

TOYOTA MOTOR NORTH AMERICA, INC. – BERTH B82 AND B83 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: Jeff White	
Phone Number: (562) 901-1216	Email: jeff.white@toyota.com
<i>Berths Included in this Plan:</i>	
<u>Name:</u>	<u>Approximate Geographic Boundary Coordinates:*</u>
1. Berth B82 and B83	1. – 33°46’24.73”N, 118°13’11.97”W - 33°46’24.02”N, 118°13’11.38”W - 33°46’30.43”N, 118°13’1.14”W - 33°46’29.76”N, 118°13’0.54”W
<i>*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.</i>	
2. STRATEGY DETAILS	
<i>Strategy used to comply with the requirements for ocean-going vessels visiting each berth:</i>	
<p>Primary Strategy: Barge-Mounted Capture Control – A barge-based mobile emissions control system will connect and capture emissions from the ship’s auxiliary power units. There is no initial installation cost if using a rental barge-mounted capture control system. However, some modifications to the ship or to the capture system may be necessary for the barge-based emissions control system because the available vessels may have different configurations and vessel connections may require modifications. There are several vendors that offer barge-based control systems that may be positioned with a tugboat next to a vessel at berth. There are possible scenarios when the barge may be unable to connect to a vessel, such as during strong wind conditions.</p> <p>Toyota is selecting to proceed with the Barge-Mounted Capture Control at this time and is planning to utilize a rental barge-mounted capture control system. Vendor selection is pending a [California Air Resources Board (CARB) Approved Emission Control Strategy (CAECS)] for Roll on/roll off (RoRo) vessels.</p> <p>Technical challenges presented for adapting Barge-Mounted Capture Control for RoRo vessels include:</p> <ul style="list-style-type: none"> - Currently there is a pending approval request for a CARB-approved barge-mounted capture control systems for RoRo vessels. Existing systems are only approved for Container Vessels. RoRo vessels have a wider power range while at berth and require a 	

taller mast with longer reach. Thus, the existing systems will need to be adapted and then CARB-approved for RoRo vessel use.

- Sufficient number of CARB-approved barge-mounted capture control systems for RoRo vessels may not be available by 2025.
- Permitting considerations for the barge-based system: A barge-based control system may require a permit to operate from the South Coast Air Quality Management District, with possible California Environmental Quality Act (CEQA) review. Therefore, delays with the permit issuance may delay the estimated equipment installation completion date.

Supplemental Strategy -Shore Power

Toyota also studied Shore Power as an option for compliance at the Port of Long Beach. While Shore Power offers several benefits and may be the better long term solution, there are several technical challenges presented by Shore Power for RoRo vessels.

While the technical standard (IEC 80005-1 ED 2.2) for Shore Power Connections for RoRo vessels was issued in August 2023 significant modifications are required for both shore facilities and incoming ships. The ANSI/IEC standard was needed prior to the modifications taking place. In addition, the ship modifications must be accomplished while each ship is in dry dock. Both the timing of ANSI standard availability and the ship modification requirements create a long lead time to implement Shore Power. The anticipated schedule for Shore Power conversion exceeds the regulatory timeframe mandated by California Code of Regulations Title 17, Section 93130.7. Toyota is forecasting that Shore Power may be available at its berth by 2029 or later.

An additional consideration is grid power availability. California's increasing shift to solar power and away from natural-gas fired generators can result in reduced generation capacity during the evening and nighttime hours when there is no available sunlight for the solar power systems. During extreme heat events, high electricity demands for air conditioning systems increases the likelihood of a shortfall in electricity. Furthermore, California Governor Gavin Newsom issued Executive Order N-79-20 in September 2020 that requires all new cars and passenger trucks sold in California to be zero-emission vehicles by 2035. Most of these will be electric which will increase the electricity demand. Therefore, there is growing concern for California's grid capacity/resiliency to support shore power in addition to the increasing electricity demand from electric vehicles and the high electricity demand during extreme heat events. To help mitigate this concern, Toyota is investigating fuel cell & alternative supplemental energy sources to facilitate Shore Power operations at the TLS Long Beach facility.

