

**Bay Area Air Quality Management District**

939 Ellis Street  
San Francisco, CA 94109  
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**Permit Evaluation  
and  
Statement of Basis  
for  
MAJOR FACILITY REVIEW PERMIT  
MINOR REVISION**

for  
**Tesoro Refining and Marketing Company  
Facility B2758 & B2759**

**Facility Addresses:**

Avon Refinery  
150 Solano Way  
Martinez, CA 94553

Amorco Terminal  
1750 Marina Vista Way  
Martinez, CA 94553

**Mailing Address:**

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Martinez, CA 94553

Application Engineer: Pamela Leong

Application: 11265

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# ENGINEERING EVALUATION and STATEMENT of BASIS

Tesoro Refining and Marketing Company; PLANT B2758

APPLICATION # 11265

## A. BACKGROUND

The Tesoro Refining and Marketing Company (Tesoro) is applying for a modification to the Permit to Operate the following equipment:

**S-323 Fixed Roof Tank; Tank A-323, Capacity: 924K Gallons, Storing: Alkylate Gasoline Blending Components abated by A-14 Vapor Recovery System at the downstream Process Furnaces (S-908, S-909, S-912, S-913 and S-991)**

In permit condition #13605, Tesoro is currently permitted to store materials with a true vapor pressure of 2.0 psia or less. The tank was originally permitted to store methanol for MTBE (application 25142), but since the use of MTBE as a gasoline additive will be prohibited by California law, Tesoro would like to use the tank to store alkylate gasoline-blending component. The blending component has a Reid vapor pressure of 9 psia. Although the current throughput limit of S-323 is 11,000,000 barrels per year of material with a true vapor pressure not to exceed 2 psia, Tesoro would like to decrease the throughput to 2,000,000 barrels per year of material with a Reid vapor pressure not to exceed 9 psia (true vapor pressure not greater than 7.6 psia at 70F).

## B. EMISSIONS

Emissions were calculated using the EPA AP-42 Tanks 4.0-computer program. Regulation 8-5-301 requires that the owner/operator of tanks greater than 39,626 gallons with material with a true vapor pressure greater than 1.5 psia and less than 11 psia use an internal floating roof, external floating roof, or approved emission control system. Tank S-323 is abated by A-14 Vapor Recovery System. The vapors from the A-14 Vapor Recovery System are burned in Tesoro's process heaters. Process heaters are very efficient at burning hydrocarbons in the vapor stream. Tesoro has demonstrated via source test a 99.9% POC destruction efficiency for the A-14 Vapor Recovery System and process heaters in Application #6201. A conservative destruction efficiency of 99.5% will be used in this application. The tank specifications, throughput limits, and POC emissions are tabulated below. The Tanks 4.0 results are attached to the engineering evaluation report.

<u>Capacity</u> <u>(Gallons)</u>	<u>Throughput</u> <u>(Gallons)</u>	<u>Reid</u> <u>Vapor Pressure</u> <u>(Psia)</u>	<u>Total POC</u>
924,000	84,000,000	9	1880.67 lb/yr = 0.9403 tpy

In application 25142 (March, 1996), the owner/operator of S-323 was permitted for a throughput of 11,000,000 barrels per year of material with a true vapor pressure of 2 psia. In the engineering evaluation for application 25142, the A-14 Vapor Recovery System was given a 98% control efficiency and POC emissions from the tank were calculated to be 1922.79 lb/yr.

With a new throughput limit of 2,000,000 barrels per year of material with a Reid vapor pressure of 9 psia and a POC destruction efficiency of 99.5% with abatement by A-14 and process heaters, emissions are calculated to be 1880.67 lb/yr.

Permit Evaluation and Statement of Basis:  
Application # 11265,  
Modify Tank Contents of S-323 Tank A-323

B2758 & B2759, Tesoro Refining and Marketing Co.  
150 Solano Way, Martinez, CA 94553

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Increase in POC Emissions = 1880.67 lb/yr – 1922.79 lb/yr = - 42.120 lb/yr = NO increase in POC emissions

## C. STATEMENT OF COMPLIANCE

### Regulation 2, Rule 1:

The project is considered to be ministerial under the District's CEQA regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emissions factors and therefore is not discretionary as defined by CEQA. (Permit Handbook Chapter 4.1)

The project is over 1000 feet from the nearest school and therefore not subject to the public notification requirements of Reg. 2-1-412.

### Regulation 2, Rule 2:

**Best Available Control Technology:** In accordance with Regulation 2, Rule 2, Section 301, BACT is triggered for any new or modified source with the potential to emit 10 pounds or more per highest day of POC, NPOC, NO<sub>x</sub>, CO, SO<sub>2</sub> or PM<sub>10</sub>. Based on the emission calculations above, the owner/operator of S-323 Fixed Roof Tank abated by A-14 Vapor Recovery System is not subject to BACT for emissions of POC.

**Offsets:** In application 25142 (March, 1996), Tesoro offset the cumulative increase from the permitting of MTBE gasoline additive at that time. Total POC emissions from the application were 1922.79 lb/yr. Previous to application 25142, the owner/operator was permitted at an emission rate of 418.98 lb/yr of POC from S-323. The cumulative increase for POC was 1503.81 lb/yr or 0.752 tpy. Offsets were provided at a ratio of 1.15 to 1 and 0.865 lb/yr of offsets were provided.

