TESORO REFINING & MARKETING COMPANY LLC

TERMINAL PLANS

I. Avon Terminal

II. Amorco Terminal

Tesoro Refining and Marketing Company LLC (TRMC)
Avon Wharf
At Berth Terminal Plan

This terminal plan has been prepared pursuant Section 93130.14(a)(3) of the Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At Berth in a California Port.

1. GENERAL INFORMATION	
Terminal Contact Name: Marjan Jamshidi	
Phone Number: 925-370-3601	Email: MJamshidi@Marathonpetroleum.com
Berths Included in this Plan: Name: 1. Avon Wharf	Approximate Geographic Boundary Coordinates:* 1. 38.049165, -122.090473
**The number of berths on a terminal and the spatial positioning of berths are dependent on vessel size; thus, the geographic boundary coordinates are approximates only.*	

2. STRATEGY DETAILS

Strateg(ies) used to comply with the requirements for ocean-going vessels visiting each berth:

Provided technology is sufficiently developed to operate with an acceptable level of personal and process safety risk, Tesoro Refining and Marketing Company LLC (TRMC) plans to employ the following strategies.

1. CARB-Approved Capture and Control (C&C) System as a CARB-Approved Emission Control Strategy (CAECS)
2. CARB-Approved Innovative Concept – See TRMC's Innovative Concept Application

Should tanker vessel owners install equipment that provides a vessel side connection for shore power in the future, TRMC may consider adding new land-based connection systems to supply electricity from the grid to a vessel. However, shore power is not anticipated to be TRMC's solution for the compliance deadline set forth in the regulation.

2.1 **[Strategy 1]**

Identification and description of all necessary equipment:

Equipment:	Location:
1. CARB Approved Capture and Control Systems - will include one or more of the following shore and/or barge unit(s) a. Fully contained barge system including connection system and treatment system b. Barge connection system with shore-based treatment system c. Permanent structure connection system with shore-based treatment system	1. Avon Wharf

d. Mobile land-based connection system with mobile or fixed shore-based treatment system

Number of **vessels** expected to use this strategy (annual): 10

Number of vessel **visits** expected to use this strategy (annual): 54

Berths where equipment will be used:

1. Avon Wharf

Schedule for installing equipment:

Project:	Estimated Completion Date:
1. CARB Approved Capture and Control Systems	Unresolved risks may result in a delay of compliance with the regulation. Construction is expected to commence upon completion of the design and testing of a safe, approved system able to be permitted and produced on a scale necessary to satisfy industry requirements. Present concerns for capture and control systems that have not yet been resolved include: • Full resolution of considerations identified in the Safety Study under the CARB grant for Capture and Control Systems for Oil Tanker Project awarded to SCAQMD where Tesoro Logistics Operations LLC resources are actively supporting advancement as a demonstration partner. • Capture and Control providers have not shared technical details for connection to the vessel stacks. The following risks are still unresolved pending evaluation of the final connection design. o Ability to connect to multiple stacks at the same time without damaging a vessel's exhaust stacks. o Ability to connect to a variable set of stack configurations without damaging the vessel's exhaust stacks. o Ability to connect without creating sparks, or designing for electrical continuity o Ability of the connection to adjust with vessel draft changes due to cargo operations o Ability of connection system to adequately transport a wide range of flows from multiple stacks • Barge congestion and siting around vessels is unresolved. The ability to locate barges to treat vessels must ensure the following: o Capture & Control (C&C) barges will not interfere with vessel traffic in the port o C&C barges stay clear of mooring lines of the vessel at berth. o C&C barges will not be adversely affected by passing vessel traffic. o C&C barges will not interfere with containment boom.

- C&C barge mooring systems will not impact submerged utilities crossing navigational channels.
- Adequate emergency preparedness to ensure safety of barge-based system operators in close proximity to hazardous cargo
- Ability to deliver exhaust to a shore-based treatment unit within the acceptable range of critical process variables such as temperature

2.2 [Strategy 2, if needed]

Identification and description of all necessary equipment:

Equipment:	Location:
1. Innovative concept – see "Innovative Concept Application" submittal	1. Innovative concept – see "Innovative Concept Application" submittal

Number of **vessels** expected to use this strategy (annual): TBD

Number of vessel **visits** expected to use this strategy (annual): TBD

Berths where equipment will be used:

See "Innovative Concept Application" submittal

Schedule for installing equipment:

Project:	Estimated Completion Date:
See "Innovative Concept Application" submittal	See "Innovative Concept Application" submittal

3. TERMINAL OPERATOR/PORT BERTHING RESTRICTIONS

Are there any terminal or port specific berthing restrictions? If yes, please describe.

1. Presently there are no restrictions however dock enhancements necessary to accommodate capture and control systems could necessitate berthing restrictions.
2. Underwater utilities located near the vessel berthing locations could restrict capture and control mooring systems.

