THE PORT OF LOS ANGELES
425 S. Palos Verdes Street Post Office Box 151 San Pedro, CA 90733-0151 TEL/TDD 310 SEA-PORT www.portoflosangeles.org



January 25, 2024

Chief, Transportation and Toxics Division
California Air Resources Board
1001 I Street
Sacramento, CA 95814
*(via E-mail: Shorepower@arb.ca.gov)*

**SUBJECT: PORT OF LOS ANGELES UPDATED PORT PLAN SUBMISSION FOR CALIFORNIA AIR RESOURCES BOARD AT-BERTH REGULATION**

The City of Los Angeles Harbor Department would like to thank the California Air Resource Board (CARB) staff for the time and effort that has been spent assisting us in completing our Port Plan for the CARB At-Berth Regulation requirement at the Port of Los Angeles. After almost a year of coordinating with our tanker and auto carrier terminals, we are pleased to submit our updated Port Plan.

Please contact Amber Coluso via email at acoluso@portla.org with any questions regarding our submitted Port Plan.

Sincerely,

LISA WUNDER
Acting Director of Environmental Management

LW:TP:AC:ba
APP No.: 201210-542

cc: Angela Csondes, acsondes@arb.ca.gov
Jonathan Foster, jonathan.foster@arb.ca.gov

# Port of Los Angeles
# At-Berth Port Plan

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

**Contents**

1. Port of Los Angeles Port Plan
    - Section 1: General Information
    - Section 2: Terminal Details (2.1 – 2.14)
    - Section 3: Port-Specific Berthing Restrictions
    - Section 4: Signature of Port Representative
    - Attachments A-P: Terminal Plans Referenced in Section 2
2. Port of Los Angeles Combined Port Plan/Terminal Plan for World Cruise Terminal

## 1. GENERAL INFORMATION

Port Contact Name: Amber Coluso

| Phone Number: (310) 732-3950 | Email: acoluso@portla.org |
|---|---|

*Terminals Included in this Plan:*

| Name: | Geographic Boundary Coordinates: |
|---|---|
| 1. APM Terminals (APMT) | 1. 33.722090886996625, -118.25254438337515 |
| 2. West Basin Container Terminal (CS) | 2. 33.756491978297944, -118.2883656707375 |
| 3. Phillips 66 | 3. 33.75550245219525, -118.27207489342517 |
| 4. Everport | 4. 33.74319965018955, -118.26468118948587 |
| 5. Fenix Marine Services | 5. 33.74134726929683, -118.25331298693834 |
| 6. Kinder Morgan | 6. 33.75683899474685, -118.28017520886124 |
| 7. Ultramar | 7. 33.75997302835016, -118.26669471196274 |
| 8. PBF Energy | 8. 33.734901549457234, -118.27277912250663 |
| 9. Shell Mormon Island Terminal | 9. 33.75433052370465, -118.26739388705505 |
| 10. TraPac | 10. 33.77056754790128, -118.26734023042205 |
| 11. Vopak | 11. 33.76648577062244, -118.26006492568224 |
| 12. Wallenius Wilhelmsen | 12. 33.7690695347976, -118.25803662615778 |
| 13. Everglades Terminal (WBCT) | 13. 33.759357363825934, -118.28791607308987 |
| 14. Yusen Terminals | 14. 33.75480470379808, -118.25695173480659 |
| 15. SSA Pacific | 15. 33.7244589648447, -118.27615445460938 |
| 16. Shore Terminals | 16. 33.779605, -118.233935 |

## 2. TERMINAL DETAILS

*Terminal details can be found on the subsequent pages.*

| 2.6. **Kinder Morgan** |
|---|
| *Identification and description of which strateg(ies) terminal will use for compliance:*<br><br>Kinder Morgan intends to contract with a CARB-approved third-party barge-based emissions control system. See **Attachment F** for more details. |
| *Equipment purchases and/or construction that are in progress or must still be completed to reduce emissions:*<br><br>Not applicable – Kinder Morgan intends to contract with third-party provider when approved. |
| *Schedule for installing equipment and/or any necessary construction projects:*<br><br>Not applicable – Kinder Morgan intends to contract with third-party provider when approved. |
| *Division of responsibilities for enacting infrastructure:*<br><br><u>Port:</u><br>Permit the operation of Emission Control Barge in POLA waterways.<br><br><u>Terminal:</u><br>Contract with 3rd party service provider. |
| *Terminal approval of responsibilities:*<br>By signing below, the terminal's responsible officer confirms that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury.<br><br>Name: William Toepfer — Title: Director of Operations<br>Signature: — Date: January 8, 2024 |

## 3. PORT-SPECIFIC BERTHING RESTRICTIONS

The Port does not impose any berthing restrictions on terminals. Restrictions imposed by terminal operators themselves may be found in their respective terminal plans (see attachments).

## 4. SIGNATURES

*By signing below, the port's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

Name: Michael DiBernardo — Title: Deputy Executive Director

Signature: Michael DiBernardo — Date: Jan 24, 2024

# ATTACHMENT F

# L.A. Harbor Terminal (Kinder Morgan)
# 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: Jordan Neuner

Phone Number: 310-628-7350 | Email: Jordan_Neuner@kindermorgan.com

*Berths included in this Plan:*

| Name: | Approximate Geographic Boundary Coordinates:* |
|---|---|
| 1. Berth 118/119 | 1. [33° 45'22.39"N 118° 16'52.03"W] |

**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

*Strategy/strategies used to comply with the requirements for ocean-going vessels visiting each berth:*

1. Emissions Capture and Control - Barge Based

### 2.1 Strategy 1 - Emissions Control Barge (3rd Party Service Provider)

*Identification and description of all necessary equipment:*

| Equipment: | Location: |
|---|---|
| 1. Preconditioning Chamber. | 1. Barge |
| 2. Cloud Generation Chambers. | 2. Barge |
| 3. System ID Fan. | 3. Barge |
| 4. Selective Catalytic Reduction (SCR). | 4. Barge |
| 5. Heater (Burner). | 5. Barge |
| 6. Heat Exchanger. | 6. Barge |
| 7. Exhaust Intake Bonnet (EIB). | 7. Barge |
| 8. Articulating Arm. | 8. Barge |
| 9. Placement Tower. | 9. Barge |

Number of vessels expected to use this strategy (annual): 40

*Berths where equipment will be used:*

Berth 118/119

*Schedule for installing equipment:*

| Project: | Estimated Completion Date: |
|---|---|
| 1. Emission Control Barge | 1. By the end of the second quarter of 2024, Kinder Morgan will collaborate with customers to initiate contracting with a 3rd party service upon CARB certification of a barge based CAECS for liquid bulk vessels. |

## 3. TERMINAL/PORT BERTHING RESTRICTIONS

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

**Kinder Morgan will engage a Marine Engineering Firm in conjunction barge-based technology companies to perform layout studies, mooring and passing vessel analysis considering the barge-based technologies currently under development. Target completion date is the end of the second quarter of 2024.**

## 4. DIVISION OF ROLES AND RESPONSIBILITIES

*Division of responsibilities for enacting infrastructure:*

Port:

- Permit the operation of Emission Control Barge in POLA waterways.
- Provide equipment or necessary infrastructure at terminal as determined through Terminal's Permit (lease) with the Port.
- Responsibility of uncontrolled emissions due to construction as determined by the Terminal's Permit (lease) with the Port.
- Responsibility of uncontrolled emissions from repair of Port owned infrastructure/equipment.

Terminal:

- By the end of the second quarter of 2024, collaborate with customers to contract with 3rd party service provider.
- Initiation of any construction through the Application for Port Permit (APP) process.
- Provide equipment or necessary infrastructure at terminal as determined through Terminal's Permit (lease) with the Port.
- Responsibility of uncontrolled emissions due to construction as determined by the Terminal's Permit (lease) with the Port.
- Responsibility of uncontrolled emissions from repair of Terminal owned infrastructure/equipment.