Although Tesoro will be permitted to store materials with a higher vapor pressure of 9 psia versus 2 psia, the permitted throughput will be decreased from 11,000,000 barrels to 2,000,000 barrels per year. In addition the POC destruction efficiency of A-14 Vapor Recovery has been increased from 98% in application 25142 to 99.5% in this application because Tesoro has recently demonstrated via source test a 99.9% POC destruction efficiency. The A-14 Vapor Recovery System and process heaters will be conditionally permitted to provide an abatement efficiency of at least 99.5% by weight POC (basis: cumulative increase, BACT, Offsets), except as allowed by Regulation 8-5-328.1.2 for tank degassing. The 99.5% destruction efficiency was demonstrated via source tests for Application #6201 (S-532 Oil Water Separator; Tank 532 abated by A-14 Vapor Recovery System). Source test results were validated by the District Source Test Division (Memos from Source Test, February 26, 2004). Source tests will be required annually to ensure a POC destruction efficiency of at least 99.5% by weight. These changes result in an overall decrease in POC emissions and no offsets are required for this application.

**PSD:** PSD does not apply.

### New Source Review for Toxic Air Contaminants:

This application does not result in any increases of Toxic Air Contaminants (TACs). The components of the alkylate gasoline blending stock are not found on Table 2-1-316 of the District's list of "Toxic Air Contaminant Trigger Levels" and a risk screening analysis is not required. Therefore, NSR for TACs is not triggered, and no new T-BACT requirements will apply.

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Regulation 2, Rule 6:

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act (40 CFR, Part 70) and BAAQMD Regulation 2, Rule 6, Major Facility Review (MFR), because it is a major facility for criteria pollutants (NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, and PM<sub>10</sub> emissions). Therefore, this facility is required to have an MFR permit pursuant to Regulations 2-6-301.

The initial MFR Permit for this facility was issued on December 1, 2003. An administrative amendment was issued on May 27, 2004 to update the sunrise dates for the flare and heater NO<sub>x</sub> permit conditions. The MFR Permit was reopened for Revision 1 on February 24, 2004 to amend flare and Regulation 9-10 requirements, to correct errors, and to incorporate some new conditions contained in recently issued Authorities to Construct. Staff expects Revision 1 to be completed by December 2004.

This application will modify permit conditions and will therefore require a revision of the current MFR permit. The definition of significant revision is discussed below to determine if this application constitutes a significant MFR revision.

- Regulation 2-6-226.1 and 226.2: This application does not involve the incorporation of a change considered to be a major modification, or a modification under NSPS, NESHAPs, or Section 112 of the CAA.
- Regulation 2-6-226.3: This application does not significantly change or relax any applicable monitoring, reporting or recordkeeping condition.
- Regulation 2-6-226.4: This application does not establish or change any limits to avoid applicable requirements.
- Regulation 2-6-226.5: This application does not involve the establishment of or change to a case-by-case emission limit or standard.
- Regulation 2-6-226.7: This application does not involve the incorporation of any requirements promulgated by the EPA.

Since this application does not meet any of the above criteria for a significant revision, this application will be handled as a minor revision to the MFR Permit.

The proposed MFR permit revisions related to this application are described later in this document.

Regulation 8, Rule 5:

The owner/operator of S-323 Fixed Roof Tank abated by A-14 Vapor Recovery System is subject to Regulation 8-5-301 Storage Tank Control Requirements. For tanks greater than 150 m<sup>3</sup> (39,626 gallons) with organic contents with a true vapor pressure greater than 1.5 psia and less than 11 psia, an internal floating roof, external floating roof, or approved emission control system is required. The owner/operator of S-323 is subject to Regulation 8-5-306 Requirements for Approved Emission Control Systems. The owner/operator will be required to abate S-323 with A-14 Vapor Recovery System at all times. The A-14 Vapor Recovery System and process heaters will be conditionally permitted to provide an abatement efficiency of at least 99.5% by weight POC (basis: cumulative increase, BACT, Offsets), except as allowed by Regulation 8-5-328.1.2 for tank degassing. The 99.5% destruction efficiency was demonstrated via source tests for Application #6201 (S-532 Oil Water Separator; Tank 532 abated by A-14 Vapor Recovery System). Source test results were validated by the District Source Test Division (Memos from Source Test, February 26, 2004). Source tests will be required annually to ensure a POC destruction efficiency of at least 99.5% by weight. The owner/operator is also subject to recordkeeping as per Regulation 8-5-501.

Federal Requirements:

**Federal NESHAPS and Federal NSPS**

The owner/operator of S-323 is subject to the requirements of the refinery MACT (40 CFR 63, Subpart CC). Section 63.640 (n) (1) of the MACT specifies that new tanks are subject only to the requirements of the NSPS for tanks. The owner/operator is subject to the requirements of NSPS Subpart Kb and the administrative requirements of Subpart A. The owner/operator complies with and will continue to comply

with the requirements of NSPS Subpart Kb and A. Tesoro meets NSPS Subpart Kb 60.112b(a) because the A-14 Vapor Recovery System collects all VOC vapors and gases discharged with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections. For S-323, Tesoro meets the requirements of 60.112b(a)(3)(ii) and 60.113b(c)(2) because the control device reduces inlet VOC emissions by over 95%. The owner/operator keeps records of inspections and control device data as required by 60.115b and records of applicability (dimensions, capacity, true vapor pressure of contents) as required by 60.116b. Tesoro maintains records and reports in conformance with the requirements of NSPS Subpart A 60.7(a)

Tesoro complies with the requirements of the Federal NESHAPS and NSPS. The applicable requirements for S-323 are in Table IV of Section D – IV of this Permit Evaluation and Statement of Basis. The latest compliance certification submitted by Tesoro to the Enforcement Division in June 2003 shows that Tesoro is in compliance with the applicable requirements. The compliance certification for 2004 will be completed and submitted by December 31<sup>st</sup>, 2004.

