Sliding Cover gasketed	1178(d)(3)(A)
Ladder Well	1	Cover,gasketed	1178(d)(3)(B)
Access Hatch	1	Cover, bolted & gasketed	1178(d)(1)(A)(i)
Automatic Gauge Float Well	0	Cover ,bolted & gasketed	1178(d)(1)(A)(i)
Guage Hatch/sample well	1	Weighted mechanical actuation, cover,gasketed	1178(d)(1)(A)(ii)
Roof legs	36	Adjustable, sock cover	1178(d)(1)(A)(iii)
Rim Vent	0	Gasketed	1178(d)(1)(A)(iv)
Vacuum Breaker	1	Weighted mechanical actuation, gasketed	1178(d)(1)(A)(v)
Roof Drain	0	Slotted membrane fabric cover that covers at least 90 percent of the area of the opening.	1178(d)(1)(A)(vi)
Slotted Guidepole	1	Gasketed sliding cover with float pole wiper	1178(d)(1)(A)(vii)
Primary seal	1	Mechanical shoe	1178(d)(1)(B)(i)
Secondary Seal	1	Rim mounted and shall not be attached to the primary seal	1178(d)(1)(A)(ii)

This internal floating roof tank, is expected to comply with the requirements of this rule.

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 10
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrawis	CHECKED BY

Regulation XIII: NEW SOURCE REVIEW

RULE1303: REQUIREMENTS (Amended Dec. 6, 2002)

Rule 1303(a):-Best Available Control Technology

Any new or modified source which results in an emission increase of any nonattainment contaminants must employ BACT for the new or relocated source or for the actual modification to an existing source. BACT is required for any increase of emissions that exceed 1 lb/day on a maximum daily basis. As shown in Emissions Calculations section, due to an increase in throughput and the product vapor pressure requested by Tesoro, there is an emission increase greater than 1 lb/day, therefore, BACT applies for the IFR tank. The BACT for internal floating roof tank is District Category “A” –approved seals and fittings that comply with Rule 1178. This tank has category “A” – approved seals -See Rule 1178 analysis above. Compliance is expected.

Rule 1303(b)(1):-Modeling

The applicant must substantiate with modeling that the new facility or modification will not cause a violation, or make significantly worse any existing violation of any state or national ambient air quality standards at any receptor location in the District. According to 1306(b), the new total emissions for modified sources shall be calculated on a pound per day basis for determination of BACT and modeling applicability. The modeling procedures are discussed in Appendix A to the rule. It is specified in Appendix A that modeling is not required for VOC or SOx, therefore, modeling is not required under this application for the subject tank.

Rule 1303(b)(2):-Emissions Offsets

This change of conditions will result in increase of VOC emissions of 3.8 lbs/day. Since the refinery is located in the South Coast Air Basin(SOCAB), an offset ratio of 1.2-to-1 is required. The resulting estimated offset of 4.56 (3.8 x1.2) lbs/day is rounded off to 5 lbs/day. Tesoro has an ERC Certificate AQ011399 of 13 lbs/day of ROG, which will be

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 11
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrawis	CHECKED BY

utilized to offset the 5 lbs of ROG increase. See attachment 5 for a copy of ERC certificate.

Rule 1303(b)(3) Sensitive Zone Requirements:

Unless credits are obtained from the Priority Reserve, facilities located in the South Coast Air Basin are subject to the Sensitive Zone requirements specified in Health and Safety Code Section 40410.5. A facility in zone 1 may obtain Emission Reduction Credits originated in zone 1 only, and a facility in zone 2A may obtain Emission Reduction Credits from either zone 1 or zone 2A, or both, or demonstrate to the Executive Officer or designee a net air quality benefit in the area impacted by the emissions from the subject facility. Tesoro is in Zone 1 and the ERCs that will be utilized were originated in Zone 1. See attachment 5 for a copy of ERC certificate. Compliance is expected.

Rule 1303(b)(4) Facility Compliance

Tesoro must comply with all applicable Rules and Regulations of the AQMD. According to the enforcement records, Tesoro is currently in compliance with all applicable rules and regulations of the District.

