

## **Proprietary Marine Oil Terminal Operational Summary**

**Refinery and Marine Oil Terminal Operations** – ExxonMobil and Phillips 66 are competitors in the fuel exploration and supply business both locally and globally. Each company operates separate local refineries primarily to supply transportation fuel for domestic and international consumption. Their local refineries operate differently based on refinery engineering, available storage and pipeline assets, and strategic business direction including available market opportunities. These refineries supply numerous transportation fuels and lubrication products. Each variety of fuel has very distinct specifications and requires distinct volume and grade specific additive and blending products to produce. The Southern California fuel market is one of the largest in the world and operates as an energy island with no pipeline connection to other large-scale petroleum fuel markets. These refineries are built at a very large scale to meet this growing and varied fuel need, now and into the future. Both refineries collectively employ in excess of 2,500 employees and contractors. Larger scale and product variability creates more complex and frequent issues of balance among products being inputted and produced. Maintaining optimal balance is essential to maintaining efficient and cost effective refinery operations. Refineries operate most efficiently when running at or above 90% of capacity. In order to achieve this high rate of efficiency, imbalance must be readily mitigated through access to proprietary marine oil terminals. All major regional refineries are attached to proprietary marine oil terminals.

Although the marine oil terminals associated with refineries generally do not operate near maximum capacity and rarely operate near levels seen in third party storage terminals, they serve a vital role in balancing out the regions refining operations. The proprietary marine oil terminals are utilized for routine import and export of clean and dark products required or produced in the refining process. Typically, outside the routine process of adding or removing products in the refining process, the marine terminal experiences the highest utilization during maintenance activities. When various components in the refinery are not functioning due to planned or unplanned maintenance, product is imported and/or exported to work around the down component and maintain refinery output. Excess capacity at the marine terminal comes into use when unplanned maintenance or refinery upsets occur, similar to the fire that recently affected a Northern California refinery. Long-term refinery outages like this one would create an even larger burden on regional fuel prices, if there was insufficient access to marine oil terminals. More recently as regional demand for certain refined fuels has decreased due to the economy; the marine terminals have allowed local refineries to export refined fuels to international markets. This access has allowed some local refining operations to maintain high levels of production and limit job losses.

Oversight of day to day operation at the marine oil terminals would provide a knowledgeable observer with sensitive information regarding refining operations, including whether the refinery is operating at optimal or suboptimal levels, whether significant maintenance is occurring and the refinery is short on refined product, or whether the refinery is running in excess of certain commodities that are actively traded in the market. Observation of the marine terminal operations also provide information on international market activity including economically driven opportunities that result in

import or export of various materials. This information is closely guarded by the refiners in order to protect their market positions. Additionally, according to Phillips 66 legal department, commingling of refinery operational information between refiners would expose the refiners to increased risk of facing potential allegations or investigations concerning antitrust compliance.

**Crude Oil Import Terminals** – Handling marine sourced crude oil is an exception to the general industry preference for proprietary marine oil terminal operations. Currently crude oil imports into the San Pedro Bay are handled at joint use facilities in the Port of Long Beach. The proposed Pier 400 project in the Port of Los Angeles would also be used by a mix of refiners and traders. It is the industry preference to import crude oil into the largest scale facilities, with the deepest berths, and best access to public and private storage. This preference is financially supported through joint use of these facilities.

According to refiners and industry participants, this is feasible because these crude oil terminaling activities do not provide the same access to sensitive information that joint operation of a proprietary marine oil terminal would. As discussed in more detail below, a typical proprietary marine oil terminal handles numerous products, both in and out, and these movements could be pieced together to determine how the refinery is operated. The import of crude oil provides a much narrower perspective of the refiners overall operation solely based on the volumes and frequency of import. Whether the crude is being used immediately or stored long term is not evident based on the terminal activities, which generally do not provide joint use storage. Although specification of crude oil varies, commingling is much less of an issue, because the crude imported is normally stored in owned or leased proprietary tanks. Further these product movements are generally routine in nature and are not a dynamically fluctuating reaction to the refinery operations as occurs at the typical proprietary marine oil terminal. The Port of Los Angeles supports future crude oil imports through a consolidated facility as is currently planned on Pier 400. This concept produces the highest utilization of land and capital investment and is generally accepted by the oil refining industry.

**Operational Obstacles to Consolidation** – In order to implement the proposed consolidation plan, both refiners would require sufficient access to and in some cases proprietary control of pipelines, tanks, and wharf facilities. Currently, ExxonMobil and Phillips 66 operate their marine oil terminals as proprietary operational arms of their inland refineries. Both entities operate complex inland refineries that are designed and operated uniquely and respectively require a unique mix of additives, intermediate petroleum products, and crude oil to make a wide variety of refined fuels. Grade or quality specifications for additives, intermediates, and finished products are precisely measured and cost reflective. As a result of limited pipeline access and the number of tanks either dedicated to clean (gasoline, diesel, jet fuel, refined fuel additives) or dark (fuel oil, bunker fuel) (all of which carry specifications required by the individual refiner), commingling of these products through shared pipelines or tanks is operationally restrictive and may not be efficient.

First, most tanks are not designed for drain-dry operations and routinely maintain several feet of product in the tank bottom, otherwise referred to as the tank heel. These operational conditions require these tanks to remain in dedicated service for various families of products and commingling of different products would only occur within different sub groups of the specific product family. Although commingling of certain products is not rare in a marine terminal, in most cases it is not a process an oil refiner would entrust to a third party operator.