The five heaters used to burn the fuel gas in the A-14 Vapor Recovery system are subject to NSPS Subpart J if constructed or modified after June 11, 1973 as per NSPS Subpart J 60.100(b). S-909 and S-913 were constructed prior to June 11, 1973 and have never been modified and are not subject to NSPS Subpart J as per 60.100(b). S-908 and S-912 were also constructed prior to June 11, 1973 but have since been altered to lower emissions. S-908 has had an SCR System installed to control emissions of NOx while low NOx burners have been installed on S-912 to control emissions of NOx. These alterations to S-908 and S-912 have resulted in a decrease in emissions. As per 40 CFR 60.14(e)(5), “the addition or use of any system or device whose primary function is the reduction of air pollutants” is not considered a modification. In addition, the “physical change to the existing facility did not result in an increase in the emission rate to the atmosphere of any pollutant” and was not a “modification” as per 40 CFR 60.14(a). The owner/operator of S-908 and S-912 is not subject to NSPS since a “modification” did not occur.

Heater S-991 was installed in 1983 and the owner/operator is subject to NSPS Subpart J. Tesoro measures the H2S content of the fuel gas prior to combustion in the furnaces and meets the monitoring requirements of NSPS Subpart J 60.105(a)(4). Tesoro removes H2S from the fuel gas prior to combustion and maintains the concentration below the limit of 230 mg/dscm (0.10 gr/dscf) as required by NSPS Subpart J 60.104(a)(1). Tesoro meets the requirements of the Federal NSPS as summarized in the table below.

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>NSPS 40 CFR 60 Subpart A</b>	<b>Standards of Performance for New Stationary Sources (12/23/71)</b>	Y	
60.7	Notification and Recordkeeping	Y	
60.8	Performance Tests	Y	
60.9	Availability of Information	Y	
60.11(a)	Compliance with standards and maintenance requirements	Y	
60.11(d)	Good Operating Practice	Y	
60.12	Circumvention	Y	
60.13	Monitoring Requirements	Y	
<b>NSPS 40 CFR 60 Subpart J</b>	<b>Standards of Performance for Petroleum Refineries (7/1/00)</b>		
60.100	Applicability	Y	

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
60.104	Standards for Sulfur Oxides	Y	
60.104(a)(1)	fuel gas H2S concentration limited to 230 mg/dscm (0.10 gr/dscf) except for gas burned as a result of process upset or gas burned at flares from relief valve leaks or other emergency malfunctions	Y	
60.105	Monitoring of Emissions and Operations	Y	
60.105(a)(4)	monitoring requirement for H2S (dry basis) in fuel gas prior to combustion (in lieu of separate combustion device exhaust SO2 monitors as required by 60.105(a)(3))	Y	
60.105(e)(3)(ii)	Excess SO <sub>2</sub> emission definitions for 60.7(c)	Y	
60.106	Test methods and procedures	Y	

#### D. MFR PERMIT MODIFICATIONS

Section I:

No changes are proposed to this section.

Section II:

Table II – A has been updated to reflect the new material stored in S-323. Table II – B has been updated with the condition requirements for the A-14 Vapor Recovery System.

#### Table II A - Permitted Sources

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities pursuant to 2-1-301. Throughput limits function as reporting thresholds as described in Standard Conditions J.

#### Plant #B2758 Tesoro Refining and Marketing Company

S-#	Description	Make or Type	Model	Capacity	Grandfathered Limit, or Firm Limit and Basis
323	Tank A-323 Fuel Oil, Jet 'A', <del>Methyl Alcohol</del> , Gasoline, <u>Alkylate Gasoline Blending Components</u>	Fixed roof		924K gal <del>2,000K</del> 41,000K bbl/yr	Firm Limit Condition #13605, part 1

**Table II B – Abatement Devices**

**Plant #B2758 Tesoro Refining and Marketing Company**

<b>A-#</b>	<b>Description</b>	<b>Source(s) Controlled</b>	<b>Applicable Requirement</b>	<b>Operating Parameters</b>	<b>Limit or Efficiency</b>
<u>14</u>	<u>Vapor Recovery System,</u> <u>Compress/Condense/Incinerate</u>	<u>S323</u>	<u>BAAQMD</u> <u>Condition # 13605,</u> <u>part 3</u>	<u>None</u>	<u>VOC: 99.5%</u> <u>abatement</u>

Section III:

No changes are proposed to this section.

Section IV:

Changes have been made to Table IV – CV to update the requirements of BAAQMD permit conditions 13605 and 21053.