Rule 1303(b)(5) Major Polluting Facilities

In addition to the above requirements, any new major polluting facility or major modification at an existing major polluting facility shall comply with the following requirements (Since the increase in estimated maximum VOC emissions this application is 3.8 lbs/day, the requirements of this section are applicable:

(A) Alternative Analysis

The applicant must conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source and demonstrate that the benefits of the proposed project outweigh the environmental and social costs associated with that project. Since this project is exempt from CEQA analysis, it will be exempt from this requirement per (b)(5)(D)(i)

(B) Statewide Compliance

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 12
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrawis	CHECKED BY

The applicant must demonstrate prior to the issuance of a Permit to Construct, that all major stationary sources, as defined in the jurisdiction where the facilities are located, that are owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in the State of California are subject to emission limitations and are in compliance or on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act.

A letter from Mr. Daniel Carlson, the Tesoro Los Angeles Refinery Manager, indicating that all major sources owned or operated by Tesoro Refining and Marketing Company in California are in compliance or are on a schedule for compliance with all applicable standards emission limitations and standards under the clean Air Act. The certification letter dated November 27, 2012 is provided in Attachment 6.

(C) Protection of Visibility

The applicant must conduct a modeling analysis for plume visibility in accordance with the procedures specified in Appendix B if the net emission increase from the new or modified source exceeds 15 tons/year of PM₁₀ or 40 tons/year of NO_x. There will not be any PM₁₀ or NO_x emissions from this source, therefore, requirements of this subsection do not apply.

(D) California Environmental Quality Act (CEQA)

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate identified significant adverse impacts of these projects be considered. The CEQA Applicability Form (400-CEQA) indicates that the project does not have any impacts which trigger the preparation of a CEQA document. The expected impacts of the project on the environment are not significant since the net emission ROG increase does not trigger the thresholds ROG: 55 LBS/DAY of The District's

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 13
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrawis	CHECKED BY

CEQA Guidelines. Therefore a CEQA analysis is not required.

Regulation XIV - TOXICS AND OTHER NON-CRITERIA POLLUTANTS

Rule 1401: New Source Review of Toxic Air Contaminants (Amended September 10, 2010)

This rule specifies limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic hazard index (HI) from new permit units, relocations or modifications to existing permit units which emit toxic air contaminants listed in Table 1 of this rule.

Rule 1401 Tier 1 & 2 Risk Assessment was performed using the following information:

1. Toxic chemical weight fractions are obtained from the speciations of the product that will be stored in tank 80072.
2. MICR Factors, Chronic Factors, Acute Factors, MET, X/Q for Chronic, X/Q for Acute & LEA are obtained from Attachment L of AQMD Risk Assessment Procedures for Rules 1401 and 212.

Based on the calculations, the cumulative increase in maximum individual cancer risk (MICR) does not exceed one in a million. For target organ systems, neither the cumulative increase in total chronic hazard index (HIC) nor the total acute hazard index (HIA) exceeds 1.0 for any target organ system. Table 4 tabulates the results of Harp Risk Assessment for MICR. Attachment 4 includes the detailed Risk Calculations calculated by the District.

Table 4 Summary of Risk Assessment Analysis

	<i>Receptor Risk (Offsite Worker)</i>	<i>Receptor Risk (Residential)</i>
MEI*	6.27E-07	8.78E-08

***Maximum Exposed Individual is equivalent to MICR**

1401(d)(1)MICR and Cancer Burden

The cumulative increase in MICR shall not result in an increased MICR greater than one in one million, if the permit is



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES
23

PAGE
14

APPL. NO.
544561

DATE
12/3/2012

PROCESSED BY
SAAndrawis

CHECKED BY

constructed without T-BACT and greater than ten in one million if the permit unit is constructed with T-BACT. The calculated MICR is less than one in a million, therefore the facility complies with this requirement.

1401(d)(2)Chronic Hazard Index

The cumulative increase in total chronic HI for any target organ system shall not exceed 1.0 at any receptor location. Since the calculated chronic hazard index is less than 1.0, the facility complies with this requirement.

1401(d)(3)Acute Hazard Index

The cumulative increase in total acute HI for any target organ system due to total emissions from the new, relocated or modified permit unit will not exceed 1.0 at any receptor location. Since the calculated chronic hazard index is less than 1.0, the facility complies with this require

1401(d)(4)Risk Per Year

The risk per year shall be less 1/70 of 1 in a million. Since the tank emissions are consistent from year to year, the facility complies with this requirement.

1401(d)(5)Operating conditions imposed pursuant to Rule 1401, which prohibit or limit the use or emission of toxic air contaminants, shall apply only to those toxic air contaminants listed in the version of Rule 1401 applicable at the time the permit conditions were imposed. There is no permit conditions prohibiting or limiting the use of toxic air contaminants for this facility.