*Are there any contractual limitations applicable to the terminal relevant to enacting the infrastructure? If yes, describe.*

**Kinder Morgan is in the process of accessing and comparing the two currently viable barge emission capture technologies, CAEM and STAX, while also watching the market for others. Service proposals are being reviewed in lieu of negotiating and executing service contracts at this time. The expectation is to select a provider and initiate contracting with customers by the end of the second quarter of 2024.**

**Some risks we have identified include availability and scheduling should only one provider obtain CARB approval (single supplier); control technology interfacing with tanker vessel stack and safety requirements; recordkeeping, reporting, and training of facility personnel; readiness and ability of tanker vessels to facilitate control connection; and timeline for necessary agency permitting.**

*Port approval of responsibilities:*

By signing below, the port's responsible officer confirms that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury.

| | | | |
|---|---|---|---|
| Name: | Michael DiBernardo | Title: | Deputy Executive Director |
| Port: | Port of Los Angeles | | |
| Signature: | Michael DiBernardo | Date: | Jan 24, 2024 |

## 5. SIGNATURES

*By signing below, the terminal's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

| | | | |
|---|---|---|---|
| Name: | William Toepfer | Title: | Director of Operations |
| Signature: |  | Date: | 11-13-23 |

# Port of Los Angeles
# At-Berth Port Plan

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

**Contents**

## 1. GENERAL INFORMATION

Port Contact Name: Amber Coluso

| Phone Number: (310) 732-3950 | Email: acoluso@portla.org |
|---|---|

*Terminals Included in this Plan:*

| Name: | Geographic Boundary Coordinates: |
|---|---|
| 1. APM Terminals (APMT) | 1. 33.722090886996625, -118.25254438337515 |
| 2. West Basin Container Terminal (CS) | 2. 33.756491978297944, -118.2883656707375 |
| 3. Phillips 66 | 3. 33.75550245219525, -118.27207489342517 |
| 4. Everport | 4. 33.74319965018955, -118.26468118948587 |
| 5. Fenix Marine Services | 5. 33.74134726929683, -118.25331298693834 |
| 6. Kinder Morgan | 6. 33.75683899474685, -118.28017520886124 |
| 7. Ultramar | 7. 33.75997302835016, -118.26669471196274 |
| 8. PBF Energy | 8. 33.734901549457234, -118.27277912250663 |
| 9. Shell Mormon Island Terminal | 9. 33.75433052370465, -118.26739388705505 |
| 10. TraPac | 10. 33.77056754790128, -118.26734023042205 |
| 11. Vopak | 11. 33.76648577062244, -118.26006492568224 |
| 12. Wallenius Wilhelmsen | 12. 33.7690695347976, -118.25803662615778 |
| 13. Everglades Terminal (WBCT) | 13. 33.759357363825934, -118.28791607308987 |
| 14. Yusen Terminals | 14. 33.75480470379808, -118.25695173480659 |
| 15. SSA Pacific | 15. 33.7244589648447, -118.27615445460938 |
| 16. Shore Terminals | 16. 33.779605, -118.233935 |

## 2. TERMINAL DETAILS

*Terminal details can be found on the subsequent pages.*

### 2.8. **Phillips 66**

*Identification and description of which strateg(ies) terminal will use for compliance:*

Phillips 66 is planning to comply through the terminal exception of low activity terminal. See **Attachment C** for more details.

*Equipment purchases and/or construction that are in progress or must still be completed to reduce emissions:*

Not applicable.

*Schedule for installing equipment and/or any necessary construction projects:*

Not applicable

*Division of responsibilities for enacting infrastructure:*

Port:

- Construction/permit approval through the Application for Port Permit (APP) process
- Port to submit vessel visit information to CARB
- If technically feasible, provide equipment or necessary infrastructure at terminal as determined through Terminal's Permit (lease) with the Port
- Responsibility of uncontrolled emissions due to construction as determined by the Terminal's Permit (lease) with the Port
- Responsibility of uncontrolled emissions from repair of Port owned shore power infrastructure/equipment

Terminal:

- Initiation of construction through the Application for Port Permit (APP) process
- If technically feasible, provide equipment or necessary infrastructure at terminal as determined through Terminal's Permit (lease) with the Port
- Responsibility of uncontrolled emissions due to construction as determined by the Terminal's Permit (lease) with the Port

*Terminal approval of responsibilities:*
By signing below, the terminal's responsible officer confirms that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury.

Name: Mike Preston Title: Operations Manager

Signature: Date: 1/8/24

## 3. PORT-SPECIFIC BERTHING RESTRICTIONS

The Port does not impose any berthing restrictions on terminals. Restrictions imposed by terminal operators themselves may be found in their respective terminal plans (see attachments).

## 4. SIGNATURES

*By signing below, the port's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

Name: Michael DiBernardo Title: Deputy Executive Director

Signature: Michael DiBernardo Date: Jan 24, 2024

# ATTACHMENT C

# Phillips 66 Company Los Angeles Marine Terminal
# At Berth Terminal Plan (Revised)

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: Kurt Alvarado | |
| Phone Number: (310) 952-6206 | Email: kurt.s.alvarado@p66.com |
| *Berths Included in this Plan:*<br>Name:<br>1. Port of Los Angeles Berths 148 / 149<br>2. Port of Los Angeles Berths 150 / 151 | Approximate Geographic Boundary Coordinates:*<br>1. 33.755776, -118.273676<br>2. 33.754170, -118.271208 |
| **The number of berths on a terminal and the spatial positioning of berths are dependent on vessel size; thus, the geographic boundary coordinates are approximate only.* | |
| **2. STRATEGY DETAILS** | |
| *Strateg(ies) used to comply with the requirements for ocean-going vessels visiting each berth:*<br>1. Low-use terminal exemption<br>2. Third party barge-based California Air Resources Board (CARB), United States Coast Guard (USCG) and International Maritime Organization (IMO) approved and accepted for safe interfacing with tanker vessel's capture and control system | |
| **2.1 [Strategy 1 – Low Use Terminal]** | |
| *Identification and description of all necessary equipment:*<br>Equipment:<br>1. None | Location:<br>1. n/a |
| Number of **vessels** expected to use this strategy (annual): Up to 19 | |
| Number of vessel **visits** expected to use this strategy (annual): Up to 19 | |
| *Berths where equipment will be used:*<br>1. Port of Los Angeles Berths 148 / 149<br>2. Port of Los Angeles Berths 150 / 151 | |
| *Schedule for installing equipment:*<br>Project:<br>1. n/a | Estimated Completion Date:<br>1. n/a |
| **2.2 [Strategy 2, if needed – Barge Based CAECS]** | |
| *Identification and description of all necessary equipment:*<br>Equipment:<br>1. Emission capture and control system that is CARB, USCG and IMO approved and | Location:<br>1. Spudded or moored (for station keeping) barge at or near vessel stern |

accepted for safe interfacing with tanker vessels

Number of **vessels** expected to use this strategy (annual): Up to 75

Number of vessel **visits** expected to use this strategy (annual): Up to 75

*Berths where equipment will be used:*

1. Port of Los Angeles Berths 148 / 149
2. Port of Los Angeles Berths 150 / 151

*A terminal operator claiming that a physical and/or operational constraint will delay its ability to implement its preferred CARB approved control strategy to achieve emission reductions from vessels at berth according to the requirements of section 93130 et seq., must also include with its terminal plan a technical feasibility study evaluating if there are any other emission control options that could be implemented more quickly at the terminal:*

Provided as an attachment to this updated plan is the feasibility study prepared by Moffatt and Nichol for the Los Angeles Marine Terminal. This detailed study includes specific information regarding the Los Angeles Marine Terminal and the implementation of the control measures to comply with the regulation and a potential schedule for completion.

Not all potential compliance methods are reasonably foreseeable for tankers at the Los Angeles Marine Terminal. For example, CARB has determined that shore power is not a reasonably foreseeable compliance option for tankers because of significant infrastructure changes needed to the vessel itself. CARB also has noted that there are currently no on-board emission control strategies verified by CARB for ocean-going vessel applications, and that retrofitting existing vessels to run on the only known alternative fuel used for vessels – liquid natural gas – is physically difficult and unlikely to occur. Thus, CARB asserts that it is reasonably foreseeable that tankers would use the capture and control option as the primary means of compliance – meaning that tankers and tanker terminals unable to use a feasible capture and control system must rely on limited exceptions to the emissions rate requirements like VIE/TIE, qualifying for use of the remediation fund, or applying to CARB to approve an innovative concept.