**Table IV – CV Cluster 28**  
**Source-specific Applicable Requirements**  
**S323 – Tank A-323, S699 – Tank A-699**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
<b>BAAQMD Reg 8 Rule 5</b>	<b>Organic Compounds - STORAGE OF ORGANIC LIQUIDS (11/27/02)</b>		
8-5-111	Limited Exemption, Tank Removal From and Return to Service	Y	
8-5-111.1	Limited Exemption, Tank Removal From and Return to Service; Notice to the APCO	Y	
8-5-111.1.1	Limited Exemption, Tank Removal From and Return to Service; Notice to the APCO; 3 day prior notification	Y	
8-5-111.1.2	Limited Exemption, Tank Removal From and Return to Service; Notice to the APCO; Telephone notification	Y	
8-5-111.2	Limited Exemption, Tank Removal From and Return to Service; Compliance before notification	Y	
8-5-111.4	Limited Exemption, Tank Removal From and Return to Service; Use of vapor recovery	Y	
8-5-111.5	Limited Exemption, Tank Removal From and Return to Service; Minimization of emissions	Y	
8-5-111.6	Limited Exemption, Tank Removal From and Return to Service; Written notice of completion not required	Y	
8-5-111.7	Limited Exemption, Tank Removal From and Return to Service; Compliance with Section 8-5-328	Y	
8-5-112	Limited Exemption, Tanks in Operation	Y	
8-5-112.1	Limited Exemption, Tanks in Operation; Notice to the APCO	Y	



**Table IV – CV Cluster 28**  
**Source-specific Applicable Requirements**  
**S323 – Tank A-323, S699 – Tank A-699**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
8-5-112.1.1	Limited Exemption, Tanks in Operation; Notice to the APCO; 3 day prior notification	Y	
8-5-112.1.2	Limited Exemption, Tanks in Operation; Notice to the APCO; Telephone notification	Y	
8-5-112.2	Limited Exemption, Tanks in Operation; Compliance and certification before commencement of work	Y	
8-5-112.3	Limited Exemption, Tanks in Operation; No product movement; minimization of emissions	Y	
8-5-112.4	Limited Exemption, Tanks in Operation; Exemption does not exceed 7 days	Y	
8-5-301	Storage Tank Control Requirements	Y	
8-5-302	Requirements for Submerged Fill Pipes	Y	
8-5-303	Requirements for Pressure Vacuum Valve	Y	
8-5-306	Requirements for Approved Emission Control Systems	Y	
8-5-328	Tank Degassing Requirements	Y	
8-5-403	Inspection Requirements for Pressure Vacuum Valves	Y	
8-5-404	Certification	Y	
8-5-405	Information Required	Y	
8-5-501	Records	Y	
8-5-502	Tank Degassing Annual Source Test Requirement	Y	
8-5-503	Portable Hydrocarbon Detector	Y	
	<b>Requirement for S699</b>		
<b>BAAQMD Reg 8 Rule 8</b>	<b>Organic Compounds – OIL WATER SEPARATORS (6/15/94)</b>		
8-8-305	Oil-Water Separator And/Or Air Flotation Unit Slop Oil Vessels	Y	
8-8-305.2	Requirement for 70% collection and destruction efficiency, by weight	Y	
<b>Refinery MACT</b>	<b>NESHAP for Petroleum Refineries REQUIREMENTS FOR TANKS ALSO SUBJECT TO NSPS Kb</b>	Y	
63.640(n)	Which rule governs for storage vessels subject to both Refinery MACT and NSPS subpart Kb?	63.640(n)(1) <b>NSPS subpart Kb</b> Y	
	Does Refinery MACT provide for EFR secondary seals to be pulled back or temporarily removed during NSPS Kb inspections of the primary seal?	63.640(n)(8)(i) <b>YES</b> Y	
	Does Refinery MACT provide for delay of NSPS Kb seal gap measurements due to unsafe conditions?	63.640(n)(8)(ii) <b>YES – up to 30 days, or empty the tank within 45 days</b> Y	

**Table IV – CV Cluster 28**  
**Source-specific Applicable Requirements**  
**S323 – Tank A-323, S699 – Tank A-699**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
	Does Refinery MACT provide for extensions of time to perform NSPS Kb inspections of unsafe tanks? 63.640(n)(8)(iii) <b>YES – up to 2 extensions of 30 days each</b>	Y	
	Does Refinery MACT provide for extensions of time to repair defects found during NSPS Kb inspections? 63.640(n)(8)(iii) <b>YES – up to 2 extensions of 30 days each</b>	Y	
	Does Refinery MACT provide for waiving the NSPS Kb prior-request requirement for extensions of time? 63.640(n)(8)(iii) <b>YES</b>	Y	
	Does Refinery MACT provide for submitting NSPS Kb documentation of the need for an extension with the next semi-annual periodic report? 63.640(n)(8)(iv) <b>YES</b>	Y	
	Does Refinery MACT provide for submitting reports of NSPS Kb inspection failures on the semi-annual periodic report schedule? 63.640(n)(8)(v) <b>YES</b>	Y	
	Does Refinery MACT provide for not reporting the results of NSPS Kb inspections when there was no out-of-compliance (i.e., recordkeeping only)? 63.640(n)(8)(vi) <b>YES</b>	Y	
<b>NSPS Subpart Kb</b>	<b>Volatile Organic Liquid Storage Vessels REQUIREMENTS FOR FIXED ROOF TANK-CONTROL DEVICE</b>	Y	
60.112b(a)	<b>Closed vent system</b> Performance requirements: 60.112b(a)(3)(i) <b>no detectable emissions (i.e., &lt; 500 ppm)</b>	Y	
	<b>Control device</b> Performance requirements: 60.112b(a)(3)(ii) <b>at least 95% efficient, or a flare per 60.18</b>	Y	
60.113b(c)(2)	<b>Control device (other than flare)</b> Operating requirements: 60.113b(c)(2) <b>operate and monitor per the plan</b>	Y	
60.115b	<b>Recordkeeping for inspections:</b> Keep inspection reports as specified. 60.115b <b>Keep required records for 5 years</b>	Y	
60.115b(c)	<b>Recordkeeping for tanks routed to a control device other than a flare:</b> 60.115b(c) <b>operating plan &amp; records of parametric monitoring data</b>	Y	

