SAN FRANCISCO BAR PILOTS

OPERATIONS GUIDELINES

FOR THE MOVEMENT OF VESSELS

ON SAN FRANCISCO BAY AND TRIBUTARIES

March 31, 2023

Changes are highlighted.
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To Our Valued Customers:
The members of the San Francisco Bar Pilots are charged under the laws of the State of California with providing a safe and efficient pilot service. To accomplish these goals, we have identified certain operational procedures that we ask that you assist us in adhering to when scheduling our services. For all movements we request that you provide the following information when ordering a pilot:

1. date and time the pilot will be required; For arrivals the request for a pilot should be made a minimum of 24 hours in advance with an update of ETA 12 and 4 hrs. prior to arrival. Vessel departures from San Francisco, San Pablo or Suisun Bay: for orders placed between 0600 and 1800, the request for a pilot shall be made at least 4 hours before the pilot is required on board. For orders placed between 1800 and 0600, the request for a pilot shall be made at least 8 hours before the pilot is required on board. For all river transits departing Sacramento and Stockton, the request should be made a minimum of 8 hours in advance. All orders for pilots shall be made to the Pilot Dispatch Office by telephone or email. E-mailed pilot orders are to be sent to dispatch@sfbarpilots.com. Email strings to multiple parties will not be accepted.

2. Vessel's arrival draft, and for vessels going above UPRRB, freshwater draft and air draft;

3. berth(s) and side to;

4. the name of the company and the tugboats that will be supplied;

5. length, breadth and air draft of vessel; any reference to PANAMAX Class means a vessel of about 750' loa and 106' beam (a vessel's trim can significantly affect the air draft and masters/agents must be alert to this);

6. availability and HP of an operational bow thruster; and

7. any special requirements or problems affecting the vessel

8. Flat tows/dead ship tows must be provided with a master or person in charge and riding crew. The San Francisco Bar Pilots will fax a copy of flat tow policy to anyone contracting or planning a flat tow as soon as the dispatcher or Operations Pilot receives an order or a request for information.

9. Pilot ladders must comply with SOLAS regulations.

10. The Harbors and Navigation Code, Division 5, section 1198, gives every vessel, and its owner, operator and/or charterer a choice of options for protecting pilots from liability. Pilots are required to have available "trip" insurance for purchase by those hiring a pilot. The trip insurance protects the pilots from liability that may be incurred in connection with the provision of pilotage service. Trip insurance is available from the SFBP upon advance written request. Alternatively, if a vessel and its owner, operator and/or charterer do not wish to purchase the trip insurance, then by law they are deemed to have agreed to defend and indemnify the pilot hired, as well as the SFBP and those associated with it, from all liabilities that may arise in connection with the provision of pilotage. Protecting the pilots from liability by choosing from the options described herein is required both by statute, and as a contractual condition.
IMPORTANT: READ CAREFULLY

These guidelines are intended for planning purposes only. They have been developed to assist dispatchers and vessel agents in planning for local vessel movements. These guidelines are not intended, nor should they be construed, as a representation of minimum or maximum requirements or a warranty that, if the recommendations outlined in the guidelines are met, an operation can be successfully performed. IN ANY EVENT, NO REPRESENTATION OR WARRANTIES OF ANY SORT ARE MADE OR INTENDED BY THE SAN FRANCISCO BAR PILOTS OR ANY OF ITS MEMBER PILOTS BY THESE GUIDELINES NOR UNDER ANY ARRANGEMENTS THAT MAY BE AGREED TO.

In each instance, the individual pilot who is assigned to the vessel will determine whether the planned operation can be successfully completed with the resources allocated. Please note that actual conditions may preclude the performance of the movement as planned. For those reasons, it is the vessel agent's responsibility to contact the pilot office, the operations pilots and the pilot assigned to the vessel to determine whether in his or her opinion the resources provided will be satisfactory and also to be prepared to assist the pilot with additional resources if needed.

In addition, each vessel has its own peculiar handling characteristics. Some vessels, because of their handling limitations, will need additional tugs or other resources, and in some instances, will not be able to be moved under all conditions. The vessel agent should provide complete details to the pilot office and to the pilot assigned of the vessel's handling characteristics in order to assist both in planning and the performance of actual piloting operations.

Recommendations for tug/thruster requirements.

Members of the San Francisco Bar Pilots Association are licensed by the State of California to help provide safe navigation of vessels on the navigable waters of San Francisco Bay and its tributaries. An integral part of this responsibility is for pilots to use tugs with sufficient capabilities to assist in escorting and maneuvering vessels to and from their berths.

Towards that end, to ensure the safety of the tug crews and the ship being navigated, the term “tractor tug”, when required, will be defined as:

A tractor tug is a tug powered by two or more omni-directional thrusters capable of applying steering and braking forces to the ship via a towline at speeds of five knots and more. For safety, the towline’s length needs to be adjustable using a winch that is controlled by the tug’s crew from the safety of the tug’s wheelhouse. Because of the exceptional maneuverability of these boats, and the tight quarters of many of the waterways and berths in the San Francisco pilot’s jurisdictions, the tug’s wheelhouse should afford the tug operator a near 360° view (masts, exhausts and other small items may restrict the view of a few degrees) so that he or she can see all that he or she needs to see without leaving the tug’s controls.
In addition to the tug recommendations noted in these guidelines, some terminals define power requirements for tugboats being used to assist vessels moving to or from their facilities.

These guidelines are based on typical fair-weather conditions. There may be special circumstances, including conditions of tide, current, wind and weather or other unusual operating parameters when the Operations Pilot or assigned pilot may require additional tugs or particular technology.

In order not to be unduly inflexible regarding tug requirements, it is impossible to set rigid rules in most cases. Previous experience and practices should be one of the guidelines. The Operations Pilot should be consulted in the cases where the draft is more than usual, in cases of unusual or severe weather or where strong tidal current may adversely affect the operation.

Tugs within a class are not necessarily the same and, occasionally, specific tugs may be requested due to their particular design, type of propulsion, deck machinery or number of propellers. Bow and stern thrusters should be considered an aid and do not necessarily replace a tug whether it is due to lack of horsepower or other inherent limitations.

We have set forth a number of recommendations that you should employ for long term and general planning purposes. Under most circumstances, any problems with implementing these recommendations can be resolved by prior consultation with the Operations Pilot. However, since the pilot to whom the vessel is assigned is responsible to advise the master of the vessel and must evaluate each move considering the circumstances at a particular time, it may be necessary for the Operations Pilot to refer you to that pilot or another familiar with the area to respond to your request. In any event, you should notify the Operations Pilot of any potential problems as soon as possible to avoid misunderstandings or delays. The final determination as to the adequacy of the tugs and bow thruster is the responsibility of the pilot assigned to the job.