The single viable compliance strategy for the Los Angeles Marine Terminal is the barge-based capture and control option. The third-party Moffatt and Nichol study estimated a barge-based capture and control system for the Los Angeles Marine Terminal to be available to Phillips 66 by entering a long-term service agreement with a barge vendor that is estimated to cost approximately $1 million upfront to establish the agreement, with an annual operations cost of approximately $1.99 million. There are currently no barge-based capture and control systems for marine oil terminals and tank vessels in the Port of Los Angeles region, and while a barge-based capture and control system is technically feasible, various factors could affect its completion and implementation. The estimated date for a system to be operational could be as early as April 2026, which is approximately 15 months after the CARB compliance deadline. There is no purchase option for Phillips 66.

To ensure an adequate supply of control equipment in the Port of Los Angeles, Phillips 66 requests there be at least two third-party barge-based capture and control system providers that are CARB, USCG and IMO approved and accepted for safe interfacing with tanker vessels in the Port of Los

Angeles Area prior to the compliance date for the facility. This is to ensure that competitive bids can be obtained before executing a contract with the successful bidder(s). Due to topside space limitations, land-based systems are not feasible due to hazardous zones and electrification is not feasible due to tanker incompatibility and safety concerns.

These constraints and others, including other terminal-based compliance technologies, directly impacting the operability and safety of the ship/shore interface are documented in the Moffatt and Nichol Feasibility Study and the DNV "CARB OGV at Berth Regulation Emissions Control Technology Assessment for Tankers" reports that are provided as an attachment.

*Schedule for installing equipment:*

| Project: | Estimated Completion Date: |
|---|---|
| 1. Third party vendor | 1. April 2026 |

## 3. TERMINAL OPERATOR/PORT BERTHING RESTRICTIONS

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

Phillips 66 complies with all federal, state, and local requirements. Terminal restrictions are documented in the latest Terminal Operating Limits as approved and regulated by the California State Lands Commission (CSLC) in compliance with California Building Code (CBC) Chapter 31F: Marine Oil Terminals also known as the Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS). Additional berthing restrictions are identified in the facility Marine Operations Manual.

## 4. DIVISION OF ROLES AND RESPONSIBILITIES

*Division of responsibilities for enacting infrastructure:*

Port:

- Permit the operation of Emission Control Barge in POLA waterways.

Terminal:

- Contract with 3rd party CAECS service provider
- Require use of the 3rd party CAECS service provider on vessels that call to terminal
- These responsibilities only go into effect if P66 is no longer designated a low activity terminal.

*Are there any contractual limitations applicable to the terminal relevant to enacting the infrastructure? If yes, describe.*

*Port approval of responsibilities:*

The Port's responsible officer confirms by signing below that he/she has reviewed the division of responsibilities set forth in Section 4 of this At Berth Terminal Plan and agrees to them under penalty

of perjury. The Port does not make any representations or attestations about the accuracy, feasibility, or legality of the Terminal Operator's proposed compliance strategy set forth in this At Berth Terminal Plan.

| | |
|---|---|
| Name: Michael DiBernardo | Title: Deputy Executive Director |
| Port: Port of Los Angeles | |
| Signature: Michael DiBernardo | Date: Jan 24, 2024 |

**5. SIGNATURE OF TERMINAL OPERATOR**

*By signing below, the Terminal Operator's responsible officer 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: Mike Preston | Title: Operations Manager, Los Angeles Refinery |
| Signature: | Date: 1/8/24 |

# Port of Los Angeles
# At-Berth Port Plan

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

**Contents**

| 1. GENERAL INFORMATION | |
|---|---|
| Port Contact Name: Amber Coluso | |
| Phone Number: (310) 732-3950 | Email: acoluso@portla.org |

*Terminals Included in this Plan:*

| Name: | Geographic Boundary Coordinates: |
|---|---|
| 1. APM Terminals (APMT) | 1. 33.722090886996625, -118.25254438337515 |
| 2. West Basin Container Terminal (CS) | 2. 33.756491978297944, -118.2883656707375 |
| 3. Phillips 66 | 3. 33.75550245219525, -118.27207489342517 |
| 4. Everport | 4. 33.74319965018955, -118.26468118948587 |
| 5. Fenix Marine Services | 5. 33.74134726929683, -118.25331298693834 |
| 6. Kinder Morgan | 6. 33.75683899474685, -118.28017520886124 |
| 7. Ultramar | 7. 33.75997302835016, -118.26669471196274 |
| 8. PBF Energy | 8. 33.734901549457234, -118.27277912250663 |
| 9. Shell Mormon Island Terminal | 9. 33.75433052370465, -118.26739388705505 |
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| 11. Vopak | 11. 33.76648577062244, -118.26006492568224 |
| 12. Wallenius Wilhelmsen | 12. 33.7690695347976, -118.25803662615778 |
| 13. Everglades Terminal (WBCT) | 13. 33.759357363825934, -118.28791607308987 |
| 14. Yusen Terminals | 14. 33.75480470379808, -118.25695173480659 |
| 15. SSA Pacific | 15. 33.7244589648447, -118.27615445460938 |
| 16. Shore Terminals | 16. 33.779605, -118.233935 |

## 2. TERMINAL DETAILS

*Terminal details can be found on the subsequent pages.*

### 2.8. **PBF Energy**

*Identification and description of which strateg(ies) terminal will use for compliance:*

PBF Energy is planning to comply through the terminal exception of low activity terminal. See **Attachment H** for more details.

*Equipment purchases and/or construction that are in progress or must still be completed to reduce emissions:*

Not applicable.

*Schedule for installing equipment and/or any necessary construction projects:*

Not applicable

*Division of responsibilities for enacting infrastructure:*

Port:

- Construction/permit approval through the Application for Port Permit (APP) process
- Port to submit vessel visit information to CARB
- If technically feasible, provide equipment or necessary infrastructure at terminal as determined through Terminal's Permit (lease) with the Port
- Responsibility of uncontrolled emissions due to construction as determined by the Terminal's Permit (lease) with the Port
- Responsibility of uncontrolled emissions from repair of Port owned shore power infrastructure/equipment

Terminal:

- Initiation of construction through the Application for Port Permit (APP) process
- If technically feasible, provide equipment or necessary infrastructure at terminal as determined through Terminal's Permit (lease) with the Port
- Responsibility of uncontrolled emissions due to construction as determined by the Terminal's Permit (lease) with the Port

*Terminal approval of responsibilities:*

By signing below, the terminal's responsible officer confirms that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury.

| | | | |
|---|---|---|---|
| Name: | Michael DiBernardo | Title: | Deputy Executive Director |
| Signature: | Michael DiBernardo | Date: | Jan 24, 2024 |

## 3. PORT-SPECIFIC BERTHING RESTRICTIONS

The Port does not impose any berthing restrictions on terminals. Restrictions imposed by terminal operators themselves may be found in their respective terminal plans (see attachments).

## 4. SIGNATURES

*By signing below, the port's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

| | | | |
|---|---|---|---|
| Name: | Joshua Briscoe | Title: | Area Manager |
| Signature: | | Date: | 12-18-23 |

# ATTACHMENT H

# *PBF Energy – Southwest Terminal*
# At-Berth Terminal Plan, Updated Submission

This updated terminal plan has been prepared pursuant Section 93130.14(a)(2)(F)) 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: Joshua Briscoe

Phone Number: (310) 212-4211 | Email: Joshua.briscoe@pbfenergy.com

*Berths included in this Plan:*

| Name: | Approximate Geographic Boundary Coordinates:* |
|---|---|
| 1. LA – B238 | 3. 33°43'04.47 N, 118°16'24.99 W |
| 2. LA – B239 | 4. 33°43'59.41 N, 118°16'22.28 W |

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

## 2. STRATEGY DETAILS

*Strategy/strategies used to comply with the requirements for ocean-going vessels visiting each berth:*

1. No controls are planned; 93130.10 (a)(2) Terminal Exceptions / Low Activity Terminal continues to apply.

### 2.1 [Strategy 1]

*Identification and description of all necessary equipment:*

| Equipment: | Location: |
|---|---|
| 1. None - Terminal Exception / Low Activity Terminal | 1. 33°43'04.47 N, 118°16'24.99 W |
| 2. None - Terminal Exception / Low Activity Terminal | 2. 33°43'59.41 N, 118°16'22.28 W |

Number of vessels expected to use this strategy (annual): 19

*Berths where equipment will be used:*

1. N/A

*Schedule for installing equipment:*

| Project: | Estimated Completion Date: |
|---|---|
| 1. None - Terminal Exception / Low Activity Terminal | 1. N/A |
| 2. None - Terminal Exception / Low Activity Terminal | 2. N/A |