**Table IV – CV Cluster 28  
 Source-specific Applicable Requirements  
 S323 – Tank A-323, S699 – Tank A-699**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
60.116b(a)	<b>Applicability records:</b> Time period for keeping records of applicability determination, unless specified otherwise.	60.116b(a) <b>Keep required records for 5 years</b> Y	
60.116b(b)	<b>Applicability records:</b> Records of dimensions & capacity required for nonexempt tanks?	60.116b(b) <b>Required</b> <b>Keep record readily accessible for the life of the tank</b> Y	
60.116b(c)	<b>Applicability records:</b> Additional recordkeeping requirements for certain tanks.	60.116b(c) <b>identification &amp; TVP of the stored product, if capacity ≥ 20,000 gallons. and TVP ≥ 2.2, OR capacity ≥ 40,000 gallons. and TVP ≥ 0.51</b> <b>Keep record as long as the tank is in that service</b> Y	
60.116b(e)	<b>True vapor pressure (TVP) determination for applicability:</b>	60.116b(e) <b>maximum TVP of the stored liquid, based on highest calendar month average storage temperature</b> Y	
60.116b(g)	<b>Applicability determination:</b> Miscellaneous recordkeeping exemptions:	60.116b(g) <b>keeping record of TVP is not required if tank is routed to a compliant control device</b> Y	
<b>NSPS Subpart A</b>	<b>New Source Performance Standards</b> <b>GENERAL PROVISIONS</b>	Y	
60.7(a)	<b>Initial Notification:</b> Is initial notification of the source's existence required?	60.7(a)(1) <b>notification within 30 days after begin construction</b> Y	
	Report (document) having initially achieved compliance?	60.7(a)(3) 60.115b(a)(1) & (b)(1) <b>within 15 days after initial fill</b> Y	
	<b>Notification of Compliance Status report:</b>	60.7(a)(3) [cf. 60.115b(a)(1)&(b)(1)] <b>notification within 15 days after startup</b> Y	
	<b>Initial Notification:</b> Is initial notification required if tank becomes affected only as a result of a modification?	60.7(a)(4) <b>notification 60 days or as soon as practicable before the change</b> Y	
60.7(f)	<b>General recordkeeping requirements:</b> Time period for keeping records, unless specified otherwise.	60.7(f) <b>Keep all reports &amp; notifications for 2 years</b> Y	

**Table IV – CV Cluster 28  
 Source-specific Applicable Requirements  
 S323 – Tank A-323, S699 – Tank A-699**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
	<b>General recordkeeping requirements:</b> Keep all reports and notification for the specified period of time. 60.7(f) <b>required</b>	Y	
60.14(g)	Achieve compliance for: <u>New Tanks</u> (or tanks that become affected as a result of a change or modification)? 60.14(g) <b>up to 180 days after modifications (otherwise prior to fill)</b>	Y	
<b>Refinery MACT</b>	<b>NESHAP for Petroleum Refineries REQUIREMENTS FOR FIXED ROOF TANK-CONTROL DEVICE</b>	Y	
63.642(e)	<b>General recordkeeping requirements:</b> Time period for keeping records, unless specified otherwise. 63.642(e) & 63.654(i)(4) <b>keep all other records 5 years, retrievable within 24 hr</b>	Y	
	<b>General recordkeeping requirements:</b> Keep all reports and notification for the specified period of time. 63.642(e) & 63.654(i)(4) <b>required</b>	Y	
63.646(a)	<b>The source only needs to comply with the provisions as they relate to an existing fixed roof tank vented via a closed vent system to a control device.</b>	Y	
	<b>Control device</b> Performance requirements: 63.646(a) & (d) 63.119(e) <b>at least 95% efficient (or 90% if older than 7/15/94), or a flare per 63.11(b)</b>	Y	
	<b>Control device (other than flare)</b> Compliance demonstration: 63.646(a) 63.120(d) <b>design evaluation or performance test, plus monitoring plan</b> {30-day notice required prior to performance tests, per 63.642(d)(2)}	Y	
	<b>Control device (other than flare)</b> Operating requirements: 63.646(a) 63.120(d) <b>operate such that the monitored parameters remain within the specified ranges</b>	Y	
	<b>Closed vent system</b> Performance requirements: 63.646(a) 63.120(d)(6) & 63.148 <b>no detectable emissions (i.e., &lt; 500 ppm)</b>	Y	