Tugs are listed in classes according to “bollard pull”, as certified by ABS or other appropriate authority. Bollard pull is used rather than horsepower because it is the only meaningful way to rate a tug’s efficiency. Additionally, the tug’s design type, such as tractor, twin screw or single screw, and the addition of kort nozzles and flanking rudders has a definite effect on the utility and efficiency of a particular tug. Use of any tug that has not been rated must be cleared by the Operations Pilot or the assigned pilot.

**Tug Class Ratings:**

<table>
<thead>
<tr>
<th>Class</th>
<th>Minimum Bollard Pull [in Pounds]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ahead</td>
</tr>
<tr>
<td>A+*</td>
<td>100,000</td>
</tr>
<tr>
<td>At</td>
<td>85,000</td>
</tr>
<tr>
<td>A</td>
<td>85,000</td>
</tr>
<tr>
<td>B</td>
<td>60,000</td>
</tr>
<tr>
<td>C</td>
<td>35,000</td>
</tr>
<tr>
<td>D</td>
<td>20,000</td>
</tr>
</tbody>
</table>

* A+ Class boat must be a tractor tug.
Thrusters must meet the following minimum requirement of available horsepower to substitute for a tug:

<table>
<thead>
<tr>
<th>Vessel’s LOA in feet (meters)</th>
<th>Available Horsepower</th>
</tr>
</thead>
<tbody>
<tr>
<td>more than 1000’ (305m.)</td>
<td>no substitute</td>
</tr>
<tr>
<td>900’ - 1000’ (274.3 m. - 305m.)</td>
<td>2,500</td>
</tr>
<tr>
<td>750’ - 900’ (228.6 m. - 274.3 m.)</td>
<td>2,000</td>
</tr>
<tr>
<td>550’ - 750’ (167.6 m. - 228.6 m.)</td>
<td>1,200</td>
</tr>
<tr>
<td>less than 550’ (167.6 m.)</td>
<td>750</td>
</tr>
</tbody>
</table>

**Note:** It is the responsibility of the Vessel’s Master, Owner or Agent to notify the Pilots of the available horsepower of the bow thruster. If this information is not provided, the bow thruster will be considered inadequate to substitute for a tug.

**SAN FRANCISCO BAR AND BAY**

1. **General**
   
   a. Situations requiring special considerations should be discussed beforehand with the Operations Pilot, and if necessary, the pilot involved.
   
   b. As a rule, Down-tide landings are not recommended, therefore, the vessel's ETA should be adjusted in order to dock into the current.
   
   c. Negative trim adversely affects vessel handling and is discouraged. In the event that it is necessary to move a vessel that has a negative trim the Operations Pilot or the pilot involved should be notified in advance as it may be necessary to time the movement to insure favorable tide/current, etc.
   
   d. Storing underway is not recommended for vessels arriving or departing. Vessels should proceed to Anchorage 8 or 9 for storing.

2. **Minimum Under Keel Clearance (UKC), Air Draft Clearance**

   Any vessel owner, operator or Master who requires minimum UKCs greater than the recommendations found in this section should communicate those greater UKCs to the Operations Pilot well in advance of the time of the vessel’s arrival for an inbound transit, and prior to the vessel loading for an outbound transit.

   a. Two (2) feet minimum static under keel clearance (UKC) is required for any piloted vessel anywhere on the pilotage grounds except as stated below:
   
      i. Three (3) feet for escorted petroleum tankers.
      ii. Three (3) feet for loaded anhydrous ammonia or sulphuric acid vessels.
      iii. Four (4) feet for all vessels transiting Oakland Bar Channel and Oakland Inner and Outer Harbor Channels. Oakland Inner Harbor NOAA tide station 9414764.
UKC/Air draft continued
b. All vessels, when transiting the Main Ship Bar Channel shall have a minimum ten (10) feet under keel clearance. UKC is based on the Golden Gate Bridge NOAA tide station 9414290. Large, deep draft vessels may experience delays during periods of severe weather.

c. Ships arriving with a draft of over 45 feet should arrive at the pilot station one hour prior to high water at the Golden Gate. Any exceptions should be cleared with the Operations Pilot to ensure adequate UKC.

d. At final approaches to berths and at berths, all vessels shall always be afloat.

e. All vessels are required to have a minimum of three (3) feet air draft clearance when passing beneath bridges.

3. Vessels Carrying Hazardous Materials

a. Movements of all vessels carrying hazardous materials should comply with all applicable Coast Guard regulations.

b. Any vessel owner, operator or Master who requires minimum UKCs greater than the recommendations found in this section should communicate those greater UKCs to the Operations Pilot well in advance of the time of the vessel’s arrival for an inbound transit, and prior to the vessel loading for an outbound transit.

4. General Anchorages 7, 8 and 9

a. Vessels arriving to anchorage 9 during a flood current will require an assist tug from the Bay Bridge if the length is greater than 1000 feet or the draft of any vessel exceeds 42 ft based on current station Rincon Point 22d NOAA station SFB1217.

b. Vessels with length greater than 1000 feet or draft exceeding 42.0ft feet departing anchorage on ebb current may require an assist tug. Consult with the Operations Pilot.
5. **Vessel Visibility Requirements**
   a. The San Francisco Bar Pilots adhere to SOLAS regulations 33 CFR 164.15 and SOLAS Chapter V, Regulation 22 regarding visibility requirements for vessels of more than 1600 tons, which apply to all vessels arriving or departing US ports. The blind distance from the conning position on the bridge may not exceed 2 times the vessel LOA or 500 meters, whichever is less. A CCTV system is not a substitute for proper visibility.

6. **Cruise Ships: San Francisco Bay Piers 27, 35**
   **Pier 27**
   a (1). This tug/current matrix is for *conventional propulsion twin screw vessels with adequate bow and stern thrusters* going to Pier 27 (SFO27). Class A tractor tugs are to be used. Consult the Operations pilot with any questions related to other cruise ships and what their tug requirements may be.

   a (2). The current station referenced is Pier 23 (depth 17 feet), station SFB1206.

   **Ebb Current Arrival**
   
<table>
<thead>
<tr>
<th>Speed (kts)</th>
<th>Tug</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1.0</td>
<td>0 Tug</td>
</tr>
<tr>
<td>1.0-1.5</td>
<td>1 Tug</td>
</tr>
<tr>
<td>&gt;1.5</td>
<td>2 tugs</td>
</tr>
</tbody>
</table>

   **Ebb Current Departure**
   
<table>
<thead>
<tr>
<th>Speed (kts)</th>
<th>Tug</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1.0</td>
<td>0 Tug</td>
</tr>
<tr>
<td>&gt;1.0</td>
<td>1 Tug</td>
</tr>
</tbody>
</table>

   **Flood Current Arrival**
   
<table>
<thead>
<tr>
<th>Speed (kts)</th>
<th>Tug</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1.0</td>
<td>1 Tug</td>
</tr>
<tr>
<td>&gt;1.0</td>
<td>2 Tugs</td>
</tr>
</tbody>
</table>

   **Flood Current Departure**
   
   Any flood = 0 Tugs

   B (1). *This tug/current matrix is for passenger vessels with POD propulsion and adequate bow thrusters going to Pier 27 (SFO27).*

   B (2). The current station referenced is Pier 23 (depth 17 feet), station SFB1206.