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

*Identification and description of all necessary equipment:*

| Equipment: | Location: |
|---|---|
| 1. If technically feasible, the control equipment could consist of:<br>a. a barge based emissions capture unit consisting of a barge mounted, crane/boom, stack adaptor, and flexible ducting: or<br>b. Barge-based emissions control system including inlet ducting, treatment system, exhaust fan, and power supply to meet terminal maximum flow rates. | 1. 33°43'04.47 N, 118°16'24.99 W |
| 2. If technically feasible, the control equipment could consist of:<br>a. a barge based emissions capture unit consisting of a barge mounted, crane/boom, stack adaptor, and flexible ducting: or<br>b. Barge-based emissions control system including inlet ducting, treatment system, exhaust fan, and power supply to meet terminal maximum flow rates. | 2. 33°43'59.41 N, 118°16'22.28 W |

Number of vessels expected to use this strategy (annual): None

*Berths where equipment will be used:*

Not Applicable

*Schedule for installing equipment:*

| Project: | Estimated Completion Date: |
|---|---|
| Not Applicable | Not applicable at this time but ultimately would be dependent on availability of equipment verses demand in the Port of Los Angeles. |

## 3. TERMINAL/PORT BERTHING RESTRICTIONS

*Are there any terminal or port specific berthing restrictions? If yes, please describe.*
[May include requirements to berth starboard- or port-side, channel constrictions, etc.]

All vessels must moor port side to the berth. If technically feasible, barge-based systems would sit at Starboard side and Aft of the vessel due to traffic in the main channel.

## 3. DIVISION OF ROLES AND RESPONSIBILITIES

*Division of responsibilities for enacting infrastructure:*

Port:

- Construction / Permit approval through the Application for Port Permit (APP) process
- Port to submit vessel visit information to CARB
- If technically feasible, provide equipment or necessary infrastructure at terminal as determined through Terminal's Permit (lease) with the Port
- Responsibility of uncontrolled emissions due to construction as determined by the Terminal's Permit (lease) with the Port
- Responsibility of uncontrolled emissions from repair of Port owned shore power infrastructure/equipment

Terminal:

- Initiation of construction through the Application for Port Permit (APP) process
- If technically feasible, provide equipment or necessary infrastructure at terminal as determined through Terminal's Permit (lease) with the Port
- Responsibility of uncontrolled emissions due to construction as determined by the Terminal's Permit (lease) with the Port

*Are there any contractual limitations applicable to the terminal relevant to enacting the infrastructure? If yes, describe.*

No

*Port approval of responsibilities:*
By signing below, the port's responsible officer confirms that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury.

Name: Michael DiBernardo Title: Deputy Executive Director

Port: Port of Los Angeles

Signature: Michael DiBernardo Date: Jan 24, 2024

## 4. SIGNATURES

*By signing below, the terminal's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

Name: Joshua Briscoe Title: Area Manager

Signature: Date: 11/10/2023

# Port of Los Angeles
# At-Berth Port Plan

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

**Contents**

## 1. GENERAL INFORMATION

Port Contact Name: Amber Coluso

| Phone Number: (310) 732-3950 | Email: acoluso@portla.org |
|---|---|

*Terminals Included in this Plan:*

| Name: | Geographic Boundary Coordinates: |
|---|---|
| 1. APM Terminals (APMT) | 1. 33.722090886996625, -118.25254438337515 |
| 2. West Basin Container Terminal (CS) | 2. 33.756491978297944, -118.2883656707375 |
| 3. Phillips 66 | 3. 33.75550245219525, -118.27207489342517 |
| 4. Everport | 4. 33.74319965018955, -118.26468118948587 |
| 5. Fenix Marine Services | 5. 33.74134726929683, -118.25331298693834 |
| 6. Kinder Morgan | 6. 33.75683899474685, -118.28017520886124 |
| 7. Ultramar | 7. 33.75997302835016, -118.26669471196274 |
| 8. PBF Energy | 8. 33.734901549457234, -118.27277912250663 |
| 9. Shell Mormon Island Terminal | 9. 33.75433052370465, -118.26739388705505 |
| 10. TraPac | 10. 33.77056754790128, -118.26734023042205 |
| 11. Vopak | 11. 33.76648577062244, -118.26006492568224 |
| 12. Wallenius Wilhelmsen | 12. 33.7690695347976, -118.25803662615778 |
| 13. Everglades Terminal (WBCT) | 13. 33.759357363825934, -118.28791607308987 |
| 14. Yusen Terminals | 14. 33.75480470379808, -118.25695173480659 |
| 15. SSA Pacific | 15. 33.7244589648447, -118.27615445460938 |
| 16. Shore Terminals | 16. 33.779605, -118.233935 |

## 2. TERMINAL DETAILS

*Terminal details can be found on the subsequent pages.*

### 2.8. **Shell Mormon Island**

*Identification and description of which strateg(ies) terminal will use for compliance:*

Shore Terminals is planning to comply through the terminal by contracting with a 3rd party CAECS provider. See **Attachment I** for more details.

*Equipment purchases and/or construction that are in progress or must still be completed to reduce emissions:*

See **Attachment I** for more details.

*Schedule for installing equipment and/or any necessary construction projects:*

See **Attachment I** for more details.

*Division of responsibilities for enacting infrastructure:*

Port:

- Permit the operation of Emission Control Barge in POLA waterways.

Terminal:

- Contract with 3rd party CAECS service provider.
- Require use of the 3rd party CAECS service provider on vessels that call to terminal.

*Terminal approval of responsibilities:*

By signing below, the terminal's responsible officer confirms that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury.

| | |
|---|---|
| Name: Lee Cheatham | Title: Distribution Ops Mgr. |
| Signature: | Date: 1/22/24 |

## 3. PORT-SPECIFIC BERTHING RESTRICTIONS

The Port does not impose any berthing restrictions on terminals. Restrictions imposed by terminal operators themselves may be found in their respective terminal plans (see attachments).

## 4. SIGNATURES

*By signing below, the port's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

| | |
|---|---|
| Name: Michael DiBernardo | Title: Deputy Executive Director |
| Signature: Michael DiBernardo | Date: Jan 24, 2024 |

# ATTACHMENT I

# Shell Mormon Island -Berths 167-169
# 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: Lee Cheatham

| Phone Number: 832.337.7040 | Email: Lee.Cheatham@SHELL.com |
|---|---|

*Berths Included in this Plan:* ***Shell Mormon Island Terminal***

| Name: | Approximate Geographic Boundary Coordinates:* |
|---|---|
| 17. Berth 168 | 1. Latitude 33 degrees 45.242 minutes N<br>Longitude 118 degrees 16.072 minutes W |

**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

Strategy/strategies used to comply with the requirements for ocean-going vessels visiting each berth:

1. Barge-based CARB Approved Emission Capture and Control Equipment
2. Complimentary to Strategy 1 Barge-based CARB Approved Emission Capture and Control Equipment, utilize CAECS providers and associated equipment with approved Innovative Concepts Strategy to control non-regulated OSV emissions with CAECS equipment to produce emissions credits. These credits would be available for use in situations where the tanker emissions could not be controlled due to availability of primary CAECS operator, tanker stack configuration, etc.

2.1 **[Strategy 1]**

*Identification and description of all necessary equipment:*

| Equipment: | Location: |
|---|---|
| 1. Barge-based CAECS Third Party operator provided emission capture and control equipment | 1. Berth 168 |

Number of vessels expected to use this strategy (annual): 100

*Berths where equipment will be used:*

1. Berth 168

*Schedule for installing equipment:*

| Project: | Estimated Completion Date: |
|---|---|
| 1. Contract services with a capture & control system | 1. Prior to January 1, 2025 |
| 2. Tanker Capture and Control Equipment | 2. April 1, 2025* |

*Contingent upon Technology development for safe tanker operations and certified by CARB

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

*Identification and description of all necessary equipment:*

Equipment:

1. Barge-based CAECS Third Party operator provided emission capture and control equipment with an approved Innovative Concepts application for capture of unregulated emissions and viable market credit system.