**Table IV – CV Cluster 28  
 Source-specific Applicable Requirements  
 S323 – Tank A-323, S699 – Tank A-699**

<b>Applicable Requirement</b>	<b>Regulation Title or Description of Requirement</b>	<b>Federally Enforceable (Y/N)</b>	<b>Future Effective Date</b>
63.646(g)	<b>Failure to perform inspections and required monitoring is a violation of the applicable standard.</b>	Y	
63.654(g), (h) and (i)	The source only needs to comply with provisions as they relate to existing fixed roof tank vented via a closed vent system to a control device.	Y	
63.654(g)	Report of periodic inspections, etc. AFTER documenting initial compliance?  63.654(g) <b>begin Sept 13, 1999 then semiannual</b>	Y	
	<b>Periodic Reports:</b> Miscellaneous additional info to report:  63.654(g)(5)(i) & (ii) <b>for tanks routed to a control device other-than a flare, semiannual reports of planned routine maintenance and all periods of monitored parameter excursions *</b>	Y	
	<b>Periodic Reports:</b> Tanks routed to a flare:  63.654(g)(5)(i) & (iii) <b>semiannual reports of planned routine maintenance and all periods in which the flare was not in compliance *</b>	Y	
63.654(h)	Report applicability for varying-use tanks?  63.654(h)(6)(ii) <b>w/the initial NOC Status report</b>	Y	
	<b>Other (initial) Reports:</b> Report applicability for varying-use tanks?  63.654(h)(6)(ii) <b>required with the initial Notification of Compliance Status report</b>	Y	
63.654(i)	<b>Applicability records:</b> Time period for keeping records of applicability determination, unless specified otherwise.  63.654(i)(1) 63.123(a) <b>Keep record readily accessible for the service life of the tank</b>	Y	
	<b>Applicability records:</b> Records of dimensions & capacity required for nonexempt tanks?  63.654(i)(1) 63.646(a)&63.119(a)(3) 63.123(a) <b>Required Keep record readily accessible for service life of the tank *</b>	Y	
	<b>Recordkeeping for inspections:</b> Keep inspection reports as specified.  63.654(i)(1) 63.123(c) - (e) <b>all inspections</b>	Y	

**Table IV – CV Cluster 28  
 Source-specific Applicable Requirements  
 S323 – Tank A-323, S699 – Tank A-699**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
	<b>Recordkeeping for tanks routed to a control device other than a flare:</b> 63.654(i)(1) 63.123(f) <b>records of parametric monitoring data and planned routine maintenance *</b>	Y	
	<b>Recordkeeping for tanks routed to a flare:</b> 63.654(i)(1) 63.123(f) <b>records of planned routine maintenance *</b>	Y	
	<b>Recordkeeping for delayed repairs:</b> When utilizing a delay of repair provision, keep documentation of the reason for the delay. 63.654(i)(1) 63.123 (g) <b>required</b>	Y	
	<b>Applicability records:</b> Additional recordkeeping requirements for certain tanks. 63.654(i)(1)(iv) <b>determination of HAP content</b> <b>Keep record readily accessible for service life of the tank</b>	Y	
<b>BAAQMD Condition # 3996</b>	<b>Permit Conditions for S699</b>		
Part 1	Design specifications (basis: cumulative increase)	Y	
Part 2	Requirements for Pressure/Vacuum Relief Valve, Including Settings (basis: cumulative increase))	Y	
Part 3	Pressure regulator settings (basis: cumulative increase)	Y	
Part 4	Vacuum regulator set pressures (basis: cumulative increase)	Y	
<b>BAAQMD Condition # 13605</b>	<b>Permit Conditions for S323</b>		
Part 1	Throughput limitations (basis: cumulative increase)	Y	
Part 2	Storage of materials other than methanol or gasoline or <u>alkylate gasoline blending components</u> (basis: cumulative increase, toxics)	Y	
Part 3	Requirement for continuous abatement and leak limitation (basis: cumulative increase, NSPS)	Y	
<u>Part 4</u>	<u>Source Test for S-323 abatement A-14 (99.5% efficiency)</u>	<u>Y</u>	
Part <u>5</u> 4	Record keeping (basis: cumulative increase, toxics)	Y	
<b>BAAQMD Condition # 21053</b>			
Part 3	Source Test for S-323 abatement A-14 (99.5% <del>98%</del> efficiency)	N	04/01/04

**Table IV – CV Cluster 28  
 Source-specific Applicable Requirements  
 S323 – Tank A-323, S699 – Tank A-699**

Applicable Requirement	Regulation Title or Description of Requirement	Federally Enforceable (Y/N)	Future Effective Date
<b>BAAQMD Condition # 19528</b>			
Part 1	Throughput limit (basis: Regulation 2-1-234.3, Regulation 2-1-403 Regulation 2-6-503)	Y	
<b>BAAQMD Condition # 19528</b>			
Part 6	Monitoring requirements for control device (basis: 63.646(a), 63.120(d)(5))	Y	

Section V:

No changes are proposed to this section.

Section VI:

This MFR Permit revision will modify condition 13605, parts 1 through 5 and modify condition 21053, part 3. All text changes are shown below in strikeout and underline format.

Condition #13605:

Application #25142 (March, 1996) amended by application #10667 (November, 2004): Increase vapor pressure from 2 to 9 psia, decrease throughput from 11,000,000 barrels/yr to 2,000,000 barrels/yr, add source testing to determine POC destruction efficiency of A-14 Vapor Recovery and process heaters.

S-323 Fixed Roof Tank; Tank A-323, Capacity: 924K Gallons, Storing: Alkylate Gasoline Blending Components abated by A-14 Vapor Recovery System

1. ~~The Permittee~~ Owner/Operator shall ensure that the net throughput of all VOC/petroleum materials at S-323 (Tank 323) does not exceed 2,000,000 ~~11,000,000~~ barrels during each rolling consecutive 12-month period ~~unless the owner/operator can show, through monthly recordkeeping and District approved calculations, that total precursor organic compound emissions from S-323 (Tank 323) organic liquid storage tank do not exceed 0.865 tons during each rolling consecutive 12 month period.~~ A level-monitoring device will measure the height of the tank. The change in height will be used to calculate throughput.  
 (basis: cumulative increase)