As compliance is a shared responsibility between the Port and the Terminal, both the Port and Toyota will continue to review and investigate compliance options as more details become available across the RoRo shipping industry and in terms of grid availability. Toyota plans to proceed with Capture Control as the Primary Compliance Strategy, supplementing with Shore Power as it becomes available in the future.

2.1 [Primary Strategy – Barge Mounted Emission Control]	
<i>Identification and description of all necessary equipment:</i>	
<u>Equipment:</u>	<u>Location:</u>
1. Flexible Emissions Capture Device	1. Barge
2. Emissions Control System	2. Barge
3. Potential vessel stack modification	3. Vessel
Number of vessels expected to use this strategy (annual): 21	
Number of vessel visits expected to use this strategy (annual): 82	
<i>Berths where equipment will be used:</i> Berth B82 and B83	
<i>Schedule for installing equipment:</i>	
<u>Project:</u>	<u>Estimated Completion Date:</u>
1. Selection of Capture Control Vendor – CARB Approved.	1. Early 2024
2. Vessel stack modification	2. Mid-2024
2.2 [Supplemental Strategy – Shore Power]	
<i>Identification and description of all necessary equipment:</i>	
<u>Equipment:</u>	<u>Location:</u>
1. Confirm Shore Power Supply Strategy	1. Terminal
2. Terminal Modifications (includes permitting)	2. Terminal
3. Ship Modifications	3. Vessel
Number of vessels expected to use this strategy (annual): 21	
Number of vessel visits expected to use this strategy (annual): 82	
<i>Berths where equipment will be used:</i> Berth B82 and B83	
<i>Schedule for installing equipment:</i>	
<u>Project:</u>	<u>Estimated Completion Date:</u>
1. Selection of Shore Power Supply Strategy	1. Mid-2024
2. Terminal Modifications (includes permitting)	2. End-2029
3. Ship Modifications	3. Ongoing thru 2030's

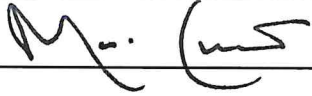
3. TERMINAL OPERATOR/PORT BERTHING RESTRICTIONS

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

Barge Mounted Capture Control: The barge would constrict a portion of the channel that may affect passing ship navigation.

Toyota is not aware of any other official port berthing restrictions.

4. DIVISION OF ROLES AND RESPONSIBILITIES		
<p>This section list the division of roles and responsibilities between the Port and the Terminal. Compliance is a shared responsibility between the Port and the Terminal.</p> <p><i>Division of responsibilities:</i></p> <p>Note: this plan does not amend or modify the terms and/or the conditions of Toyota’s preferential assignment agreement and other agreements with the Port, including without limitation expiration dates, nor does it amend or modify the terms and/or conditions of any agreements of the Port of Long Beach and/or of Toyota with other entities nor does it modify or diminish any other obligations of other entities to the Port of Long Beach and/or Toyota.</p>		
	Port	Terminal
Initiation of electrical infrastructure construction including design		✓
Responsibility to provide equipment or necessary electrical infrastructure inside of the terminal		✓
Responsibility to maintain electrical infrastructure inside of the terminal		✓
Responsibility of uncontrolled emissions at berth due to incomplete electrical infrastructure construction		✓
Responsibility of uncontrolled emissions during repair of electrical infrastructure/equipment		✓
Submission of terminal plan		✓
Submission of port plan	✓	
<p><i>Are there any contractual limitations applicable to the terminal relevant to enacting the infrastructure? If yes, describe.</i></p> <p>Berths B82 and B83 are shared Berths. Toyota Motor North America, Inc. is only the Terminal operator while Toyota-leased ships are at berth. National Gypsum has preferential berthing rights and may impact scheduling.</p>		

<i>Port approval of responsibilities:</i> The Port's responsible official 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: MARIO GONZALEZ	Title: CEO
Port: Port of Long Beach	
Signature: 	Date: 1/29/24

5. SIGNATURE OF TERMINAL OPERATOR	
<i>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.</i>	
Name: Manny Bansi	Title: VP TLS
Signature: <u><i>Manny Bansi</i></u> <small>Manny Bansi (Jan 19, 2024 12:17 CST)</small>	Date: 01/19/2024