   **Ebb Current Arrival**
   
<table>
<thead>
<tr>
<th>Speed (kts)</th>
<th>Tug</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2kts</td>
<td>0 Tug</td>
</tr>
<tr>
<td>2.0-2.5</td>
<td>1 Tug</td>
</tr>
<tr>
<td>&gt;2.5kts</td>
<td>2 tugs</td>
</tr>
</tbody>
</table>

   **Ebb Current Departure**
   
<table>
<thead>
<tr>
<th>Speed (kts)</th>
<th>Tug</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2.5kts</td>
<td>0 Tug</td>
</tr>
<tr>
<td>&gt;2.5kts</td>
<td>1 Tug</td>
</tr>
</tbody>
</table>
POD CRUISE SHIP MATRIX continued

Flood Current Arrival
<2.5kts = 1 Tug
>2.5ts = 2 Tugs

Flood Current Departure
Any flood = 0 Tugs

Pier 35
Consult the operations pilot for tug recommendations when planning a transit to pier 35.

7. San Francisco Bay, Islais Creek

a. Tug Requirements for vessels arriving and departing Berths in Islais Creek:

Vessels arriving at Berths 80 A-B and 92 will require two tugs regardless of bow thruster as follows:

<table>
<thead>
<tr>
<th>Vessel’s LOA in Feet (Meters)</th>
<th>Draft in Feet (Meters)</th>
<th>Tugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>more than 700’ (212.2)</td>
<td>any draft</td>
<td>At A</td>
</tr>
<tr>
<td>600’ - 700’ (181.8 - 212.2)</td>
<td>more than 30’</td>
<td>At B</td>
</tr>
<tr>
<td></td>
<td>less than 30’</td>
<td>A B</td>
</tr>
<tr>
<td>up to 600’ (181.8)</td>
<td>any draft</td>
<td>B B</td>
</tr>
</tbody>
</table>

b. Vessels with a draft of 30-34 ft. or greater than 600’ LOA should avoid arriving at the berth within one (1) hour of maximum ebb current.

Vessels with a draft of greater than 34 ft. or greater than 700’ LOA should arrive at the berth within one (1) hour of slack water.

Vessels that cannot meet these arrival time requirements may require larger or more tugs. Consult with the Operations Pilot.

c. Any vessel wishing to pass another berthed vessel or any vessel wanting to berth P/S to MUST contact the Operations Pilot with all the pertinent information in a timely manner (24 hours pre-arrival). Once this information is received a determination will be made as to the feasibility, and if approved, arrival/departure times and tug requirements will be given at that time.
San Francisco Bay, Islais Creek continued

d. Vessels departing Berths 80 A-B and 92 may eliminate the smaller tug if they have an adequate bow thruster, as set forth in these guidelines.

e. Vessels arriving S/S to at Berths A-B, with BT, ST and Becker Rudder with a draft of < 27’ may eliminate the smaller tug.

f. Vessels docking down-tide at Berth 80C will require 2 tractor tugs.

8. San Francisco Bay, Piers 94 and 96

a. Vessels with draft of 35’ and greater will require 2 tractor tugs on arrival.
b. Consult with the Operations Pilot regarding tug requirements on all other vessels.

9. Oakland Inner and Outer Harbor

(1)a. For vessels transiting Oakland Outer Harbor and Oakland Inner Harbor requiring turn:

<table>
<thead>
<tr>
<th>Vessel’s LOA in Feet (Meters)</th>
<th>Draft in Feet (Meters)</th>
<th>Tugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>more than 1210’ (368.9)</td>
<td>any draft</td>
<td>(2) 80t and (2) 50t plus BT</td>
</tr>
<tr>
<td>1115’ - 1210’ (340 – 368.9)</td>
<td>any draft</td>
<td>(1) 80t and (3) 50t plus BT</td>
</tr>
<tr>
<td>1000’ - 1115’ (304 m. – 340)</td>
<td>any draft</td>
<td>A+ A+ A plus BT</td>
</tr>
<tr>
<td>900’ – 1000’ (274.3 m. – 304)</td>
<td>more than 38’ (11.59)</td>
<td>A+ A+ plus BT</td>
</tr>
<tr>
<td>900’ – 1000’ (274.3 m. – 304)</td>
<td>less than 38’ (11.59)</td>
<td>A+ At plus BT</td>
</tr>
<tr>
<td>750’ - 900’ (228.6 m. - 274.3)</td>
<td>more than 35’ (10.67)</td>
<td>AA plus BT</td>
</tr>
<tr>
<td>750’ - 900’ (228.6 m. - 274.3)</td>
<td>less than 35’ (10.67)</td>
<td>AB plus BT</td>
</tr>
<tr>
<td>550’ – 750’ (167.6 – 228.6)</td>
<td>more than 32’ (9.75)</td>
<td>BC or B plus BT</td>
</tr>
<tr>
<td>550’ – 750’ (167.6 – 228.6)</td>
<td>less than 32’ (9.75)</td>
<td>CC or C plus BT</td>
</tr>
<tr>
<td>less than 550’ (167.6)</td>
<td>All</td>
<td>CC or C plus BT</td>
</tr>
</tbody>
</table>

OOH and OIH turning basin:
Vessels with an LOA between 1115’ and 1210’ shall not turn in OIH or OOH between the hours of 0000 and 0600. To facilitate this, transit times will be planned as follows:

OOH:
Arrival at the sea buoy no later than 2200 and not before 0500
Departure from the berth no later than 2300 and not before 0600
Shifting from anchor to the berth no later than 2300 and not before 0500
**OIH:**
Arrival at the sea buoy no later than 2100 and not before 0400
Departure from the berth no later than 2200 and not before 0500
Shifting from anchor to the berth no later than 2200 and not before 0500

Vessels over 1210’ inbound for Oakland Inner Harbor shall berth port side to only at berths 55-59. Vessels over 1210’ departing Oakland Inner Harbor berths 55-59 (port side alongside) shall back stern first to the PCT Oakland Bar Channel area to turn and depart. All turns at PCT shall be commenced outside the circadian low period (0000-0600). To facilitate this timing, no such vessel shall sail before 0500 nor later than 2200.

(2) a. For vessels transiting inbound Oakland Outer Harbor and Oakland Inner Harbor no turn required: For vessels transiting inbound Oakland Outer Harbor and Oakland Inner Harbor no turn required (effective Oct. 1, 2020).