2. The ~~permittee~~ owner/operator may store hydrocarbon materials other than ~~methanol and~~ gasoline and alkylate blending components provided the following two criteria are met:  
 a. the ~~Reid true~~ vapor pressure of the alternate material is not greater 9.0 ~~2.0~~ psia (true vapor pressure not greater than 7.6 psia at 70 F), and  
 b. POC emissions, based on the maximum throughput in part 1, do not exceed 1922.79 pounds per year;  
and

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~~c.b.~~ the resulting toxic risk from the tank does not cause the tank to fail a risk screen analysis.  
(basis: cumulative increase, toxics)

3. Notwithstanding any provision of District regulations allowing for either the maintenance or malfunction of A-14 due to a valid break down at No. 1 Gas Plant vapor recovery compressor(s), the Permittee-Owner/Operator shall ensure that fixed roof tank S-323 vents to existing vapor recovery unit, A-14, or an equivalent District-approved abatement system, having a minimum overall VOC control efficiency of 99.5% ~~98%~~ on a mass basis. In accordance with the NSPS requirements of 10 CFR 60, Subpart Kb, Permittee/Owner/Operator shall ensure that this tank is maintained leak-free (less than 500 ppm above background as methane).  
(basis: cumulative increase, NSPS)

4. To determine compliance with part 3, the owner/operator shall conduct a District approved source test at each of the following sources on an annual basis as of 4/01/04 (initial compliance has been demonstrated in a source test for AN 6201 by TIAX on October 28, 2003).

S-908 No. 8 Furnace @ No. 3 Crude Unit  
S-909 No. 9 Furnace @ No. 1 Feed Prep.  
S-912 No. 12 Furnace @ No. 1 Feed Prep.  
S-913 No. 13 Furnace @ No. 2 Feed Prep.  
S-991 FCCU Preheat Furnace

For each source, the owner/operator must measure the following:

- the fuel feed rate in pounds/hr
- the POC emission rate at the stack
- the flue gas flow rate in SCFM at the stack
- the oxygen content of the stack flue gas
- the stack temperature
- the destruction efficiency of POC as measured across the combustion device

The owner/operator shall submit individual copies of the results of the source tests (along with related calculations and process data) to the District's Engineering Division, Enforcement Division, and Source Test Division within 35 days of the source test.

(basis: Cumulative Increase, Toxic Risk Screen, Offsets, Regulation 1-238)

~~4. To demonstrate compliance with the above conditions, not less frequently than monthly, Permittee/Owner/Operator shall maintain the following records in a District approved log that shall be kept on site and made available for District inspection for a period of 5 years from the date on which the last record was made.~~

- ~~a. The type of organic liquid stored and the dates that the organic liquids were stored.~~  
~~b. The monthly tank throughput for each material stored on the tank surface.~~

~~(basis: cumulative increase, toxics)~~

5. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above conditions, including, but not necessarily limited to, the following information:

- a. On a monthly basis, type and amount of liquids stored and Reid vapor pressure ranges of such liquids.
- b. The throughput of material shall be added and recorded in the log for each month and for each rolling consecutive 12-month period.
- c. The time, date, duration, and reason for each instance that S-323 is not abated by A-14.

These records shall be kept on-site for at least 5 years. All records shall be recorded in a District-approved log and made available for inspection by District staff upon request. These recordkeeping



Permit Evaluation and Statement of Basis:  
 Application # 11265,  
 Modify Tank Contents of S-323 Tank A-323

B2758 & B2759, Tesoro Refining and Marketing Co.  
 150 Solano Way, Martinez, CA 94553

requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations.

(basis: Cumulative Increase, Toxic Risk Screen, Offsets, Regulation 1-441, Regulation 8-5-501, Regulation 1-238)

Condition 21053:

Tesoro Refining and Marketing Company  
 150 Solano Way  
 Martinez, CA 94533

... (No changes to Parts 1-2)

3. The Owner/Operator shall conduct an annual District-approved source test on the S-323, to demonstrate that the combined collection/destruction efficiency of A-14 is no less than 99.5% ~~98%~~, by weight, for VOC. The Owner/Operator shall submit the test results to the District's Compliance and Enforcement Division and the District's Engineering Division no less than 30 days after the test. These records shall be kept for a period of at least 5 years from date of entry and shall be made available to District staff upon request. [Basis: BAAQMD Condition 13605, Part 3 and 4, and BAAQMD Regulation 2-1-403]

... (No changes to Parts 4-6)

Section VII:

Table VII – CB needs to be modified to reflect changes in permit conditions 13605 and 21053.

**Table VII – CB  
 Cluster 28  
 Applicable Limits and Compliance Monitoring Requirements  
 CLOSED VENT SYSTEMS & CONTROL DEVICES  
 S323 – Tank A-323**

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
<b>BAAMD 8-5</b>	<b>Organic Compounds - STORAGE OF ORGANIC LIQUIDS LIMITS AND MONITORING FOR CVS &amp; CONTROL DEVICES</b>						
VOC	BAAQMD 8-5-306	Y		Control device standards; includes 95% efficiency requirement	BAAQMD 8-5-603.1	P/A	MOP Volume IV ST-4
VOC	BAAQMD 8-5-328.1	Y		Tank cleaning control by liquid balancing in which the resulting organic liquid has a TVP is less than 0.5 psia	BAAQMD 8-5-501	P/E	Records

**Table VII – CB**  
**Cluster 28**  
**Applicable Limits and Compliance Monitoring Requirements**  
**CLOSED VENT SYSTEMS & CONTROL DEVICES**  
**S323 – Tank A-323**