Location:

1. Various locations in Port

Number of vessels expected to use this strategy (annual): 20

*Berths where equipment will be used:*

1. Oil Terminals
2. Anchorage
3. Bulk Terminals

*Schedule for installing equipment:*

Project:

1. Use of approved innovative concept by barge-based CAECS Third Party operator
2. Tanker Capture and Control Equipment

Estimated Completion Date:

1. January 1, 2025*
   * Contingent upon: (1) the CAECS providers in the Port of LA receiving approval from CARB of an "Innovative Concept" alternative emission reduction program resulting in emission credits and technology development for safe tanker operations and CARB certification, (2) having marketable credit system available in the market, (3) successful negotiations with CAECS provider.
2. April 1, 2025*
   *Contingent upon Technology development for safe tanker operations and certified by CARB

## 3. TERMINAL/PORT BERTHING RESTRICTIONS

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

If a barge based CAECS is used, CAECS Equipment will be located aft of the stern or along starboard side of tanker. For larger tankers 50- 80K DWT tankers, CAECS Equipment may impinge on Rio Tinto lease or navigation lines in the channel.

## 4. DIVISION OF ROLES AND RESPONSIBILITIES

*Division of responsibilities for enacting infrastructure:*

Port:

- Permit the operation of Emission Control Barge in POLA waterways.

Terminal:

- Contract with 3rd party CAECS service provider.
- Require use of the 3rd party CAECS service provider on vessels that call to terminal.

*Are there any contractual limitations applicable to the terminal relevant to enacting the infrastructure? If yes, describe.*

*Port approval of responsibilities:*

The Port's responsible officer confirms by signing below that he/she has reviewed the division of responsibilities set forth in Section 4 of this At Berth Terminal Plan and agrees to them under penalty of perjury. The Port does not make any representations or attestations about the accuracy, feasibility, or legality of the Terminal Operator's proposed compliance strategy set forth in this At Berth Terminal Plan.

| | | | |
|---|---|---|---|
| Name: | Michael DiBernardo | Title: | Deputy Executive Director |
| Port: | Port of Los Angeles | | |
| Signature: | Michael DiBernardo | Date: | Jan 24, 2024 |

## 5. SIGNATURES

*By signing below, the terminal's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

| | | | |
|---|---|---|---|
| Name: | Lee Cheatham | Title: | Distribution Operations Manager |
| Signature: | | Date: | 1/22/24 |

# Port of Los Angeles
# At-Berth Port Plan

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

**Contents**

## 1. GENERAL INFORMATION

Port Contact Name: Amber Coluso

Phone Number: (310) 732-3950 | Email: acoluso@portla.org

*Terminals Included in this Plan:*

| Name: | Geographic Boundary Coordinates: |
|---|---|
| 1. APM Terminals (APMT) | 1. 33.722090886996625, -118.25254438337515 |
| 2. West Basin Container Terminal (CS) | 2. 33.756491978297944, -118.2883656707375 |
| 3. Phillips 66 | 3. 33.75550245219525, -118.27207489342517 |
| 4. Everport | 4. 33.74319965018955, -118.26468118948587 |
| 5. Fenix Marine Services | 5. 33.74134726929683, -118.25331298693834 |
| 6. Kinder Morgan | 6. 33.75683899474685, -118.28017520886124 |
| 7. Ultramar | 7. 33.75997302835016, -118.26669471196274 |
| 8. PBF Energy | 8. 33.734901549457234, -118.27277912250663 |
| 9. Shell Mormon Island Terminal | 9. 33.75433052370465, -118.26739388705505 |
| 10. TraPac | 10. 33.77056754790128, -118.26734023042205 |
| 11. Vopak | 11. 33.76648577062244, -118.26006492568224 |
| 12. Wallenius Wilhelmsen | 12. 33.7690695347976, -118.25803662615778 |
| 13. Everglades Terminal (WBCT) | 13. 33.759357363825934, -118.28791607308987 |
| 14. Yusen Terminals | 14. 33.75480470379808, -118.25695173480659 |
| 15. SSA Pacific | 15. 33.7244589648447, -118.27615445460938 |
| 16. Shore Terminals | 16. 33.779605, -118.233935 |

## 2. TERMINAL DETAILS

*Terminal details can be found on the subsequent pages.*

### 2.8. **Shore Terminals**

*Identification and description of which strateg(ies) terminal will use for compliance:*

Shore Terminals is planning to comply through the terminal by contracting with a 3rd party CAECS provider. See **Attachment P** for more details.

*Equipment purchases and/or construction that are in progress or must still be completed to reduce emissions:*

See **Attachment P** for more details.

*Schedule for installing equipment and/or any necessary construction projects:*

See **Attachment P** for more details.

*Division of responsibilities for enacting infrastructure:*

Port:

- Review the barge-based CAECS system location to confirm that it will not impact navigation
- As applicable, provide equipment or necessary infrastructure at terminal as negotiated by the parties

Terminal Operator:

- Finalize contract with barge-based C&C vendor
- Update TOLs, update DOM and obtain USCG approval

Barge Based C&C Vendor:

- Satisfy multiple variables that are yet to be demonstrated (e.g. USCG approvals, meeting hazard classifications, MTSA/Security concerns, etc.)
- Obtaining CARB certification of barge-based C&C system
- Fabricate and make available barge-based C&C system for the POLA Berth 163

*Terminal approval of responsibilities:*

By signing below, the terminal's responsible officer confirms that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury.

| | | | |
|---|---|---|---|
| Name: | **Christopher Vratil** | Title: | **General Manager** |
| Signature: | Chris Vratil | Date: | **18 January 2024** |

## 3. PORT-SPECIFIC BERTHING RESTRICTIONS

The Port does not impose any berthing restrictions on terminals. Restrictions imposed by terminal operators themselves may be found in their respective terminal plans (see attachments).

## 4. SIGNATURES

*By signing below, the port's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

| | | | |
|---|---|---|---|
| Name: | Michael DiBernardo | Title: | Deputy Executive Director |
| Signature: | Michael DiBernardo | Date: | Jan 24, 2024 |

# ATTACHMENT P

# Shore Terminals LLC dba NuStar
# At-Berth Terminal Plan

This terminal plan has been prepared pursuant Section 93130.14(b)(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: Christopher Vratil | |
| Phone Number: (361) 906-7454 | Email: chris.vratil@nustarenergy.com |
| *Berths Included in this Plan:*<br>Name:<br>1. Port of Los Angeles Berth 163 | Approximate Geographic Boundary Coordinates:*<br>33 deg 45' 37" N, 118 deg 16' 02" W |
| **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** |
|---|
| *Strategies used to comply with the requirements for ocean-going vessels visiting each berth:*<br><br>Shore Terminals LLC (Shore Terminals) continues to evaluate a range of potential CAECS technologies that can be safely and reliably implemented, including shore power, shore-based and barge-based capture and control (C&C). Based on the company's feasibility studies to date, Shore Terminals has identified barge-based C&C as the most feasible CAECS, and likely the first available technology to comply with the regulation for tanker vessels at Berth 163. The company is accordingly evaluating such barge-based C&C systems under development by several companies and has initiated contract discussions with one vendor. The final decision will be based on multiple factors, including, among other things, demonstrated successful testing, equipment approval for tanker vessels, equipment availability, and vessel/berth compatibility.<br><br>Furthermore, Shore Terminals is currently in lease negotiations with the Port of Los Angeles regarding the future operation of Berth 163. After the finalization of the lease, the dock at Berth 163 will be demolished and a new dock constructed. The planned demolition of the dock limits the potentially feasible control technology until the new dock is constructed. Depending on the construction and design of the new dock, Shore Terminals may amend its terminal plan to incorporate a different CAECS for the new dock. |
| *Number of vessels expected to use this strategy (annual): 29* |
| *Number of vessel visits expected to use this strategy (annual): 29* |
| *Berths where equipment will be used: POLA* Berth 163 |

*Equipment purchases and/or construction that are in progress or must still be completed to reduce emissions:*

Shore Terminals must secure a third-party CAECS provider who will dictate the necessary equipment and construction. As referenced above, Shore Terminals is currently in negotiations to contract with a barge C&C provider.

