

## **EXECUTIVE SUMMARIES OF TERMINAL OPERATIONS MANUALS FOR OFFSHORE MARINE TERMINALS**

### **A. EL SEGUNDO MARINE TERMINAL**

1. Terminal Location and Description: The Chevron U.S.A. Products Company's El Segundo Marine Terminal facility is located in an open, unsheltered roadstead in the Santa Monica Bay on the West Coast of the United States at El Segundo, California. The Terminal maintains a Sea Buoy, "2ES," a lighted bell buoy exhibiting a red flashing light ever 4 seconds.

The Terminal has two, 7-point conventional buoy moorings systems (CBMs). Berth No. 3 is approximately 7200' offshore and Berth No. 4 approximately 8100' offshore. Berth No. 3 has two separate piping systems and associated submarine hoses; 3C (clean) for light oils (primarily gasoline, diesel and jet fuels) and 3B (black) for crude oil and black fuel oils.

In Berth 3C, a 16" submarine pipeline and a 12" submarine circulation pipeline are attached to 245' of submarine hose, the last link of which is a 12" over-the-rail hose. Berth 3B has a 26" pipeline, and a 12" circulation pipeline also attached to 240' of submarine hose. In Berth 4, a 36" submarine pipeline and a 14" submarine circulation pipeline attach to 290' of submarine hose, the last link of which is a 16" over-the-rail hose.

The Onshore Facility has a transfer station for each submarine system, with booster pumps, lines and instrumentation. The systems operate remotely from a control room with control indicators, recorders, start up and shutdown devices for all facilities. The El Segundo Marine Terminal is maintained and operated 24 hours a day, 7 days a week.

2. Mooring and Unmooring: Only vessels that have been successfully vetted by Chevron Shipping Company can call at this Terminal. A mooring launch with a Chevron Mooring Master and an Environmental Cargo Officer (ECO) meet vessels, scheduled to go directly into berth, on arrival, at the pilot station, located three miles SW of Buoy "2ES." The Mooring Master pilots the vessel and advises the vessel's Master on approaching and departing the berth. The Mooring Master and ECO act as Terminal Person-in-Charge, while on watch, onboard the vessel. The ECO assists the Mooring Master and is the pollution prevention officer on the vessel. The Mooring Master, ECO and mooring launch remain with the vessel for the entire period it is at the Marine Terminal.

The following is a typical procedure for berthing tank vessels in Berth Nos. 3 or 4. The vessel's Master and Mooring Master modify the detailed procedures to fit existing conditions of the particular berth, the state of the wind, current, sea, vessel size/limitations and agree on a detailed before starting the operation.

Escorted by a tug assist, a vessel approaches the mooring heading due north, passing approximately 200 yards west of No. 7 mooring buoy. The ECO and mooring launch assist the Mooring Master in dropping and positioning the vessel's anchors. Both the port and starboard anchors are dropped and positioned in approximately 80' of water in Berth No. 4, and 73' of water in Berth No. 3. The mooring launch is used to tie up the vessel to 7 large mooring buoys, the order of which is determined by wind and current conditions.

Reverse the general procedure to leave the berth. The vessel's crew slacks the lines and the mooring launch crew releases them at the buoy. The anchors are heaved based on wind and current conditions at the time. An assist tug attends the unmooring operation at all times.

3. Tug Assist Requirements: All vessels will have a tug or tugs standing by in readiness to assist the tank vessel during every mooring and unmooring. All assist tugs will be of the tractor type.

4. Underkeel Clearance Guidelines: The maximum operating draft for vessels is 51' in Berth No. 3 and 56' in Berth No. 4. Vessels calling at the El Segundo Marine Terminal shall at all times during mooring, unmooring and oil transfer have a net underkeel clearance of at least 6' from the sea floor and any known obstructions. As measured at the pipeline end manifold, vessels at the maximum allowable draft in each berth would have an underkeel clearance of 12'.

5. Spill Prevention and Response: Chevron is aware of the consequences of oil spills, and works diligently to prevent them at the Marine Terminal. The process begins with the vetting of all tank vessels before entering into any commercial contract. The vessel owner must make the vessel available to a Chevron marine representative and the vessel must satisfy this person. Suitable vessels appear on Chevron Shipping Company's Conventional Buoy Mooring (CBM) Certified List. Only CBM-certified vessels trade at this terminal.

Chevron continues spill prevention by placing the Mooring Master and ECO aboard vessels calling at the Terminal. These individuals have the highest level of professional competency, and many have served as Master of tank vessels. This combination of skilled professionals monitoring the vessel's progress, from mooring through cargo transfer to unmooring, ensures not only full compliance with regulations but also prompt corrective action to avoid hazardous developments. Chevron formulated Contingency Plans for many possible events and the Terminal personnel

are well trained in the event of an oil spill. Periodic drills involve the Terminal's own workers and equipment as well as contractor initial-response vessels and Marine Spill Response Organization (MSRC) in Long Beach.

Additionally, Chevron recognizes that human error is often a factor in oil spills and trains its personnel accordingly. All Mooring Masters successfully complete the Chevron Mooring Master Training program and possess an Unlimited U.S. Master Mariners License with a Federal First Class Pilotage Endorsement for El Segundo Offshore Moorings.

Other Prevention Measures include:

- a. A diver conducts monthly inspections of the submarine PLEM and submarine hoses in each berth. Additionally, diver inspections are made if a submarine hose has not been lifted within fifteen days of the previous cargo transfer and after a storm or seismic event affects the area.
- b. Continuous vacuum is placed on the submarine pipeline and hose during all mooring and unmooring.
- c. Bathymetric Surveys are conducted every three years. Quarterly soundings are taken at each Berth PLEM, if the quarterly sounding exceeds the Bathymetric Survey by five percent, a new Bathymetric Survey must be conducted.

The Terminal prides itself on a low incidence rate of spills and has a goal of zero oil spills. To contain oil spills on the water, the refinery maintains the following spill response equipment:

- a. Initial Response: Mooring launch "Caribe Alliance" is equipped with 1000' of Expandi pollution boom, secondary mooring launch "Keith K," is equipped with 550' of Expandi pollution boom. Upon verification of a spill, personnel can begin deploying this boom within 15 minutes.
- b. The refinery will dispatch the following Chevron equipment from King Harbor which can be in place in less than two hours:
  - i. Vanguard: 36' Fast response
  - ii. Utility One: 32' Fast response

- iii. Boomer: 55' with 1,000' of 43" Kepner ReelPak
- iv. Recon: 44' with 1,000' of 43" Kepner ReelPak

Additional response will cascade in from Marine Spill Response Organization in Long Beach. MSRC'S response time is 2-2.5 hours.

See the "Oil Spill Contingency Response Plan" for additional inventory of the refinery's spill-containment equipment, as well as information concerning Spill Notification Procedures, Logistical Support, Offshore Containment and Recovery Procedures and Shoreline Protection and Cleanup.