<table>
<thead>
<tr>
<th>Vessel’s LOA in feet (Meters)</th>
<th>Draft in feet (Meters)</th>
<th>Tugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 1115’</td>
<td>any draft</td>
<td>(1) 80t and (2) 50t plus BT</td>
</tr>
<tr>
<td>1000’ to 1115’</td>
<td>any draft</td>
<td>A+ A+ plus BT</td>
</tr>
<tr>
<td>up to 1000’ (304)</td>
<td>more than 38’ (11.59)</td>
<td>2 tugs per the guidelines regardless of BT</td>
</tr>
</tbody>
</table>

(3) a. For vessels transiting outbound Oakland Outer Harbor and Oakland Inner Harbor no turn required:

<table>
<thead>
<tr>
<th>Vessel’s LOA in feet (Meters)</th>
<th>Draft in feet (Meters)</th>
<th>Tugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000’ to 1210’ (304-368.9)</td>
<td>any draft</td>
<td>A+ A+ plus BT</td>
</tr>
</tbody>
</table>

b. Vessels requiring 2 Class A+ tugs may substitute 2 Class A tugs for the forward Class A+ tug in some cases – consult Operations Pilot. Vessels without a fully operational Bow Thruster should consult with Operations Pilot for additional tug requirements.

c. Vessels docking (inner/outer harbor) or undocking (inner harbor) without turning may eliminate the smaller tug if they have an adequate bow thruster meeting the minimum requirements set forth in these guidelines, with the following exceptions:

-Vessels undocking at berths 22-25 and docking/undocking at berths 35-37
During periods of adverse weather conditions, such as strong winds, storm fronts and rain squalls.

d. Vessels with bow and stern thrusters may, in some cases, dock/undock without tugs if the thrusters meet the minimum requirements set below, except vessels over 900’ with bow and stern thrusters will require 1 Class A tug for docking.
Oakland Inner Harbor and Outer Harbor continued

e. Vessels under 600’ undocking without turning may, under certain circumstances, use one tug or bow thruster (meeting minimum requirements) only after consulting the Operations Pilot or pilot assigned to the job.

f. Vessels wishing to dock starboard side to berths 35/37 or port side to berths 55/56 should consult the Operations Pilot for tug requirements. Vessels should be docked with minimal current. A tractor tug may be required at times other than slack water.

g. Draft/Current Matrix for OOH and OIH. All current based on predictions for Oakland, Yerba Buena Island (Depth 13 ft.) station PCT0336. No restrictions for vessels less than 900’ LOA.

(4) a. VESSELS 1115’ OR GREATER SHIFTING ANC 8/9 TO OIH/OOH
Max current 1.5 knots ebb or flood. Based on NOAA Rincon Point (SFB1217), 22’ deep

<table>
<thead>
<tr>
<th>OOH</th>
<th>Vessels from 900’ to 1000’ LOA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INBOUND</td>
</tr>
<tr>
<td></td>
<td>DRAFT</td>
</tr>
<tr>
<td>Less Than 40’</td>
<td>1.75 K</td>
</tr>
<tr>
<td>40’ – 43’</td>
<td>1.5 K</td>
</tr>
<tr>
<td>43’ – 45’</td>
<td>1.25 K</td>
</tr>
<tr>
<td>45’+</td>
<td>1.0 K</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OOH</th>
<th>Vessels 1000’ to 1115’ LOA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INBOUND</td>
</tr>
<tr>
<td></td>
<td>DRAFT</td>
</tr>
<tr>
<td>Up to 45’</td>
<td>1.0 K</td>
</tr>
<tr>
<td>45’+</td>
<td>0.75 K</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OOH</th>
<th>Vessels 1115’ to 1315’ LOA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INBOUND or OUTBOUND</td>
</tr>
<tr>
<td></td>
<td>DRAFT: N/A</td>
</tr>
</tbody>
</table>

13
### OIH
**Vessels from 900’ to 1000’ LOA**

<table>
<thead>
<tr>
<th>DRAFT</th>
<th>EBB</th>
<th>FLOOD</th>
<th>OUTBOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>40’ – 43’</td>
<td>N-R</td>
<td>N-R</td>
<td>N-R</td>
</tr>
<tr>
<td>43’ – 45’</td>
<td>2.0 K</td>
<td>1.5 K</td>
<td>2.5 K</td>
</tr>
<tr>
<td>45’+</td>
<td>1.75 K</td>
<td>1.25 K</td>
<td>2.25 K</td>
</tr>
</tbody>
</table>

### OIH
**Vessels 1000’ to 1115’ LOA**

<table>
<thead>
<tr>
<th>DRAFT</th>
<th>EBB</th>
<th>FLOOD</th>
<th>OUTBOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 40’</td>
<td>N-R</td>
<td>2.0 K</td>
<td>N-R</td>
</tr>
<tr>
<td>40’ – 43’</td>
<td>2.0 K</td>
<td>1.5 K</td>
<td>2.5 K</td>
</tr>
<tr>
<td>43’ – 45’</td>
<td>1.75 K</td>
<td>1.25 K</td>
<td>2.25 K</td>
</tr>
<tr>
<td>45’+</td>
<td>1.5 K</td>
<td>1.0 K</td>
<td>2.0 K</td>
</tr>
</tbody>
</table>

### OIH
**Vessels 1115’ to 1210’ LOA**

<table>
<thead>
<tr>
<th>DRAFT</th>
<th>FLOOD or EBB</th>
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</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>1.0 K</td>
<td>1.5 K</td>
</tr>
</tbody>
</table>

### OIH
**Vessels 1210’ to 1315’ LOA**

<table>
<thead>
<tr>
<th>DRAFT</th>
<th>EBB</th>
<th>FLOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>.75 K</td>
<td>.75 K</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DRAFT</th>
<th>EBB</th>
<th>FLOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>.75 K</td>
<td>1.0 K</td>
</tr>
</tbody>
</table>

**h.** See Addendum 2 for USCG recommendations for bunkering operations at berths 35/37.
10. Naval Air Station

a. All movements within, into and out of NAS shall be during daylight only.

11. Redwood City

Tug requirements for vessels arriving and departing Redwood City are as follows:

<table>
<thead>
<tr>
<th>Vessel’s LOA in Feet (Meters)</th>
<th>Draft in Feet (Meters)</th>
<th>Tugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>more than 750’ (228.65)</td>
<td>Any</td>
<td>At At</td>
</tr>
<tr>
<td>700’ - 750’ (212.3 - 228.65)</td>
<td>Any</td>
<td>At A</td>
</tr>
<tr>
<td>600’-700’ (183 - 212.3 )</td>
<td>Any</td>
<td>A B</td>
</tr>
<tr>
<td>up to 600’ (183)</td>
<td>Any</td>
<td>B B</td>
</tr>
</tbody>
</table>

a. Weather permitting, vessels departing without turning may eliminate the smaller tug if they have an adequate bow thruster as set forth in these guidelines.

b. Vessels over 700’ LOA may be required to transit Redwood Creek during daylight hours only regardless of draft.

c. Maximum drafts for Redwood City will be calculated using Redwood City, Wharf 5 station 9414523

12. Richmond Chevron Long Wharf (Chevron Long Wharf Guidelines)

a. Vessels will dock only port side to at Berth 1 and arrive and depart on flood current. Vessels over 750’ in length docked in Berth 1 may be required to run an extra spring line from aft forward. Vessels departing Berth 4 will depart on flood current.