1401(d)(6)Federal New Source Review for Toxics

This section requires construction with Best Available Control Technology for Toxics (T-BACT) and compliance with 40 CFR 63.40 through 63.44. The requirements do not need to be met if the source is subject to an existing National Emission Standard for Hazardous Air Pollutants (NESHAP). Since the modification is subject to 40CFR63 Subpart CC, this section does not apply.

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 15
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrawis	CHECKED BY

Reg XX Regional Clean Air Incentives Market (RECLAIM)

Rule 2005: New Source Review for RECLAIM (Amended June 3, 2011)

Tesoro is a NO_x and SO_x RECLAIM facility. It is therefore subject to Reg XX.

2005(c) **Requirements for Existing RECLAIM facilities**

This subdivision requires BACT, modeling and proof of sufficient RECLAIM Trading Credits (RTC) for an application for a Facility Permit amendment that results in any increase in NO_x and SO_x emissions. These applications will not increase NO_x or SO_x emissions, therefore this subdivision does not apply.

2005(g) **Additional Federal Requirements for Major Stationary Sources**

This subdivision lists additional requirements for application for a Facility Permit or an Amendment to a Facility Permit for a new, relocated or modified major stationary source, as defined in the Clean Air Act, 42, U.S.C. Section 7511a(e). Section 7511a(e)(2) defines modification as any change at a major stationary source which results in any increase in emissions. This application will not increase NO_x or SO_x emissions, therefore this subdivision does not apply.

PART 2: STATE REGULATIONS

CEQA California Environmental Quality Act

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate identified significant adverse impacts of these projects be considered. The CEQA Applicability Form (400-CEQA) submitted by Tesoro indicates The expected impacts of the project on the environment are not significant since the net emission ROG increase does not trigger the thresholds ROG: 55 LBS/DAY of The District's CEQA Guidelines. Therefore a CEQA analysis is not required.

PART 3: FEDERAL REGULATIONS

Standards of Performance for New Stationary Sources (NSPS)



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES

23

PAGE

16

APPL. NO.

544561

DATE

12/3/2012

PROCESSED BY

SAAndrawis

CHECKED BY

40 CFR 60, **Subpart K**: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction or Modification Commenced after June 11, 1973 and Prior to May 19, 1978.

This standard does not apply. Tank 80072 was not constructed or modified between June 11, 1973 and May 19, 1978.

40 CFR 60, **Subpart Ka**: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction or Modification Commenced after May 18, 1978 and Prior to July 23, 1984.

This standard does not apply. Tank 80072 had no modification between May 18, 1978 and July 23, 1984.

40 CFR 60, **Subpart Kb**: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction or Modification Commenced after July 23, 1984

This tank is already subject this standard when the subject tank 80072 was modified by changing from fixed roof to an internal roof tank.

Condition H23.40 ensures continued compliance with all applicable requirements of this rule.

As discussed below, this tank is subject to 40CFR63 Subpart CC as group 1 storage tank. It is specified in §63.640(n)(1) that a Group 1 storage tank that is also subject to the provisions of 40 CFR part60,subpart Kb, is required to comply only with the requirements of 40 CFR part60, subpart Kb.

Subpart CC:National Emissions Standards for Hazardous air Pollutants for Petroleum Refineries

63.640 Applicability and designation of affected source (Amended October 28, 2009)

The refining process units and equipment located at the Tesoro are subject to the requirements of this subpart addressing

- Miscellaneous process vents
- Storage vessels
- Waste water streams, and
- Equipment leaks
- The modified storage tank as proposed in this application is subject to storage vessels standards.

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 17
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrawis	CHECKED BY

63.646 Storage vessel provisions (Amended October 28, 2009)

Group 1 storage vessels are subject to the requirements of these provisions. Group 1 storage vessel is defined as a storage vessel at an existing or new source that has all the following:

	Existing source	New source
Design capacity	≥177 m ³ (46,764gal)	≥151 m ³ (39,894gal)
Vapor Pressure	≥8.3 kPa(1.2 psia)	≥3.4 kPa(0.49 psia)
HAPs	>4% wt	>2% wt

The subject tank meets the definitions of group 1 storage vessels, exceeds the capacity limit, exceeds the allowable vapor pressure for the storage content and also exceeds the toxic composition limit of 4% or greater according to Tesoro MSDS. Therefore, this tank is considered as group 1 storage vessel and is subject to the requirements of these provisions.

