

## Terms and Basic Information Useful To Know on the Crude-By-Rail Issue

### Federal Agencies:

- National Transportation Safety Board (NTSB)
- U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA)
- U.S. Federal Railroad Administration (FRA)
- Department of Transportation (DOT)
- American Association of Railroads (AAR)

### CA Agencies:

California Energy Commission (CEC) – projecting 25% of CA crude will arrive by rail by 2016 [http://energyalmanac.ca.gov/petroleum/statistics/2013\\_crude\\_by\\_rail.html](http://energyalmanac.ca.gov/petroleum/statistics/2013_crude_by_rail.html)

- Office of Emergency Services (OES)
- CA Department of Fish and Wildlife, Office of Spill Prevention and Response (OSPR), Rail Safety Working Group Report issued June 10, 2014
- California Public Utilities Commission (CPUC) - charged with rail inspections
- Sacramento Area Council of Governments (SACOG)

### General terms for communities:

- **Up-rail communities** – cities trains pass through on their way to deliver their products
- **Down-wind communities** – cities that may be affected by air pollution coming from “upwind” sources such as major industrial facilities and refineries, major freeways, etc. Particulate matter, such as dispersed by open storage of pet coke or during pet coke shipping terminal operations, can be nearly invisible, yet travel in the wind, affecting human health.
- **Fenceline communities** – communities that host refineries or other large-scale industrial polluters.

### Transportation by Railroad companies:

- **Unit train:** train made up of a single type of car, with same product for efficiency, with only 1-2 human operators. Unit trains carrying crude oil are typically 50 to 120 tank cars long. 100 cars = 70,000 barrels of crude (1 barrel = 42 gallons)
- **Manifest train:** carry a mix of cars
- **rail tank car:** “DOT-111” tank cars, 60 feet long and 10 feet high, capacity = 30,000 gallons = 286,000 pounds. DOT-111s were never designed to carry crude oil. They puncture easily during a derailment and leak. Currently, there are approx. 92,000 DOT-111s carrying flammable liquids such as crude oil and ethanol. The National Transportation Safety Board has issued an Emergency Order requiring upgrades to the tank car design. The redesigned tank car is referred to as a “1232.” Currently there are about 14,000 upgraded “1232s.” But this redesigned model has not proven safe in transporting volatile Bakken oil.
- **midstream oil terminals** unload crude oil from train, ships and pipelines, but are not the final destination. At the McClellan terminal in Sacramento, and Kinder Morgan’s in Richmond, the crude is unloaded from unit trains into tank trucks and delivered to Bay Area refineries. Crude may also be delivered to an oil terminal for storage and further distribution, as WesPac LLC has planned for Pittsburg’s waterfront. The WesPac’s proposed oil terminal would import 242,000 barrels of oil each day, by ship, pipeline and rail, for distribution by pipeline to 4 of nearest refineries, including Valero, according to the WesPac Infrastructure Project DEIR.

- **Downstream terminals** unload crude oil directly from unit trains to the refinery. Valero Benicia would be considered a downstream terminal.
- **Rail Road Companies operating in California:** Union Pacific (UP), and Burlington North Santa Fe (BNSF) owned by Warren Buffet. For rail delivery of crude oil to the Valero Benicia Refinery, Union Pacific would run unit trains from their rail hub in Roseville, through Sacramento, Yolo and Solano County cities and environs. Hazardous materials must run on Class I tracks.
- All crude oil by rail is being tracked by the California Energy Commission [CEC] at [http://energyalmanac.ca.gov/petroleum/statistics/2013\\_crude\\_by\\_rail.html](http://energyalmanac.ca.gov/petroleum/statistics/2013_crude_by_rail.html)

**Two primary sources of North-American crude slated for increased import by rail to California refineries and oil terminals are:**