b. Vessels departing from RLW berth 4 (either side) will depart on the flood current

c. Chevron Long Wharf minimum tug requirements will be applied to all routine ship movements. See Addendum 1A for Chevron [RLW] minimum tug requirements.

d. While berthing, vessels are advised to dock into the current and avoid arriving at berth at slack water.
13. **Richmond Inner Harbor**

a. Tug requirements for vessels arriving and departing Richmond Inner Harbor:

- Vessels up to 600’ LOA: AB
- Vessels over 600’ LOA: AA
- Vessels over 700’ LOA: At A
- Vessels over 800’ LOA: A+ A+

b. Weather permitting, vessels undocking without turning may eliminate the smaller tug if they have an adequate bow thruster, as set forth in these guidelines.

c. It is recommended that vessels greater than 650’ LOA be turned at Pt. Potrero Turning Basin.

d. Vessels with a draft greater than 33 ft. or LOA greater than 700’ transiting Richmond Inner Harbor shall plan their **arrival** to pass RLW/Ferry Point with a maximum 1 kt. flood current or 0.5 kt. ebb current & their **departure** with a maximum 0.5 kt. ebb current; based on the RICHMOND (14d) current station. Deep draft vessels that cannot meet this requirement may require a tractor tug to assist. Consult with the Operations Pilot.

e. Vessels greater than 800’ LOA and requiring a turn will be required to transit Richmond Inner Harbor during daylight hours. Vessels greater than 800’ LOA not requiring a turn, with a draft less than 30 feet, may depart during non-daylight hours. All conditions of paragraph (d) above remain in effect.

f. Present channel configuration limits the size of a vessel able to use RCH20 to a maximum 650 feet in length and 106 feet in beam. Vessels arriving and departing RCH20 will require at least (1)At. Please consult with the Operations Pilot.

g. **RCH20 SAILING**
   - Vessels greater than 600’: max sail 26’ with minimum 4’ of tide.
   - Vessels 600’ or less: max sail 27’ with minimum 4’ of tide.

h. Barges in the vicinity of RCH20 must be moved well clear before ships can dock or undock.

i. Movements to or from RCH20 are precluded when vessels are berthed at RCH21 or RCH14.

j. Agents representing vessels calling at RCH21, RCH17 or RCH14 are responsible for determining if vessels are occupying RCH22, RCH21, RCH20, or RCH14 and obstructing the channel. If so the Operations Pilot must be consulted. As a general rule, the combined beams of the vessels shall not exceed 200’, the passing shall be set up near high water(4.0’ or more) and (2) tractor tugs will be required.
Richmond Inner Harbor continued...

k. In some situations it may not be possible to arrange a safe transit until the channel is clear.

l. Conflicts with channel obstructions are to be resolved prior to scheduling transits with SFBP.

m. Vessels berthed at RCH 22 may preclude movements to RCH 14, 17, 20 and 21.

n. The Chevron Oil Pier tide station (9414863) is used for RIH operations and calculations.

14. **Terminal 4 Richmond**
   a. It is recommended that the arrival and departure of vessels be coordinated with the Operations Pilot.

15. **Pinole Shoal Channel**
   a. Maximum draft for transiting Pinole Shoal Channel will be calculated on the height of the tide one hour on either side of high water at Pinole Point. It will be based on brackish water draft \((1.010)\) allowing for 2’ UKC for non-tank vessels, and 3’ UKC for all tank vessels on the latest controlling depth. Contact the Operations Pilot for controlling depth and assistance with calculating maximum draft allowed.

16. **Rodeo**
   a. ROD3 (Lower): Vessels over 600’ are to dock P/S only.
      ROD5 (Upper): All vessels S/S only except ATB’s. No vessels over 600’.
      ROD4 (Center): All vessels can berth either side to.
   b. Vessels docked port side to may undock anytime during flood and ebb current.
   c. Current station Davis Point 17d (SFB1316_6) will be used for operations at Rodeo.

17. **Mare Island Straits**
   a. Vessels transiting Mare Island Straits shall do so during daylight hours. Vessels berthing along the face of Mare Island shall be turned upon arrival, mooring starboard side to whenever practicable.
   b. Vessels mooring at Mare Island Dry Dock shall be daylight and near High Water Slack current. The Operations Pilot must approve the flat tow plan for any vessels arriving or departing from Mare Island and the Mare Island dry dock.
   c. Mare Island Strait tug requirements (number/type) shall be determined on a case by case basis depending upon vessel’s draft, LOA and berthing location. Tugs must be approved by the Operations Pilot.
18. **Selby (ROD8)**

   a. Presently, the terminal allows vessels up to 800’ LOA or 100,000 DWT. Both port and starboard side mooring is acceptable. However, starboard side mooring is strongly recommended.

   b. Consult the Operations pilot for tug recommendations. At the discretion of the owner or master, an assist tug may stand-by while a ship is moored to the wharf.

   c. Vessels may undock any time during flood current or during ebb current of less than 2.0 knots, based on the current station at the following location: Carquinez Strait (west end, bridge)(20d). NO VESSEL SHOULD DOCK OR UNDOCK WITH EBB CURRENT GREATER THAN TWO KNOTS.

19. **Crockett (CRM1)**

   a. Vessels may dock starboard side to with up to 0.5 knots flood current and up to 1.5 knots ebb current.

   c. Vessels docked starboard side to can undock at any stage of the flood current or when ebb current is less than 2 knots.

   d. Consult Operations Pilot for tug requirements.

20. **Amorco (MRZ5)**

   a. See Addendum 3 for Tesoro Terminal tug and docking requirements.

21. **Anchorage 23**

   a. Vessels in Anchorage 23 must comply with the general and specific regulations as contained in Code of Federal Regulations Title 33, paragraph 110.224.

   b. As the deep water portion of the anchorage is limited, drafts of most vessels will be limited to less than 30 feet. Specific circumstances, however, may permit greater drafts for a limited time.

   c. A tug may be required to stand by a large or deep draft vessel in anchorage 23 during changes of the current. Tug class to be determined by the Operations Pilot, or the Pilot on the vessel, depending upon the size and/or draft of the vessel or any other condition that may affect the safety of the vessel.

22. **Port of Benicia (BNC1, 2, 3)**

   a. It is recommended that vessels be docked into the current only, due to hazards posed by adverse currents and the proximity of the bulk loader. In addition, car carriers docking at the east berth must have a 2-degree list away from the berth.
Port of Benicia continued

b. In some cases, vessels may be allowed to dock down tide with the use of two tractor tugs and less than 1 kt. of current, based on the Benicia Bridge (depth 15 ft.) current station (s06010). Consult with the Operations Pilot.

c. Vessels arriving at Benicia Industrial Dock will require 2 tugs, regardless of bow thruster. Vessels departing on the flood current (starboard side to) may eliminate the smaller tug if they have an adequate bow thruster, weather and current conditions permitting. Vessels departing on the ebb current (starboard side to) will require 1 tractor + 1 conventional tug for ebb currents up to 2 kts. Over 2 kts. of ebb current will require 2 tractor tugs.

