San Francisco Bay Area Oil Infrastructure

1. Valero Benicia Refinery

The Benicia Refinery was built by Exxon from 1966-1969, and has the distinction of receiving the first shipload of crude to be delivered from the Alaskan Pipeline, in 1977. Most of the crude processed here still comes from the pipeline via Valdez, though the refinery is also connected to a crude pipeline that brings oil from the San Joaquin Valley. It employs around 500 people, and is considered an average, large refinery, capable of processing 150,000 barrels of oil per day. When Exxon and Mobil merged, Exxon had to divest itself of some of its assets, including this refinery, which it sold to a young oil company called Valero in 2000. The oil refinery and the surrounding industrial park were built on the grounds of the Benicia Arsenal. Munitions storage structures cover the hillside, some of which have been converted to new uses, removed, or built on top of. Unexploded ordnance surveys and removal continues.
2. **Teso/Golden Eagle Martinez/Avon Refinery**

The Golden Eagle Refinery in Martinez, also known as the Avon Refinery, is one of five refineries located around the San Francisco Bay and Delta region. Valued around $1 billion, the refinery has a processing capacity of 166,000 barrels of crude per day, making mostly automotive fuels. It was built in 1913, to process heavy crude from the southern San Joaquin Valley, to which it is connected by pipeline. It is now owned by Tesoro, of San Antonio, TX, and had previously been owned by Tosco and Ultramar Diamond Shamrock.
3. Shell Oil Martinez Refinery

The Martinez Refinery is the second largest refinery in the Bay Area, after Chevron, and was the first American refinery built by the Shell Oil Company, in 1915. It is operated by Equilon, a joint partnership of Shell and Texaco. Today it employs 900 people and processes around 165,000 barrels of crude per day. It is connected to oil fields in the Central Valley by a 170 mile long pipeline. Martinez is an industrial area with two major oil refineries, three chemical plants (Shell Chemical, Rhodia, and Monsanto), and several hazardous waste dumps. It is also known for being naturalist John Muir's home for much of his life. The first major industry to locate in Martinez was a copper smelter and fertilizer plant, built on a rise next to the Bay called Bull's Head Point, a site that was later taken over by the Rhone-Poulenc sulfuric acid plant, which is now owned by Rhodia, a French chemical company.
4. ConocoPhillips/Rodeo San Francisco Refinery

The refinery in Rodeo was the first of the five major oil refineries now operating on the shores of the Bay Area. The plant was built in 1896, and now covers more than 1,000 acres, and employs 500 people. It processes 100,000 barrels of crude per day, to make mostly gasoline. For years it was owned by Unocal, and was bought by Tosco in 1997, one of eight refineries in the U. S. owned by Tosco. In 2001, Tosco was acquired for $7 billion by Phillips Petroleum [a.k.a. ConocoPhilips “San Francisco Refinery”]. Phillips already bought out ARCO’s Alaskan crude oil production properties last year for $6.5 billion. Like most refineries, Rodeo has a co-generation plant on site that produces steam and electricity with heat generated by the refining process, as well as natural gas. At times Rodeo generates more power than it needs, and the surplus is sold to PG&E and is distributed on the grid. Cracking is the refinery term for heating crude and low grade oils to the point where they change at a molecular level into new products. This is done at the Plant's Coking Unit 200. Adjacent to it, with two stacks, the Unicracker-Reformer Complex continues the process, and adds hydrogen. Though Tosco has sold its refineries, it still controls 6,500 retail outlets, including the 76 brand of gas stations, and the Circle K convenience store chain. It also sells its gas under the Exxon and Mobil brands in the northeast.
5. **Chevron Richmond Refinery**

The Richmond Refinery is the largest and oldest major oil refinery on the West Coast. Construction started in 1901, and it was soon bought by Standard Oil. It covers 2,900 acres, has 5,000 miles of pipelines, and hundreds of large tanks, that can hold up to 15 million barrels of crude, gasoline, jet fuel, diesel, lube oil, wax, and other chemicals produced by the refinery. The refinery has several distinct zones for the various stages of the refining process, including distillation, cracking, and blending. Most of these operations require intense heat and pressure, requiring 130 megawatts of power and up to 50 million gallons of cooling water daily. With a processing capacity of over 350,000 barrels per day, this refinery is among the largest in the United States. 1,600 people are employed in the process, of the 28,000 that work for Chevron worldwide. Chevron's research and technology division occupies the most visible portions of the refinery grounds, along the 580 freeway. This separate company employs over 1,000 people in work related to improving and expanding petrochemical processes and products. At the north end of the refinery grounds is a recreational center for Chevron employees, built in 1921. It is an isolated private club with a yacht harbor, shooting ranges, baseball diamonds, tennis courts and other amenities. The fence around the entire Chevron property is over six miles long. In 1984, Standard bought Gulf Oil in the largest corporate merger in history, and changed its name to Chevron. Now Chevron has merged with Texaco. Chevron is a local company, whose worldwide headquarters was on Market Street in San Francisco until 2001, when it moved into a new suburban campus in San Ramon (in 2013, 800 jobs were moved to Houston from San Ramon).

Long Wharf handles more tonnage than any other pier on the bay, as this is the main pier for the Chevron Refinery. A three foot diameter pipe removes an average of ten million gallons of crude oil per day off tanker ships, primarily from Alaska and a few from the Middle East.
Tracks bring tar sands crude to refineries

A glut of tar sands crude and refined heavy crude oil at Alberta, Canada’s tar sand mines, coupled with maxed-out pipelines, has increased rail shipments to Bay Area refineries and elsewhere.

San Francisco Bay Area crude oil refineries

1. **Valero** — Wants to import tar sands crude
2. **Tesoro Golden Eagle** — Wants to import tar sands crude
3. **Shell** — Receives tar sands oil as synthetic crude
4. **Phillips 66** — Receives tar sands crude by rail
5. **Chevron** — Processes tar sands crude