*Schedule for installing equipment and/or any necessary construction projects:*

| Project: | Estimated Completion Date: |
|---|---|
| 1. Barge-Based Capture & Control | 1. January 1, 2025 commencement of barge-based emissions capture and control |

## 3. TERMINAL OPERATOR/PORT BERTHING RESTRICTIONS

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

- Berthing restrictions for the existing Berth 163 are regulated by the existing MOTEMS terminal operating limits and other federal, state, and local requirements.
- For a barge-based C&C system, the CAECS barge will need to be either intrinsically safe or operated outside the ocean-going vessel's hazardous zone. The industry appears to be moving in the direction of operating outside of the hazardous zone. In either case, due to terminal siting limitations and the location of mooring lines at Berth 163, the CAECS barge will be located waterside of the pierhead line. Further review with the Port of LA will be required to determine if the CAECS barge location will impact navigation. Lastly, the CAECS barge must not inhibit the vessel's ability to get underway within 30 min in an emergency situation.
- Shore Terminals will also rely on input from the third-party barge-based C&C service provider to identify any additional restrictions.

## 4. DIVISION OF ROLES AND RESPONSIBILITIES

*Division of responsibilities for enacting infrastructure:*

Port:

- Review the barge-based CAECS system location to confirm that it will not impact navigation
- As applicable, provide equipment or necessary infrastructure at terminal as negotiated by the parties

Terminal Operator:

- Finalize contract with barge-based C&C vendor
- Update TOLs, update DOM and obtain USCG approval

Barge Based C&C Vendor:

- Satisfy multiple variables that are yet to be demonstrated (e.g. USCG approvals, meeting hazard classifications, MTSA/Security concerns, etc.)
- Obtaining CARB certification of barge-based C&C system
- Fabricate and make available barge-based C&C system for the POLA Berth 163

*Are there any contractual limitations applicable to the terminal relevant to enacting the infrastructure? If yes, describe.*

- Considering the selected barge-based capture and control vendor meets the various requirements, a long-term service agreement with the service provider will be required.
- Contractual limitations applicable to the terminal relevant to enacting the barge-based C&C system and meeting the January 1, 2025 compliance date include:
  - Shore Terminals expects at least one company will satisfactorily complete testing on tankers by the first quarter of 2024
  - A barge-based CACES system will have to be approved by CARB by mid-2024

| |
|---|
| ○ Assuming the CARB approval is issued by mid-2024, Shore Terminals will finalize the selection of the barge-based vendor and enter into a service agreement with a target equipment availability for use at Berth 163 on January 1, 2025 |
| *Port approval of responsibilities:*<br><br>The Port's responsible officer confirms by signing below that he/she has reviewed the division of responsibilities set forth in Section 4 of this At Berth Terminal Plan and agrees to them under penalty of perjury. The Port does not make any representations or attestations about the accuracy, feasibility, or legality of the Terminal Operator's proposed compliance strategy set forth in this At Berth Terminal Plan.<br><br>Name: Michael DiBernardo Title: Deputy Executive Director |
| Port: Port of Los Angeles |
| Signature: Michael DiBernardo Date: Jan 24, 2024 |

| **5. SIGNATURE OF TERMINAL OPERATOR** |
|---|
| *By signing below, the Terminal Operator's responsible officer confirms under penalty of perjury that he/she has reviewed this At Berth Terminal Plan and is submitting this At Berth Terminal Plan as Shore Terminals LLC's compliance strategy for the At Berth Regulation. Shore Terminals LLC understands this plan is subject to verification by CARB staff.*<br><br>Name: Christopher Vratil Title: GM Pipeline and Terminal Operations |
| Signature: Chris Vratil Date: **15 December 2023** |

# Port of Los Angeles
# At-Berth Port Plan

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

**Contents**

| 1. GENERAL INFORMATION | |
|---|---|
| Port Contact Name: Amber Coluso | |
| Phone Number: (310) 732-3950 | Email: acoluso@portla.org |

*Terminals Included in this Plan:*

| Name: | Geographic Boundary Coordinates: |
|---|---|
| 1. APM Terminals (APMT) | 1. 33.722090886996625, -118.25254438337515 |
| 2. West Basin Container Terminal (CS) | 2. 33.756491978297944, -118.2883656707375 |
| 3. Phillips 66 | 3. 33.75550245219525, -118.27207489342517 |
| 4. Everport | 4. 33.74319965018955, -118.26468118948587 |
| 5. Fenix Marine Services | 5. 33.74134726929683, -118.25331298693834 |
| 6. Kinder Morgan | 6. 33.75683899474685, -118.28017520886124 |
| 7. Ultramar | 7. 33.75997302835016, -118.26669471196274 |
| 8. PBF Energy | 8. 33.734901549457234, -118.27277912250663 |
| 9. Shell Mormon Island Terminal | 9. 33.75433052370465, -118.26739388705505 |
| 10. TraPac | 10. 33.77056754790128, -118.26734023042205 |
| 11. Vopak | 11. 33.76648577062244, -118.26006492568224 |
| 12. Wallenius Wilhelmsen | 12. 33.7690695347976, -118.25803662615778 |
| 13. Everglades Terminal (WBCT) | 13. 33.759357363825934, -118.28791607308987 |
| 14. Yusen Terminals | 14. 33.75480470379808, -118.25695173480659 |
| 15. SSA Pacific | 15. 33.7244589648447, -118.27615445460938 |
| 16. Shore Terminals | 16. 33.779605, -118.233935 |

## 2. TERMINAL DETAILS

*Terminal details can be found on the subsequent pages.*

### 2.8. **Ultramar**

*Identification and description of which strateg(ies) terminal will use for compliance:*

Ultramar is planning to comply through the terminal exception of low activity terminal. See **Attachment G** for more details.

*Equipment purchases and/or construction that are in progress or must still be completed to reduce emissions:*

Not applicable.

*Schedule for installing equipment and/or any necessary construction projects:*

Not applicable

*Division of responsibilities for enacting infrastructure:*

For the low activity exception –

- Ultramar will keep records of vessel visits.

Port:

- Review the barge-based CAECS system location to confirm that it will not impact navigation
- As applicable, provide equipment or necessary infrastructure at terminal as negotiated by the parties

Terminal Operator:

- Finalize contract with barge-based C&C vendor
- Update TOLs, update DOM and obtain USCG approval

Barge Based C&C Vendor:

- Satisfy multiple variables that are yet to be demonstrated (e.g. USCG approvals, meeting hazard classifications, MTSA/Security concerns, etc.)
- Obtaining CARB certification of barge-based C&C system
- Fabricate and make available barge-based C&C system for the POLA Berth 163

*Terminal approval of responsibilities:*
By signing below, the terminal's responsible officer confirms that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury.

| | | | |
|---|---|---|---|
| Name: | Christine James | Title: | VP & General Manager |
| Signature: | Christine James | Date: | 1/16/24 |

## 3. PORT-SPECIFIC BERTHING RESTRICTIONS

The Port does not impose any berthing restrictions on terminals. Restrictions imposed by terminal operators themselves may be found in their respective terminal plans (see attachments).

## 4. SIGNATURES

*By signing below, the port's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

| | | | |
|---|---|---|---|
| Name: | Michael DiBernardo | Title: | Deputy Executive Director |
| Signature: | Michael DiBernardo | Date: | Jan 24, 2024 |

# ATTACHMENT G

# Wilmington Berth 164 Marine Terminal
# 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: Richard Vasquez | |
| Phone Number: (562) 491-6753 | Email: Richard.Vasquez@valero.com |
| *Berths Included in this Plan:*<br>Name:<br>Port of Los Angeles Berth 164 | Approximate Geographic Boundary Coordinates:*<br>*33.759531, -118.267742* |

**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

*Strategies used to comply with the requirements for ocean-going vessels visiting each berth:*

Ultramar, Inc. dba the Valero Wilmington Marine Terminal (Ultramar) continues to evaluate a range of potential compliance options, including CAECS technologies that can be safely and reliably implemented, including shore power, shore-based and barge-based capture and control (C&C) and the low activity terminal exception pursuant to Section 93130.10. Based on Ultramar's feasibility studies to date, Ultramar has identified barge-based C&C as the most feasible long-term CAECS, and likely the first available technology to comply with the regulation for tanker vessels at Berth 164. Ultramar is accordingly evaluating such barge-based C&C systems under development by several companies. The final decision will be based on multiple factors, including, among other things, demonstrated successful testing, equipment approval for tanker vessels, equipment availability, and vessel/berth compatibility.