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
VOC	BAAQMD 8-5-328.1	Y		Tank cleaning control device standards; includes 90% efficiency requirement	BAAQMD 8-5-502 and 8-5-603.2	P/A	Annual source test using MOP, Vol. IV, ST-7
VOC	BAAQMD 8-5-328.1.2	Y		Organic concentration in tank <10,000 ppm as methane after cleaning	BAAQMD 8-5-503	<u>periodic</u> each time emptied & degassed	portable hydrocarbon detector
VOC	BAAQMD 8-5-301	Y		Record of liquids stored and true vapor pressure	BAAQMD 8-5-501.1	<u>periodic</u> initially and upon change of service	records
VOC	328. 1.2	Y		Tank cleaning control device standards; includes 90% efficiency requirement	603.2	P/E during tank cleaning	ST-7
VOC	501	Y		True vapor pressure determination	601, 602, 604	<u>periodic</u> initially and upon change of service	look up table or sample analysis
VOC	BAAQMD Condition 13605 Part 3	N		Control device standards; includes <del>99.5 %</del> 98% efficiency requirement	BAAQMD Condition 21053 Part 3 and 4	<u>P/A</u>	<u>Source Test</u> (ST-4)
<b>Refinery MACT</b>	<b>NESHAP for Petroleum Refineries</b>						
	<b>LIMITS AND MONITORING FOR CONTROL DEVICES</b>						
HAP	63.646(a) 63.119 (e)(1) & (2)	Y		Control device standards; includes 95% efficiency requirement (or 90% if older than 7/15/94),	63.646(a) 63.120 (d)(5), & BAAQMD Condition #21053 Part 6	P/D	Temperature monitoring of S908, S909, S912, S913, S991
HAP	63.646(a) 63.119 (e)(1) & (2)	Y		Control device standards; includes 95% efficiency requirement (or 90% if older than 7/15/94),	63.646(a) 63.120 (d)(5), & BAAQMD Condition #21053 Part 6	C	Flue gas oxygen content of S908, S909, S912, S913, S991
HAP	63.646(a) 63.119 (e)(3)	Y		Limits on hours of planned routine maintenance of the control device	63.646(a) 63.120 (d)(4)	<u>periodic</u> semiannually	reports

**Table VII – CB**  
**Cluster 28**  
**Applicable Limits and Compliance Monitoring Requirements**  
**CLOSED VENT SYSTEMS & CONTROL DEVICES**  
**S323 – Tank A-323**

Type of Limit	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
HAP	63.646(a) 63.120 (d)(6), (e)(5) 63.148(b)(3)	Y		Standards for openings in the cover (unless maintained under negative pressure)	63.646(a) 63.120 (d)(6), (e)(5) 63.148(b)(3)	<u>periodic</u> initially & semiannually	visual inspection
HAP	63.646(a) 63.120 (d)(6), (e)(5) 63.148 (b)(1) & (2)	Y		Closed vent system leak tightness standards (< 500 ppmw - unless maintained under negative pressure)	63.646(a) 63.120 (d)(6), (e)(5) 63.148 (b)(1) & (2)	<u>periodic</u> initially & annually	sensory inspection (and, if ductwork, by Method 21)
HAP	63.646(a) 63.120 (d)(6), (e)(5) 63.148(b)(3)	Y		Cover leak tightness standards (unless maintained under negative pressure)	63.646(a) 63.120 (d)(6), (e)(5) 63.148(b)(3)	<u>periodic</u> initially & semiannually	sensory inspection
HAP	63.646(a) 63.120 (d)(6), (e)(5) 63.148(f)	Y		Closed vent systems by-pass line standards (unless maintained under negative pressure)	63.646(a) 63.120 (d)(6), (e)(5) 63.148(f)	<u>periodic</u> every 15 min for flow indicator; monthly for car-seal	visual inspection
VOC		Y		<del>2,000,000</del> <del>11,000,00</del> barrels per 12 consecutive month period <del>or 0.865</del>	BAAQMD Condition # 13605, part 1	<u>P/monthly</u>	Record keeping <del>or calculation</del>

Section VIII:

No changes are proposed to this section.

Section IX:

No changes are proposed to this section.

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Section X:

These above revisions are summarized in the revision history section as shown below.

## **X. Revision History**

Initial Major Facility Review Permit Issuance  
(Application 16484): December 1, 2003

Administrative Amendment (no application): May 27, 2004

Reopening (Application 9295): August 25, 2004

Minor Revision (Application # 11265): [insert approval date]

- Modify the materials to be stored at S-323 Tank A-323 to allow the storage of alkylate gasoline blending material. Increase vapor pressure of material to be stored from a Reid vapor pressure of 2 psia to 9 psia. The throughput of the tank will be decreased from 11,000,000 to 2,000,000 barrels per year. Add source testing requirement for A-14 Vapor Recovery System and process heaters to ensure VOC destruction efficiency of 99.5%. Update Tables II-A, II-B, Table IV –CV, Conditions 13605 and 21503, and Table VII-CB.

Sections XI-XII:

No changes are proposed to these sections.

## **E. RECOMMENDATION**

Issue a Change of Permit Conditions for the following equipment:

**S-323 Fixed Roof Tank; Tank A-323, Capacity: 924K Gallons, Storing: Alkylate Gasoline Blending Components abated by A-14 Vapor Recovery System at the downstream Process Furnaces (S-908, S-909, S-912, S-913 and S-991)**

By: signed by Pamela J. Leong  
Pamela J. Leong  
Air Quality Engineer II

December 14, 2004  
Date