Second, the constant commingling of like kind but slightly different specification clean and dark products creates an added level of financial and refining risk that is currently controlled by internal staff. Based on discussions with staff from both refineries, the overall risk of product grade degradation would require routine oversight from both refiners at the marine terminal to ensure products are being sequestered properly. This oversight also increase access to sensitive competitive information as discussed in more detail below.

Third, product movements require a significant amount of product to be pushed through intra-terminal and external pipeline systems to affect the movement onto the ships, into another tank, or into the refinery. In addition to the tank heels referenced above, the product left in the pipeline is not insignificant and often represents hundreds of barrels that have substantial value. Commingled operations in one tank farm would require an intense and accurate specification and quantity tracking system for these left over products. Although not impossible to manage, this would be an added financial and staffing burden of the commingled operation and would further reduce efficiency.

Although Phillips 66 currently has tanks that are not in use, they have stated plans to begin use of all tank capacity at their facility in the near future. This plan is conditioned on completion of a requested long-term permit with the Port. The shift in utilization for Phillips 66 is occurring, for several reasons. Phillips 66 recently split from the ConocoPhillips Company. The split was implemented to isolate upstream (drilling and exploration) from downstream (refining, logistics, and marketing) operations. Phillips 66 now has a higher level of control over future development and capital expenditures, which previously was constrained by the capital-intensive upstream activities. Phillips 66 has already made temporary improvements to increase utilization and open new opportunities through its marine terminal. Additionally, Phillips 66 intends to use its existing terminal to import substantial volumes of ethanol from Brazil to meet new California low-carbon-intensive-fuel requirements. Their current business projections require use of all exiting tanks and based on information they have provided, should result in a significant increase in volume in the next two years.

Due to product sequestration requirements and tank storage capabilities, ExxonMobil has represented that they currently require all of their tanks to support refinery operations. Additionally, ExxonMobil likely suffers from less flexible marine terminal operations because they are located 9 miles from their Torrance refinery. This significant distance requires a higher level of long term planning, more deliberate and static tank usage, and less overall operational flexibility.

Based on information received from both refiners, it appears all tanks serve a specific purpose in importing and exporting specific families of products for their respective refinery operations. Different utilization rates for tanks are to be expected based on the difference between the business models of each facility. A third party terminal operator's focus on short distance transfers from ship to tanks and tank to barge will always produce a much higher utilization rate in comparison to a refiner who routinely makes product transfers as they are required in the refinery and as they come out of the refinery. Although all tanks currently have a current or future intended use, both refiners state they are looking for ways to unlock excess capacity in a manner that does not place the core refining business at risk. In an industry as operationally complex and competitively sensitive as this one, it is difficult to find a consistent approach among industry participants for unlocking this excess capacity. However, industry participants have consistently stated that consolidating two refiners into one marine oil terminal is not a feasible alternative to achieve higher utilization. Based on the information provided to staff through this process, it is difficult to find fault with this consistent message.

With both ExxonMobil and Phillips 66 showing legitimate needs for all of their existing tanks and pipelines, the only way to increase utilization through consolidation without significantly increasing operational inefficiency and competitive risk would be to develop additional tanks and pipelines for separate use. Unfortunately, neither site has sufficient adjacent vacant land to accommodate such a development.

**Competitive Obstacles to Consolidation** – As competitors in the highly regulated fuel supply market, refiners do not share refinery operation information. Sharing such information is competitively unfavorable. According to the refiners, restricting access to this information and avoiding any perception that sensitive information is available to be shared is a core function of standard refiner operational training. Refiners take significant precautions to avoid exposure to this type of competitive risk as their industry is heavily scrutinized by the general public and governmental agencies.

Sensitive information could include production or operating costs, profit margins, production output or capacity, refinery maintenance schedules, product inventory levels, specifications and grade of imported and exported products, general marketing, logistics or business plans, or customer identification. All of this information would be available to operations staff of a marine oil terminal. Although, a third party operator could shield some of this information, it is not a complete shield. As mentioned above, each refiner has internal quality and measurement control standards, and only a limited number of activities that their standards would allow them to cede completely to third party operator.

Although refiners routinely use third party terminal operators to handle and store products, this is generally limited to movement of routine quantities of refined materials and normally does not include more sporadic day-to-day refinery product logistics. Refiner staff at their own terminals generally handle these tasks. Even when using third parties, there is a significant amount of internal staff oversight into quantity and grade control including testing for grade and quantity prior to acceptance or sale and payment. When this type of oversight occurs at a third party terminal where a variety of other

business activities from various unknown customers is taking place, the likeliness of encountering intelligible sensitive information is low.

However, when applying the required control measures to a terminal operated jointly on behalf of two refiners by a third party, it is very likely routine quality and measurement checks will put refinery employees in direct contact with sensitive information. In this scenario, the cargo moves are not limited to routine transfers of the same material, but are variable in all types of material and time frequencies. These materials will be routinely transferred from tanks and pipelines that may have been recently occupied by the other refiner's product or where the other refiner's product currently is located. In order to ensure grade quality, refiner staff may need to know what type of materials were previously stored in certain tanks or pipelines or how long it will take to move a certain cargo out of a tank they require for loading. In these scenarios, the refiner staff person may come into contact with quantity and grade information of their competitor's product. This functional reality makes it very difficult to avoid commingling of sensitive information.

Staff cannot determine if it is impossible to implement controls to limit access to sensitive information to a level that would be acceptable to the refiners from a competitive and legal perspective. However, staff can determine that protecting the refinery operators from the risk of coming into contact with sensitive information from their competitors would be a very complex and labor intensive task. Through conversations with various refiners, we can find no precedent for such a joint operation anywhere in the country. Although such an operation seemingly would provide increased operational efficiency, dual oversight likely reduces efficiency and creates a larger competitive risk.