23. Valero (BNC4)

a. Those vessels using VALERO TERMINAL FACILITIES should comply with all of the regulations of that facility.

b. Vessels port side to undock during Ebb current only. Vessels starboard side to may undock anytime during flood current or during ebb current of less than 2.0 kts, based on the Benicia Bridge (depth 15 ft.) current station (s06010). NO VESSEL SHOULD DOCK OR UNDOCK WITH EBB CURRENT GREATER THAN 2 KTS.

c. Vessels docking and undocking at this facility should use adequate tugs as listed in Addendum 3.

24. Union Pacific Railroad Bridge

a. During average tidal conditions vessels can normally pass without time restrictions if the air draft is no higher than 132 feet.

b. Vessels 800’ or longer, or beam greater than or equal to 130’, must transit the bridge at or near slack water and daylight only.

c. Any vessel of PANAMAX Class or larger or with air draft of more than 132’ must coordinate with the Operations Pilot.

d. Maximum beam permitted will be 145’ or less.

25. Martinez and Avon Terminals (MRZ6, MRZ8)

a. Vessels in ballast should be turned and docked port side to on the flood

b. Vessels back-loading may need to turn before loading. Consult with the Operations Pilot.

b. For vessels 610’ or less turning in the Avon Turning Basin, maximum drafts should be no greater than 32’ F and 34’ A. For vessels 611’ or greater, maximum drafts should be no greater than 30’ F and 32’ A.
Martinez and Avon Terminals (MRZ6, MRZ8) continued

c. Vessels docked either port or starboard side to at MRZ6 & MRZ8 must sail on the flood tide only; based on the current at Benicia Bridge (depth 15 ft.) station s06010.

e. Maximum draft for vessels arriving at MRZ6 & MRZ8 will be calculated on the height of the tide at Martinez-Amorco Pier (9415102) one hour after high water slack at Benicia Bridge (depth 15 ft.) station s06010. It will be based on fresh water draft (1.000) allowing for 3’ UKC on the latest controlling depth in Bulls Head Channel. Contact the Operations Pilot for controlling depth and assistance with calculating maximum draft allowed.

f. See Addendum 3 for tug requirements at MRZ6 & MRZ8.

26. Pittsburg/Antioch Terminals (PBG3, PBG4, PBG6, ANZ2, ANZ3)

a. Vessels loading to deep draft should be docked port side to.

b. We recommend that all vessels more than 600’ LOA turn at “Riverview”

c. Vessels more than 700’ (213.4 M) LOA and turning must have daylight above New York Point, if vessel cannot meet the DLO, Operations Pilot should be consulted.

d. Vessels over 700’ LOA, turning at “Riverview”, will require one At and one A tug.

e. Loaded vessels docked port side to and sailing during ebb current should use minimum one At and one A tug. Loaded vessels docking at PBG4 should use a minimum one A and one B tug. If docking down tide, they will require one A and one B tug. Vessels sailing on ebb current from ANZ2/3 should use minimum: one A and one B tug (in ballast) or one At and A (loaded). Loaded vessels sailing from PBG3 shall sail on flood current only.

f. In general, the narrow channel limits the size of vessels calling at terminals above New York Point to the PANAMAX class (750’ LOA x 106’ Beam).

SACRAMENTO AND STOCKTON

1. Transit Drafts

a. Contact the Operations Pilot for maximum allowable transit drafts.

b. Deep drafts for specific transits may be decreased depending on navigation factors such as date, time, tidal conditions, soundings, weather conditions, vessel size and type, etc.

c. During the period from December to April, rapid shoaling may occur on the river. The pilots may be notified by the Army Corps of Engineers or receive other information of depth changes/shoaling requiring maximum drafts to change on very short notice.
Sacramento & Stockton continued

d. All transit drafts refer to freshwater drafts.

e. All vessels are required to have a minimum of 1 ft (30cm) of trim by the stern, not exceeding maximum fresh water deep draft provided by the Operations Pilot.

2. Size Limitations

a. In general, the narrow channel limits the size of vessels above New York Point to the PANAMAX class (750’ LOA x 106’ beam).

b. Contact the Operations Pilot before scheduling any vessels over 700’ LOA.

3. Air Draft

a. The air draft limit for an unrestricted transit during an average tidal cycle is 132 feet.

Vessels with an air draft of greater than 132 feet should contact the Operations Pilot for allowable transit time.

All transits to/from Sacramento must consult with the Operations Pilot due to overhead clearance issues near SAC DWSC LT 12. This is in effect until further notice when this office has received proper verification of available clearance.

All vessels are required to have minimum 3’ clearance when passing beneath bridges.

4. Daylight Transits

The following vessels will be allowed daylight transits only:

a. 650’ and above LOA;

b. 100’ and above beam;

c. vessels with severely limited visibility due to design or other factors;

d. vessels transiting to/from Stockton with a deep draft exceeding 31.0’ (9.45 m.)

e. vessels transiting to/from Sacramento with a deep draft equal to or exceeding 29.5’ (9.0 m)

5. Rapid Shoaling

During the period from December to April, rapid shoaling may occur on the river. The pilot may be notified by the Army Corps of Engineers or receive other information of depth changes requiring drafts to be changed with very short notice.

6. Under keel Clearance

See page 7, 2. Minimum Under keel Clearance (UKC) for recommendations.
Sacramento & Stockton continued

7. Fog Season

From November to March, frequent periods of severely restricted visibility occur. Considerable delays may be experienced. Contact the Operations Pilot to schedule the most expeditious transit time to avoid the fog. The assigned pilot can recommend to the master a change in any of the above parameters depending on specific conditions.
Chevron Richmond Long Wharf

TUGBOAT CLASSIFICATION AND REQUIREMENTS

CLASS "A+"
Any tractor tug with a Bollard Pull of 100,000lbs. or greater in any direction.

CLASS “At”
Any tractor tug with an Ahead Bollard of >85,000lbs. and an Astern Bollard Pull of >55,000. Also, any tractor tug with a Bollard Pull of 60,000lbs or greater in any direction.

CLASS “A”
Any conventional tug with an Ahead Bollard of >85,000lbs. and an Astern Bollard Pull of >55,000. Also, any tractor tug with a Bollard Pull of 60,000lbs or greater in any direction.

CLASS "B"
Any conventional tug with an Ahead Bollard Pull between 60,000lbs. and 85,000lbs. and an Astern Pull of > 45,000lbs. Also, any tractor tug with a Bollard Pull of <60,000lbs. in any direction.

CLASS "C"
Any conventional tug with an Ahead Bollard Pull of <60,000lbs.