- Bakken Shale Williston Formation from North Dakota - so-called "tight oil" extracted by hydraulic fracturing ("fracking") of shale rock is a light, highly volatile crude (said to be as light and flammable as gasoline). Right now it is abundant and cheap. It must be refined before it can be sold abroad, although the industry is trying to change that law.
- Tar Sands, Alberta, Canada- hugely carbon-intensive extraction process yields a thick-as-asphalt, naturally occurring substance called "bitumen," which is highly acidic (corrosive) and full of toxic metals, including lead. Bitumen has to be upgraded with other refined petroleum products in order to make it flow in pipelines or rail cars. Spills of "diluted bitumen" ("dilbits") are impossible to clean up from rivers, lakes, shorelines marshes and wetlands, because the heavy bitumen sinks and coats everything, destroying life wherever it lands. Refining tar sands produces more petroleum coke, ("petcoke"), a toxic by-product that is worse than coal when burned as a fuel. (It is routinely sold to Asia.) So far, pet coke remains unregulated as a threat to public health: yet it disperses in air in tiniest particulates that can lodge in lung tissue and diffuse toxins into the bloodstream, triggering respiratory distress and asthma.
- All 5 Bay Area refineries are now geared to process tar sands. Unrefined tar sands crude can also be loaded directly from coastal terminals to tankers for sale in Asian markets.
  - Valero Refinery in Benicia; Tesoro Golden Eagle Refinery in Martinez; Shell Refinery in Martinez; Phillips 66 Refinery in Rodeo; Chevron Refinery in Richmond
  - Kinder-Morgan terminal in Richmond is currently receiving Bakken crude by rail which is transferred to tank trucks and driven to Martinez.
  - Pittsburg's proposed WestPac Energy LLC would import 242,000 barrels/day of crude by BNSF rail and/or ships for storage and export crude (pending EIR approval). CA Attorney Gen'l, Kamala Harris, slowed the DEIR's approval with her letter that cited inaccuracies and missing discussions in the DEIR.
  - Santa Maria refinery in San Luis Obispo County is part of Phillips 66's refinery in Rodeo. The two refineries are connected by a pipeline. The Santa Maria refinery is proposing a new rail spur that would allow BNSF Rail to import crude oil into their terminal for processing and also further distribute crude to Rodeo via pipeline. Phillips 66 intends to import tar sands, and possibly Bakken.

- Rail routes for UP and BNSF cross into CA from the north and/or east: over the Sierra Nevadas via Donner Pass to Truckee, Roseville, Sacramento, Davis, through Yolo and Solano cities, to Benicia, or through the Feather River Canyon to Oroville to Sacramento, Davis, etc. The route from Oregon goes south through Redding to Yuba City
- to Sacramento and Davis, and is a possible route for BNSF trains bound for Santa Maria refinery (south of San Luis Obispo). If this route is taken by Phillips 66 unit trains bound for their Santa Maria refinery, the trains would pass through Benicia on UP tracks and continue through East Bay cities then down the coast. (Bee, June 9, The Public Eye: Fight over crude-oil transports through CA intensifies).
- Rail traffic with more scheduled unit trains carrying oil would travel over the old Carquinez Trestle Bridge (built in 1929-30), endangering the Strait, then pass through the East Bay on their way to Phillips 66 Santa Maria refinery in San Luis Obispo County.

### **Opposition to crude-by-rail to protect communities and the environment:**

- **Bay Area environmental organizations:** Communities for a Better Environment [CBE]; Natural Resources Defense Council [NRDC]; Forest Ethics; Stop Crude By Rail; 350 Bay Area; Sunflower Alliance; California Coastal Coalition.
- **Local and regional community groups organized to challenge crude-by-rail:**  
Benicians for a Safe and Healthy Community [BSHC]; Martinez Environmental Group [MEG]; Pittsburg Defense Council; Pittsburg Ethics Council; Crockett/Rodeo United To Defend The Environment [C.R.U.D.E.]; Richmond Progressive Alliance; Richmond Environmental Justice Coalition; Asia Pacific Environmental Network
- **Nationwide actions:** Albany (New York State), Minneapolis, Chicago,
- **West Coast resolutions of opposition:** Vancouver, Seattle and Bellingham WA, Spokane & Portland, OR
- **CA resolutions of opposition introduced and/or passed:** Berkeley, Richmond, Martinez, Oakland, Davis