SITE:	Chevron Refinery	LATITUDE:	37-55.2
HAZARD:	Facility	LONGITUDE:	122-24.5
VOLUME:	30,000 bbl		
DURATION:	3 days		

TRAJECTORY ANALYSIS

A spill trajectory envelope was calculated for the Chevron Refinery located on Long Wharf in Richmond. The trajectory analysis considered oil transport by the wind, tidal currents, and river flows, and spreading of the oil spill by physical processes such as gravity, surface tension, and tidal dispersion. Spill transport on a flood tide would be expected to transport the oil northward into San Pablo Bay and then eastward towards the Carquinez Strait. A spill during an ebbing tide would be expected to transport the oil south and west as far as the Golden Gate area. Spreading of the spill over 3 days would move the limit of the spill out of San Francisco Bay.

Wind-induced surface currents could cause additional transport of oil depending on the direction, strength, and persistence of local winds. Northerly winds could transport the oil into South San Francisco Bay as far as the San Mateo Bridge. Within 3 days, westerly and as southwesterly winds would carry oil across San Pablo Bay and through the Carquinez Strait to approximately 3 miles east of the Benicia/Martinez Bridge.

Any oil exiting San Francisco Bay could be expected to be transported either southward or northward depending on the direction of the wind. For oil that is transported outside the Bay, northerly winds would move the oil as far as Point Montara after 3 days. Southerly winds outside the Bay would move the oil northward as far as Point Reyes after 3 days.

These spill trajectory envelopes represent the outer perimeter of shoreside areas that could receive oil in the event of any spill. The envelopes are based on regional extremes of climate, tide, current, and wind and assume pessimistic dispersion and other adverse weather conditions. These trajectory envelopes do not represent the trajectory of any one spill. A full discussion of the details used for preparing these spill envelopes is provided in Section 202.2.