MINIMUM REQUIREMENTS- SHIP/TUGBOAT ASSISTANCE

<table>
<thead>
<tr>
<th>VESSEL SIZE</th>
<th># MOORING TUGS</th>
<th># UNMOORING TUGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 30,000 DWT</td>
<td>1 CLASS A TUG</td>
<td>1 CLASS A TUG</td>
</tr>
<tr>
<td></td>
<td>1 CLASS B TUG</td>
<td>1 CLASS B TUG</td>
</tr>
<tr>
<td>30,000 to 65,000 DWT</td>
<td>1 CLASS A+ TUG</td>
<td>1 CLASS A+ TUG</td>
</tr>
<tr>
<td></td>
<td>1 CLASS A TUG</td>
<td>1 CLASS A TUG</td>
</tr>
<tr>
<td>65,000 to 130,000 DWT</td>
<td>2 CLASS A+ TUGS</td>
<td>2 CLASS A+ TUGS</td>
</tr>
<tr>
<td></td>
<td>1 CLASS A TUG</td>
<td></td>
</tr>
<tr>
<td>130,000 to 193,000 DWT</td>
<td>2 CLASS A+ TUGS</td>
<td>2 CLASS A+ TUGS</td>
</tr>
<tr>
<td></td>
<td>1 CLASS A TUG</td>
<td>1 CLASS A TUG</td>
</tr>
<tr>
<td>Over 193,000 DWT</td>
<td>3 CLASS A+ TUGS</td>
<td>3 CLASS A+ TUGS</td>
</tr>
</tbody>
</table>
ADDENDUM 1-B

Richmond Long Wharf Vessel Pre-Arrival Communication

5.1. Berthing

Chevron periodically issues draft restrictions for vessels calling at Richmond Long Wharf. These restrictions should be obtained through the vessel’s agent, or directly from Chevron Shipping Company’s Richmond office (see “official addresses”).

Berthing of a deep draft tanker should be timed to allow the ship to remain along side at her arrival draft through the next low water.

If cargo transfer is delayed and it’s determined that the berth allowable draft limit (BADL) will be exceeded, the vessel shall be ordered to make preparations to sail six hours before BADL will be reached, making all tug and pilot arrangements. Associated costs will be determined based on the responsibility for the berth delay.

Vessel shall be required to depart the berth based on safe tidal and current conditions, but always before maneuvering area draft limit (MADL) is reached.

The Wharf Coordinator and your agent will set your berth assignment prior to your arrival. If a berth is not available at the time of your arrival your agent will instruct you to go to anchor (as directed by the captain of the port) and maintain radio contact with Richmond Long Wharf by VHF Radio Channel 10, 156.5 MHz.

Your vessel’s agent is responsible for providing you with your anticipated arrival time at the Long Wharf. At least three hours before your assigned docking time, contact Richmond Long Wharf by VHF Radio Channel 10 to confirm your anticipated docking time. At that time the Wharf will advise you of Berth assignment and any expected vessel traffic at the Long Wharf. Use phone communication (Long Wharf Control Room # 510-242-4494) only as a backup to the radio call. For vessels arriving from anchorage or from other facilities, this call should be made prior to heaving anchor or departing berth.

The Wharf will also advise your vessel of any changes once the vessel has made initial contact. Inbound vessels will typically have priority over departing vessels. If an outbound vessel is restricted to a particular sailing time due to draft and tide, and if the inbound vessel can safely lose time outside the Bay or safely proceed to anchor, the Wharf will request that the outbound vessel have priority. If there is a decision to be made regarding holding a vessel alongside, it will be made by the Head Operator.

At one hour before your assigned docking time, you are to again contact Richmond Long Wharf to establish with the terminal what channel the pilot will be using to moor your vessel.

For docking purposes, we have available the following VHF Channels: 7A & 77.

While mooring or unmooring, our internal safety procedures require that vessel-to-terminal communications be established before vessel is 150’ from wharf, and then maintained throughout the event. Vessels are cautioned to check with SF Bay VTS on other vessel movements in the area that are not controllable by the Richmond Long Wharf, for instance, vessels proceeding out of Richmond Inner Harbor which may also intend to use Southampton Shoal Channel.
SAFETY CHECKLIST FOR BUNKERING VESSELS BY BARGE
AT PORT OF OAKLAND BERTHS 35, 37 and 55-59

1. Prior to arrival of the bunker barge alongside the receiving vessel, the tug captain will contact the Marine Exchange for arrival and departure information for all vessels transiting OOH or OIH over the intended duration of the transfer.

2. Following arrival, the tug captain will notify Vessel Traffic to request all vessels to proceed slowly and with caution when passing the bunker barge.

3. The tug will monitor VHF channels 10 and 13 at all times.

4. The tug will remain in the barge notch with engines on standby and on wheelhouse control.

5. A minimum of 2 head lines, 2 spring lines and 2 stern lines will be used to secure the tug/barge unit to the vessel. One of the stern lines will be taken from the tug’s offshore Beebe winch.

6. The receiving vessel will have a VHF equipped watch stander available at all times to tend the bunker hose and lines.

7. The tug captain will obtain from the Pilot Dispatcher the name and unit number of each pilot on vessels transiting the area for possible direct communications.

8. Bunker transfer operations will cease when vessels are transiting the immediate area.

9. A second man will be stationed on the barge when vessels are transiting the immediate area.
ADDENDUM 3

Valero Tug Requirements

PART C: PORT SUPPORT SERVICES

C.1 Pilotage

The local pilot service, known as the San Francisco Bar Pilots, provides pilotage for the Port of San Francisco.

Masters requesting the services of a harbor pilot (inbound & outbound) shall place their request at least two (2) hours prior to arrival at the sea buoy. Vessel movements are conducted on a 24-hour basis throughout the year with the exception of tank vessels, which are not allowed to pass through the breakwater during hours of darkness.

C.2 Pilot/Master Information Exchange

In the interest of safety of the vessel and protection of the shore facility, the Master and the Pilot shall exchange information regarding navigation procedures, local conditions and the vessel’s characteristics. It is particularly important that any deficiency of equipment, which may affect the navigation, maneuverability or capability to safely moor at the Terminal dock, be noted on the information card and brought to the attention of the pilot.

C.3 Tugs, Moorings and Mooring Crews

Tug Requirements

The use of adequately powered tugs is required to ensure control of the vessel when docking or undocking. Vessels must utilize the minimum tug assistance outlined in the table below unless prior approval has been obtained from the Terminal Supervisor. Such approval would depend on the conditions of tide, currents, wind, and the maneuverability of the vessel.