Group 1 storage vessels are identified in the permit by the following notation in the “Emissions and Requirements” column: HAP :(10)[40CFR 63 Subpart CC,#3a, 6-23-2003]. The facility is expected to comply with the requirements.

As discussed above, this tank is subject to 40 CFR part 60, subpart Kb. It is specified in §63.640(n)(1) that a Group 1 storage tank that is also subject to the provisions of 40 CFR part 60, subpart Kb, is required to comply only with the requirements of 40 CFR part 60, subpart Kb.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

40 CFR 61 Subpart FF: National Emission Standard for Benzene Waste Operation(December 4, 2003):

The Tesoro Los Angeles Refinery is subject to Benzene Waste NESHAP. By existing permit condition P13.1, the facility is expected to continue to comply.

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 18
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrawis	CHECKED BY

Reg XXX-----Title V Permits

Rule 3001(a): Applicability (Amended November 14, 1997)

The Tesoro Los Angeles Refinery has been designated as a Title V facility. The initial Title V permit was issued on November 23, 2009. Tesoro Refinery is currently subject to Title V. The permit issued for this tank will be issued as a revision of the Title V permit. Permit revisions are categorized into the following four types: administrative, minor, de minimus significant and significant.

As defined in Rule 3000(b)(7), a De-Minimus Significant permit revision means any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or hazardous air pollutants (HAP) from these permit revisions during the term of the permit are not greater than any of the emission threshold levels in Table below.

De Minimis Emission Threshold Level
Air Contaminant Daily Maximum in lbs/day

Volatile Organic Compounds	30
Nitrogen Oxides	40
PM10	30
Sulfur Dioxide	60
Carbon Monoxide	220
Lead	3

Since the proposed applications for the Light Crude Oil tank has an emission increase of VOC and do not exceed the thresholds, the Title V permit revision A/N 544560 qualifies as **a De Minimis Significant Revision**, which will be sent to EPA for a 45-day review. Public notice is not required. A final copy of the permit will be submitted to the EPA within 5 working days of its issuance.



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES
23

PAGE
19

APPL. NO.
544561

DATE
12/3/2012

PROCESSED BY
SAAndrawis

CHECKED BY

Summary of Emission Increases for De Minimis Significant Revisions of Tesoro Title V Permit

A/N	Equipment	Section	Rev #	Revision date	Emissions Increase (lb/day)				
					VOC	CO	PM	NOX	SOX
469915	Separator V-1507 and V-1508/V-1509	D	7	7/9/2010	0.43				
470283	Catalytic Reforming Unit No. 2	D	7	1/1/2010	3				
520256	Stormwater storage tank 80089	D	13	7/19/2011	0.22				
519205	Caustic/spent caustic Storage Tank	D	14	8/12/2011	0				
519207	Caustic/spent caustic Storage Tank	D	14	8/12/2011	0				
519208	Caustic/spent caustic Storage Tank	D	14	8/12/2011	0				
519209	Caustic/spent caustic Storage Tank	D	14	8/12/2011	0.84				
530223	Caustic/spent caustic Storage Tank 742	D	28	4/19/2012	0.24				
544561 ⁽²⁾	Internal floating roof storage tank 80072 storing light crude oil	D	33		3.8				
	Cumulative ⁽¹⁾				8.53				

(1) Cumulative emission increase for all De Minimis significant Title V permit revision since issuance of the initial Title V permit on October 12, 2009.

(2) This application is covered under the subject evaluation.

RECOMMENDATIONS

A permit to operate is recommended subject to the following conditions:

PROCESS CONDITION

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
Benzene	40CFR61	Subpart FF

[40CFR61 Subpart FF, 12-4-2003]

[Processes subject to this condition: 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 15]

SYSTEM CONDITIONS

S13.7 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	463
VOC	District Rule	1178
VOC	District Rule	1149

[RULE 1149, 7-14-1995; RULE 1178, 4-7-2006; RULE 463, 11-4-2011]

[Systems subject to this condition : Process 15, System 1 , 2 , 5]



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES
23

PAGE
20

APPL. NO.
544561

DATE
12/3/2012

PROCESSED BY
SAAndrawis

CHECKED BY

DEVICE CONDITIONS

B. Material/Fuel Type Limits

B59.8 The operator shall only use the following material(s) in this device :

Light Crude Oil with true vapor pressure of 7.5 psia or less, Heavy Crude Oil, Recycle Oil, Heavy Gas Oil, Light Gas Oil, Diesel

[RULE 1303, 5-10-1996]

[Devices subject to this condition : D614]

C. Throughput or Operating Parameter Limits

C1.54 The operator shall limit the throughput to no more than 500,000 barrel(s) in any one calendar month.