While Ultramar has identified barge-based C&C as the most feasible long-term CAECS, Ultramar has consulted with industry and third-party experts, such as Moffatt & Nichol and DNV GL USA, Inc. Maritime, who have evaluated various technologies such as shore power and shore- and barge-based capture and control. They both independently determined that there is currently no commercially available means to comply with the regulation. Additionally, Ultramar is working with STAX and Marathon on the testing and evaluation of STAX's barge-based C&C technology. However, Ultramar does not believe that sufficient barges will be commercially available in time for the January 1, 2025 compliance deadline and so Ultramar is unable to say with certainty what the estimated completion date will be for having a barge-based C&C system operational at the berth.

In light of the foregoing, Ultramar plans to employ the follow strategies:

First Choice: Low Activity Exception
Second Choice: CARB Approved Barge Based Capture and Control System

Please note that Ultramar and Shore Terminals LLC dba NuStar are currently in lease negotiations with the Port of Los Angeles regarding the future operation of NuStar's Berth 163. After the finalization of the lease, the dock at Berth 163 will be demolished and a new dock constructed. NuStar's vessel transfer operations will be consolidated with Ultramar's at Berth 164 until the new dock is constructed. Depending on the number of consolidated vessel visits at Berth 164, Ultramar may amend the terminal plan to incorporate a different CAECS for Berth 164.

After the new Berth 163 is operational, both Ultramar and NuStar will consolidate all vessel transfer operations from Berth 164 to Berth 163. Berth 164 will be decommissioned from oil transfer activities. The planned demolition of the dock at Berth 163 limits the potentially feasible control technology until the new dock is constructed. Depending on the construction and design of the new dock, Ultramar and NuStar may amend the terminal plan for Berth 163 to incorporate a different CAECS for the new dock.

* A terminal plan for consolidated vessel transfer operations was timely submitted by Ultramar and NuStar when it was anticipated that the new dock at Berth 163 would be operational by January 1, 2025. An updated plan is not being submitted at this time as the dock is not anticipated to be operation until after the compliance deadline. An updated plan may be provided in future.

Number of **vessels** expected to use this strategy (annual): Between 12 and 20

Number of vessel **visits** expected to use this strategy (annual): Between 12 and 20

*Berths where equipment will be used:* POLA Berth 164

*Schedule for installing equipment:*

| Project: | Estimated Completion Date: |
|---|---|
| 1. Low Activity Exception | January 1, 2025 |
| 2. Barge-Based C&C | Currently unknown |

## 3. TERMINAL OPERATOR/PORT BERTHING RESTRICTIONS

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

*For the low activity exception –*

- Berthing restrictions are regulated by the existing MOTEMS terminal operating limits and other federal, state, and local requirements.

*For barge-based capture and control -*

- Berthing restrictions are regulated by the existing MOTEMS terminal operating limits and other federal, state, and local requirements.
- For a barge-based C&C system, the CAECS barge will need to be either intrinsically safe or operated outside the ocean-going vessel's hazardous zone. The industry appears to be moving in the direction of operating outside of the hazardous zone. Further review with the POLA will be required to determine the CAECS barge location. Lastly, the CAECS barge must not inhibit the vessel's ability to get underway within 30 min in an emergency situation.
- Ultramar will also rely on input from the third-party barge-based C&C service provider to identify any additional restrictions.

## 4. DIVISION OF ROLES AND RESPONSIBILITIES

*Division of responsibilities for enacting infrastructure:*

*For low activity exception –*

- Ultramar will keep records of the number of vessel visits.

*For barge-based capture and control –*

Port:

- Review the barge-based CAECS system location to confirm that it will not impact navigation
- As applicable, provide equipment or necessary infrastructure at terminal as negotiated by the parties

Terminal Operator:

- Finalize contract with barge-based C&C vendor
- Update terminal operating limits, update dock operations manual and obtain USCG approval

Barge Based C&C Vendor:

- Satisfy multiple variables that are yet to be demonstrated (e.g. USCG approvals, meeting hazard classifications, MTSA/Security concerns, etc.)
- Obtaining CARB certification of barge-based C&C system
- Fabricate and make available barge-based C&C system for the berth

*Are there any contractual limitations applicable to the terminal relevant to enacting the infrastructure? If yes, describe.*

For Barge Based C&C

- Considering the selected barge-based C&C vendor meets the various requirements, a long-term service agreement with the service provider will be required.
- Contractual limitations applicable to the terminal relevant to enacting the barge-based C&C system and meeting the January 1, 2025 compliance date include:
  1. Ultramar expects at least one company will satisfactorily complete testing on tankers by the first quarter of 2024
  2. A barge-based CACES system will have to be approved by CARB by mid-2024
  3. Assuming the CARB approval is issued by mid-2024, Ultramar will finalize the selection of the barge-based vendor and enter into a service agreement with a target equipment availability for use at by January 1, 2025. However, as previously discusses in this plan, Ultramar does not believe that sufficient barges will be commercially available in time for the January 1, 2025 compliance deadline and so Ultramar is unable to say with certainty what the estimated completion date will be for having a barge-based C&C system operational at the berth.

*Port approval of responsibilities:*
The Port's responsible officer confirms by signing below that he/she has reviewed the division of responsibilities set forth in Section 4 of this At Berth Terminal Plan and agrees to them under penalty of perjury. The Port does not make any representations or attestations about the accuracy, feasibility, or legality of the Terminal Operator's proposed compliance strategy set forth in this At Berth Terminal Plan.

| | |
|---|---|
| Name: Michael DiBernardo | Title: Deputy Executive Director |
| Port: Port of Los Angeles | |
| Signature: Michael DiBernardo | Date: Jan 24, 2024 |

**5. SIGNATURE OF TERMINAL OPERATOR**

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

| | |
|---|---|
| Name: Christine James | Title: VP and General Manager |
| Signature: Christine James | Date: 1/3/24 |

# Port of Los Angeles
# At-Berth Port Plan

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

**Contents**

| 1. GENERAL INFORMATION | |
|---|---|
| Port Contact Name: Amber Coluso | |
| Phone Number: (310) 732-3950 | Email: acoluso@portla.org |

*Terminals Included in this Plan:*

| Name: | Geographic Boundary Coordinates: |
|---|---|
| 1. APM Terminals (APMT) | 1. 33.722090886996625, -118.25254438337515 |
| 2. West Basin Container Terminal (CS) | 2. 33.756491978297944, -118.2883656707375 |
| 3. Phillips 66 | 3. 33.75550245219525, -118.27207489342517 |
| 4. Everport | 4. 33.74319965018955, -118.26468118948587 |
| 5. Fenix Marine Services | 5. 33.74134726929683, -118.25331298693834 |
| 6. Kinder Morgan | 6. 33.75683899474685, -118.28017520886124 |
| 7. Ultramar | 7. 33.75997302835016, -118.26669471196274 |
| 8. PBF Energy | 8. 33.734901549457234, -118.27277912250663 |
| 9. Shell Mormon Island Terminal | 9. 33.75433052370465, -118.26739388705505 |
| 10. TraPac | 10. 33.77056754790128, -118.26734023042205 |
| 11. Vopak | 11. 33.76648577062244, -118.26006492568224 |
| 12. Wallenius Wilhelmsen | 12. 33.7690695347976, -118.25803662615778 |
| 13. Everglades Terminal (WBCT) | 13. 33.759357363825934, -118.28791607308987 |
| 14. Yusen Terminals | 14. 33.75480470379808, -118.25695173480659 |
| 15. SSA Pacific | 15. 33.7244589648447, -118.27615445460938 |
| 16. Shore Terminals | 16. 33.779605, -118.233935 |

## 2. TERMINAL DETAILS

*Terminal details can be found on the subsequent pages.*

### 2.6. **Vopak**

*Identification and description of which strateg(ies) terminal will use for compliance:*

Vopak intends to contract with a CARB-approved third-party barge-based emissions control system. See **Attachment F** for more details.

*Equipment purchases and/or construction that are in progress or must still be completed to reduce emissions:*

Not applicable – Vopak intends to contract with third-party provider when approved.

*Schedule for installing equipment and/or any necessary construction projects:*

Not applicable – Vopak intends to contract with third-party provider when approved.

*Division of responsibilities for enacting infrastructure:*

Port:
Permit the operation of Emission Control Barge in POLA waterways.

Terminal:
Contract with 3rd party service provider.