<table>
<thead>
<tr>
<th>VESSEL SIZE</th>
<th>MOORING*</th>
<th>UNMOORING*</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;30K DWT</td>
<td>2 class B*</td>
<td>2 class B tugs*</td>
</tr>
<tr>
<td>30k DWT to 65k DWT</td>
<td>1 class B and 1 class A</td>
<td>1 class B and 1 class A</td>
</tr>
<tr>
<td>65K DWT to 130k DWT</td>
<td>2 class A and 1 class B</td>
<td>2 class A tugs</td>
</tr>
<tr>
<td>130k DWT to 195k DWT</td>
<td>4 class A OR 3 class A if 2 tractor tugs are employed</td>
<td>3 class A tugs</td>
</tr>
<tr>
<td>over 195k DWT</td>
<td>4 class A tugs</td>
<td>3 class A tugs and 1 class B</td>
</tr>
</tbody>
</table>

Polar ENDEAVOUR class ships may moor and unmoor with 2 A+ Tractor Tugs providing all requirements for tug escort exemption is met at the time of mooring and unmooring. If conditions warrant, the master and/or pilot may use an additional tug at their discretion.
Valero Notes

- A bow thruster with 1000 available horsepower or greater is equivalent to one class B tugboat.
- Tug classes are as defined by the SF Bay Marine Exchange classifications as follows:

<table>
<thead>
<tr>
<th>Tug Class</th>
<th>Minimum Bollard Pull (in pounds) OR Tractor Tug bollard pull, all directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>85,000 ahead, 55,000 astern 60,000 lbs or greater</td>
</tr>
<tr>
<td>B</td>
<td>60,000 ahead, 45,000 astern less than 60,000 lbs</td>
</tr>
</tbody>
</table>

Tesoro Minimum Tug Requirements

TESORO TERMINAL REGULATIONS FOR SHIPS AND BARGES

Tesoro requires the vessel to maintain at least 2 feet of UKC through any stage of the tide while alongside Avon or Amorco Terminal. Please reference the most current Tesoro Draft Notice to confirm the max draft and UKC requirement for your vessel. The most current notice can be obtained from the agent or Tesoro directly.

Tug Requirements

- **Barges**: For docking and undocking, loaded or light, two tugs are required for all barges regardless of size. The assist tug must be a twin screw class B or better.

- **ATB**: Articulated Tug and Barge units will require as a minimum for docking and undocking one (1) tractor tug class A or better and one (1) class B or better in addition to the dedicated ATB tug.

- **Ships up to 120 MDWT** will require as a minimum for docking and undocking two (2) tractor tugs class A or better.

- **120 MDWT to 199 MDWT** will require as a minimum for docking two (2) tractor tugs class A and one twin screw conventional tug Class A or better.

- **120 MDWT to 199 MDWT** will require as a minimum for undocking two (2) tractor tugs Class A or better.

- **Polar Tankers, Millennium Class**, will require for docking and undocking two (2) tractors Class A or better.

At Amorco, if docking starboard to, then the vessel must dock into the ebb and can only leave on ebb current. The sailing time is to be set no later than two hours prior to low water slack based on the “Martinez Marina, 0.61 nmi. NNW of (23d)” current station.

At Amorco, if docking port side to, then the vessel can leave at any state of the tide/current, but during the ebb, the current should be less than one knot.
ADDENDUM 5

FLAT TOW GUIDELINES

When a tug company or other customer requests the services of a pilot for assistance on flat tows, the following policy shall apply from the date hereof. We define a "flat tow" as a movement of a vessel without propulsion and where the vessel is not fully manned or lacks a properly-licensed master employed by the vessel owner or operator. Under such circumstances, control of the vessel will have to be through instructions to various assisting tugs and the hired linesmen.

To properly address safety and liability concerns, the San Francisco Bar Pilots Association, acting on behalf of its members, is hereby imposing certain minimum requirements as a condition for assigning pilots on flat tow operations. The requirements are:

1. Adequate tugs in both number and size must be assigned. The San Francisco Bar Pilots generally recommend the following tugs:

<table>
<thead>
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<th>LOA (feet)</th>
<th>Recommended Tugs</th>
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</thead>
<tbody>
<tr>
<td>less than 400</td>
<td>1 Tractor and 1 A</td>
</tr>
<tr>
<td>400 - 700</td>
<td>2 Tractors and 1 A</td>
</tr>
<tr>
<td>700 - 900</td>
<td>2 A+ Tractors and 2 A</td>
</tr>
<tr>
<td>900+</td>
<td>3 A+ Tractors and 1 A</td>
</tr>
</tbody>
</table>

The term “tractor tug”, when required, will be defined as:

A tractor tug is a tug powered by two or more omni-directional thrusters capable of applying steering and braking forces to the ship via a towline at speeds of five knots and more. For safety, the towline’s length needs to be adjustable using a winch that is controlled by the tug’s crew from the safety of the tug’s wheelhouse. Because of the exceptional maneuverability of these boats, and the tight quarters of many of the waterways and berths in the San Francisco pilot’s jurisdictions, the tug’s wheelhouse should afford the tug operator a near 360° view (masts, exhausts and other small items may restrict the view of a few degrees) so that he or she can see all that he or she needs to see without leaving the tug’s controls.

The actual number and size of the tugs to be assigned to a flat tow operation will depend on a number of factors which will affect the safe movement of the tow. For planning purposes, guidance can be obtained from the Operations Pilot of the pilot office who will endeavor to coordinate the assigned pilot’s concerns with the intended flat tow operation. However, the assigned pilot has it in his or her discretion to refuse to accept the assignment if the number and size of the tugs, as well as the size and type of lines available aboard for use during the movement are not satisfactory to that pilots. Again, if you have any questions about tug size or needs, please contact the Operations Pilot.
2. Adequate linesmen must be aboard the towed vessel to receive, handle and let go tug lines during the operation. These individuals must be organized into two gangs, one forward and one aft, and there shall be an experienced supervisor for each gang who will transmit the pilot’s directions, usually given by radio, to the linesmen. For this reason, adequate radios, compatible with the pilot’s own radio, must be provided to the linesmen supervisors.

3. Because of the critical role of the tugs to the operation and because the pilot is serving merely as advisor to the person in control of the towed vessel, the senior-most tug operator will be designated prior to the operation, as the person in control, or “master” of the tug, and shall be aboard the tow at all times during the maneuver. The operator assigned to the tow will coordinate the movement with VTS and other authorities.

4. Our members always work hard to ensure a safe operation. However, the pilot acts as an advisor only. Neither the pilot, the Operations Pilot, nor the San Francisco Bar Pilots Association warrants the adequacy of the tugs, their lines, the linesmen or the tug operator in control of the tow and the movement.

5. The Harbors and Navigation Code, Division 5, section 1198, gives every vessel, and its owner, operator and/or charterer a choice of options for protecting pilots from liability. Pilots are required to have available “trip” insurance for purchase by those hiring a pilot. The trip insurance protects the pilots from liability that may be incurred in connection with the provision of pilotage service. Trip insurance is available from the SFBP upon advance written request. Alternatively, if a vessel and its owner, operator and/or charterer do not wish to purchase the trip insurance, then by law they are deemed to have agreed to defend and indemnify the pilot hired, as well as the SFBP and those associated with it, from all liabilities that may arise in connection with the provision of pilotage. Protecting the pilots from liability by choosing from the options described herein is required both by statute, and as a contractual condition.

It is strongly suggested that consultation with the Operations Pilot takes place before going to bid on any towing operation involving pilot services.

If you have any questions about any of these requirements, please feel free to contact the Operations Pilot at the pilot office.