The operator shall measure and record the liquid volume of the tank using an automatic tank level gauging system(ATLGS). The ATLGS shall measure the tank liquid level and calculate the liquid volume using the tank strapping tables. The volume measurements shall be recorded electronically once every 15 minutes.

The operator shall calculate the throughput in barrels using the total one-way (increasing) volume movement on a monthly basis. The calculation will be based on the sum of the increasing volume readings.

The ATLGS installed shall be verified once per quarter by comparing against a manual tank level measurement. If the ATLGS differs from the manual tank level measurement by more than 1.0 inch or 0.8%, whichever is greater, the ATLGS shall be repaired and back to service within 10 days.

In the event of a failure or routine maintenance of the ATLGS, the ATLGS shall be repaired and put back into service within 10 days of the time that the ATLGS failed or was removed from service for maintenance.

While the ATLGS is being repaired or maintained, the throughput shall be determined by the hourly tank level data averaged from the previous 30 days prior to time that the ATLGS went out of service.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D603, ~~D614~~, D617]



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES
23

PAGE
21

APPL. NO.
544561

DATE
12/3/2012

PROCESSED BY
SAAndrawis

CHECKED BY

C1.40 The operator shall limit the throughput to no more than 600,000 barrel(s) in any one calendar month.

The operator shall measure and record the liquid volume of the tank using an automatic tank level gauging system(ATLGS). The ATLGS shall measure the tank liquid level and calculate the liquid volume using the tank strapping tables. The volume measurements shall be recorded electronically once every 15 minutes.

The operator shall calculate the throughput in barrels using the total one-way (increasing) volume movement on a monthly basis. The calculation will be based on the sum of the increasing volume readings.

The ATLGS installed shall be verified once per quarter by comparing against a manual tank level measurement. If the ATLGS differs from the manual tank level measurement by more than 1.0 inch or 0.8%, whichever is greater, the ATLGS shall be repaired and back to service within 10 days.

In the event of a failure or routine maintenance of the ATLGS, the ATLGS shall be repaired and put back into service within 10 days of the time that the ATLGS failed or was removed from service for maintenance.

While the ATLGS is being repaired or maintained, the throughput shall be determined by the hourly tank level data averaged from the previous 30 days prior to time that the ATLGS went out of service.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition :_D982,~~D614~~]

C6.4 The operator shall use this equipment in such a manner that the hydrocarbon concentration_ being monitored, as indicated below, does not exceed 30 percent of the lower explosive limit.

The operator shall use an explosimeter or equivalent device to monitor the hydrocarbon concentration in the vapor space above the floating roof device on a semi-annual basis.

[RULE 1178, 4-7-2006; RULE 463, 11-4-2011]

[Devices subject to this condition: D610, D617, D614, D618, D621, D630]

H. Applicable Rules

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p>ENGINEERING AND COMPLIANCE DIVISION</p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 23	PAGE 22
	APPL. NO. 544561	DATE 12/3/2012
	PROCESSED BY SAAndrawis	CHECKED BY

H23.1 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	40CFR60,	SUBPART Kb

[40CFR 60 Subpart Kb, 10-15-2003]

[Devices subject to this condition : D469, D524, D598, D610,D613, D617, D614, D630, D648, D659, D982, D1001, D1002, D1078]

K. Record Keeping/Reporting

K67.15 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

- Throughput and vapor pressure of stored liquid.
- Hydrocarbon concentration measurements done in the vapor space above the floating roof of the tank.
- Other records that may be required to comply with the applicable requirements of District Rules 463, 1149 and 1178.

[RULE 1178, 4-7-2006; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 463, 11-4-2011]

[Devices subject to this condition : D613, D617, D614, D618, D621]

K171.3 The operator shall provide to the District the following items:
Final drawings and/or specifications of the internal floating roof to be installed/constructed shall be submitted to the District within 30 days after its construction

[RULE 1178, 4-7-2006]

[Devices subject to this condition: D610, D613, D617, D614, D618, D621, D630]



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

PAGES

23

PAGE

23

APPL. NO.

544561

DATE

12/3/2012

PROCESSED BY

SAAndrawis

CHECKED BY

Attachments

1.	NOV's and NC's Issued
2.	MSDS Sheets
3.	Emissions Calculations
4.	Toxic Analysis
5.	ERC Certificate
6.	Certification of Statewide Compliance