4. DIVISION OF ROLES AND RESPONSIBILITIES

Division of responsibilities:

Not applicable at this terminal because there is no port authority.

Responsibility	Port	Terminal
Connect vessels to shore power when visited by a commissioned shore power vessel		
Delays in connecting to shore power from land side		
Commissioning vessels equipped with shore power that is installed on the side of the vessel facing the wharf when berthed.		

If the commissioned shore power vessel is berthed in a way that prevents it from connecting to shore power, the terminal may use a TIE or must provide an alternative CARB Approved Emission Control Strategy (CAECS) compatible with the vessel.		
Controlling emissions at berth without shore power		
Communicate with vessel prior to arrival		
Ensure proper positioning of vessel		
Record data on emission control strategy used		
Submit vessel visit information to CARB per regulation requirement		
Provide an alternative CAECS for vessels to reduce emissions if the CAECS for the berth is unavailable due to construction or repair. Terminals also have the option of using a TIE or remediation fund for construction or repair.		
Initiation of shore power construction including design		
Responsibility to provide equipment or necessary infrastructure at a terminal		
Responsibility to provide equipment or necessary infrastructure outside of the terminal to ensure sufficient power availability		
Responsibility of uncontrolled emissions at berth due to incomplete shore power infrastructure construction		
Responsibility of uncontrolled emissions from repair of shore power infrastructure/equipment or alternative CAECS		
Submission of terminal compliance plan		
Submission of port compliance plan		

5. SIGNATURE OF TERMINAL OPERATOR

By signing below, the Terminal Operator's responsible official confirms under penalty of perjury that he/she has reviewed this At Berth Terminal Plan and is submitting this At Berth Terminal Plan as [Terminal Operator's] compliance strategy for the At Berth Regulation. [Terminal Operator] understands this plan is subject to verification by CARB staff.

Name: Robert S. Hanks	Title: Refining General Manager
Signature: Robert S Hanks	Date: 11-30-2021

Tesoro Refining and Marketing Company LLC (TRMC)
Amorco Wharf
At Berth Terminal Plan

This terminal plan has been prepared pursuant Section 93130.14(a)(3) of the Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At Berth in a California Port.

1. GENERAL INFORMATION

Terminal Contact Name: Marjan Jamshidi

Phone Number: 925-370-3601	Email: MJamshidi@Marathonpetroleum.com

Berths Included in this Plan:

Name:	Approximate Geographic Boundary Coordinates:*
1. Amorco Wharf	1. 38.035564, -122.123111

**The number of berths on a terminal and the spatial positioning of berths are dependent on vessel size; thus, the geographic boundary coordinates are approximates only.*

2. STRATEGY DETAILS

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2.1 **[Strategy 1]**

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d. Mobile land-based connection system with mobile or fixed shore-based treatment system

Number of **vessels** expected to use this strategy (annual): 12

Number of vessel **visits** expected to use this strategy (annual): 36

Berths where equipment will be used:

1. Amorco Wharf

Schedule for installing equipment:

Project:	Estimated Completion Date:
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- C&C barges will not interfere with containment boom.
- C&C barge mooring systems will not impact submerged utilities crossing navigational channels.

- Adequate emergency preparedness to ensure safety of barge-based system operators in close proximity to hazardous cargo.
- Ability to deliver exhaust to a shore-based treatment unit within the acceptable range of critical process variables such as temperature.

2.2 **[Strategy 2, if needed]**

Identification and description of all necessary equipment:

Equipment:	Location:
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Number of **vessels** expected to use this strategy (annual): TBD

Number of vessel **visits** expected to use this strategy (annual): TBD

Berths where equipment will be used:

1. See "Innovative Concept Application" submittal

Schedule for installing equipment:

Project:	Estimated Completion Date:
See "Innovative Concept Application" submittal	See "Innovative Concept Application" submittal

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Commissioning vessels equipped with shore power that is installed on the side of the vessel facing the wharf when berthed if shore power is installed at berth.		
If the commissioned shore power vessel is berthed in a way that prevents it from connecting to shore power, and shore power is installed at the berth, the terminal may use a TIE or must provide an alternative CARB Approved Emission Control Strategy (CAECS) compatible with the vessel.		
Controlling emissions at berth without shore power		
Communicate with vessel prior to arrival		
Ensure proper positioning of vessel		
Record data on emission control strategy used		
Submit vessel visit information to CARB per regulation requirement		
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Name: Robert S. Hanks	Title: Refining General Manager
Signature: Robert S Hanks	Date: 11-30-2021

TESORO REFINING & MARKETING COMPANY LLC
INNOVATIVE CONCEPT APPLICATION

For Avon Terminal and Amorco Terminal