*Terminal approval of responsibilities:*
By signing below, the terminal's responsible officer confirms that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury.

| | |
|---|---|
| Name: Brandon Friend | Title: Site Director |
| Signature: | Date: Jan 2, 2024 |

## 3. PORT-SPECIFIC BERTHING RESTRICTIONS

The Port does not impose any berthing restrictions on terminals. Restrictions imposed by terminal operators themselves may be found in their respective terminal plans (see attachments).

## 4. SIGNATURES

*By signing below, the port's responsible officer confirms that he/she has reviewed this plan under penalty of perjury and understands this plan is subject to verification by CARB staff.*

| | |
|---|---|
| Name: Michael DiBernardo | Title: Deputy Executive Director |
| Signature: Michael DiBernardo | Date: 1/24/2024 |

# ATTACHMENT F

# Vopak Terminal Los Angeles
# At Berth Terminal Plan (Updated)

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: Brandon Friend

| Phone Number: 310 518 6419 | Email: brandon.friend@vopak.com |
|---|---|

*Berths Included in this Plan:*

| Name: | Approximate Geographic Boundary Coordinates (Lat/Long):* |
|---|---|
| 1. Berth 187-188 | 1. 33.766252 / -118.259959 to 33.764062 / -118.259786 |
| 2. Berth 189-190 | 2. 33.764062 / -118.259786 to 33.761149 / -118.259562 |

**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:*

1. Vopak has determined that Barge Based Capture & Control technology will be implemented, primarily due to:
    a. The Shore Power option of the regulations are infeasible with the operations of the Vopak terminals, primarily due to the "ship of opportunity" basis that our customers use. This results in mostly different ships for each visit and rare repeat calls.
    b. The land based version of Capture & Control has fatal flaws associated with permitting schedule and approvals.
2. Vopak Terminals Los Angeles, Inc. (Vopak) has executed an agreement with Clean Air Engineering - Maritime, Inc. (CAEM) for preferential services of CAEM's new barge-based Capture & Control (C&C) system.
3. The barge system is currently targeting testing & service as soon as Q2 2024.
4. CAEM submitted an Innovative Concepts (IC) for "Credit Banking" to CARB for consideration and approval. The IC will allow the generation of credits by controlling unregulated vessel emissions, to be used when regulated ships cannot be controlled for various reasons. This is in

addition to the VIEs and TIEs that are currently in the regulations, and allows for more efficient use of the equipment.

5. Vopak's strategy is to use a combination of barges and credits to cover the various operational scenarios.

**2.1 Barge-based exhaust capture & treatment**

*Identification and description of all necessary equipment:*

| Equipment: | Location: |
|---|---|
| 1. Barge-based exhaust capture & treatment #1 | 1. B187-188 |
| 2. Barge-based exhaust capture & treatment #2 | 2. B189-190 |

Number of **vessels** expected to use this strategy (annual): 109 (unique ships)

Number of vessel **visits** expected to use this strategy (annual): 158

*Berths where equipment will be used:*

1. Berth 187-188
2. Berth 189-190

*Schedule for installing equipment:*

* The estimated completion dates listed below are contingent upon favorable results of a hazardous operations analysis, and approval for use by ship owners.

| Equipment: | Estimated Completion Date: |
|---|---|
| 1. Barge-based exhaust capture & treatment #1<br>a. Contracted September 5, 2023 | 1. January 1, 2025* |
| 2. Barge-based exhaust capture & treatment #2<br>a. Plan to contract Q1 2024 | 2. Q1 2025* |

## 3. TERMINAL OPERATOR/PORT BERTHING RESTRICTIONS

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

All berthings must comply with MOTEMS regulations and VTLA Terminal Operating Limits. A barge-based system will need a stand-off distance from the tanker at berth. The Barge may need to move out of the way at B189-190 when a passing vessel is navigating to B187-188.

While the technology is similar to the existing CAEM barge that is in service for container ships, the new barges are not yet certified by CARB.

## 4. DIVISION OF ROLES AND RESPONSIBILITIES

*Division of responsibilities for enacting infrastructure:*

Port:

- Permit the operation of Emission Control Barge in POLA waterways.

Terminal:

- Contract with 3rd party CAECS service provider.
- Require use of the 3rd party CAECS service provider on vessels that call to terminal.

*Are there any contractual limitations applicable to the terminal relevant to enacting the infrastructure? If yes, describe.*

POLA and Vopak are currently in negotiations for lease extensions starting approximately Q3 2025. An Environmental Impact Report is underway to include the lease extension, MOTEMS upgrade project, and cement terminal projects.

*Port approval of responsibilities:*

The Port's responsible officer confirms by signing below that he/she has reviewed the division of responsibilities set forth in Section 4 of this At Berth Terminal Plan and agrees to them under penalty of perjury. The Port does not make any representations or attestations about the accuracy, feasibility, or legality of the Terminal Operator's proposed compliance strategy set forth in this At Berth Terminal Plan.

| | | | |
|---|---|---|---|
| Name: | Michael DiBernardo | Title: | Deputy Executive Director |
| Port: | Port of Los Angeles | | |
| Signature: | Michael DiBernardo | Date: | Jan 24, 2024 |

## 5. SIGNATURE OF TERMINAL OPERATOR

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

| | | | |
|---|---|---|---|
| Name: | Brandon Friend | Title: | Site Director |
| Signature: | | Date: | Jan 2, 2024 |

# Wallenius Wilhelmsen Solutions (WWS)
# 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: Peter Bresnee

Phone Number: 310-847-4545 | Email: peter.bresnee@walwil.com

*Berths Included in this Plan:*

| Name: | Approximate Geographic Boundary Coordinates:* |
|---|---|
| 17. Berth 196-199 | 17. Lat:33.7689 Lon: 118.2522 |

**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

*Strategy/strategies used to comply with the requirements for ocean-going vessels visiting each berth:*

Barge based CARB Approved Emissions Control Strategy (CAECS)

### 2.1 Barge Based CAECS

*Identification and description of all necessary equipment:*

| Equipment: | Location: |
|---|---|
| 1. Barge based CAECS | Various around Port |

Number of **vessels** expected to use this strategy (annual): 35-40

Number of vessel **visits** expected to use this strategy (annual): 80

Berths where equipment will be used: Berth 196- 199

*Schedule for installing equipment:*

Aside from the schedule below, separate barge based CAECS have been commissioned directly by 1-2 vessel operators to treat their vessels while at berth.

| Project: | Estimated Completion Date: |
|---|---|
| 1. Port Request for Proposals (RFP) for CAECS services | 1. 1Q 2024 |
| 2. Contract with proposal(s) received from CAECS service provider RFP | 2. 3Q 2024 |
| 3. Certification of system(s) | 3. Dependent on CARB certification of CAECS systems |
| 4. Commissioning of CAECS service provider(s) | 4. Dependent on CARB certification of CAECS systems |

## 3. TERMINAL OPERATOR/PORT BERTHING RESTRICTIONS

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

All vessels are required to berth starboard side.

## 4. DIVISION OF ROLES AND RESPONSIBILITIES

*Division of responsibilities for enacting infrastructure:*

Port:

- Port is responsible in contracting CAECS service provider(s)
- Notification and request for services with an approved and contracted CAECS provider to provide service for ship calls when necessary

Terminal Operator:

- Confirmation that the shipping line will use a CAECS system at least 7 days before each call
- If the shipping line does not have a direct contract with a CAECS service provider for port call, terminal operator must notify the Port
- Provide contact information of the shipping line to the Port and vice versa if the Port has to arrange for CAECS services

*Are there any contractual limitations applicable to the terminal relevant to enacting the infrastructure? If yes, describe.*

*Port approval of responsibilities:*

The Port's responsible officer confirms by signing below that he/she has reviewed the division of responsibilities set forth in Section 4 of this At Berth Terminal Plan and agrees to them under penalty of perjury. The Port does not make any representations or attestations about the accuracy, feasibility, or legality of the Terminal Operator's proposed compliance strategy set forth in this At Berth Terminal Plan.

Name: Michael DiBernardo Title: Deputy Executive Director

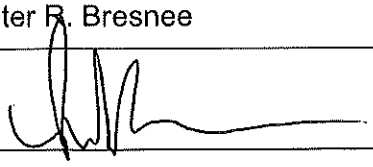
Port: Port of Los Angeles

Signature: Michael DiBernardo Date: Jan 24, 2024

## 5. SIGNATURE OF TERMINAL OPERATOR

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

Name: Peter R. Bresnee Title: General Manager, West Coast Ports

Signature:  Date: 1/23/24