

PERSONS RESPONSIBLE

- NASSCO
- Southwest Marine
- MARCO & Campbell Industries, Inc.
- US Navy
- City of San Diego
- Chevron
- BP / ARCO
- SDG&E

PERSONS RESPONSIBLE

- California Water Code section 13304
- SWRCB Resolution 92-49
- Make a reasonable effort to identify dischargers.
- Use relevant direct or circumstantial evidence.

NASSCO since 1945

Southwest Marine since 1979

- ◆ **Wastes Generated**
- ◆ **WDR Violations**

MARCO & Campbell Industries, Inc.

- ◆ **San Diego Marine Construction Corporation (SDMC)**
- ◆ **Operated from ~1920 to 1979**
- ◆ **Waste Generated**
- ◆ **WDR Violations**

US Navy

- ◆ Operated drydock within NASSCO leasehold from ~1950s to 1970s
- ◆ Waste Generated
- ◆ Discharge of Pollution

City of San Diego

- ◆ **Owns/Operates MS4**
- ◆ **Urban Waste Conveyed**
- ◆ **WDR Violations**

Chevron

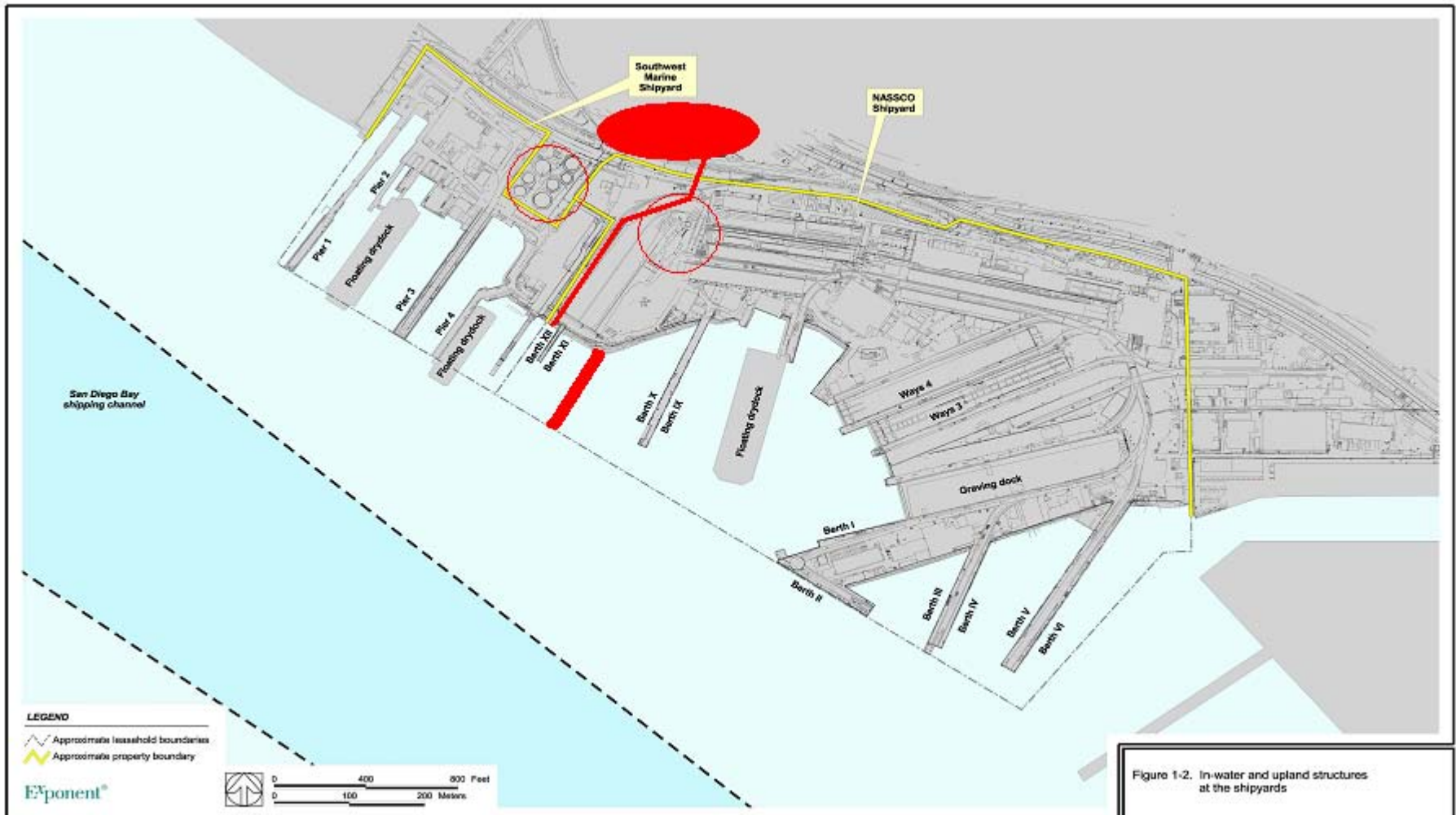
- ◆ **Operations since early 1900s**
- ◆ **Facilities**
- ◆ **Evidence of releases**
- ◆ **Stormwater discharges**
- ◆ **Relationship to sediment contamination**

Chevron

Fuel storage, transport, and transfer operations since 1909

- ◆ 7 million gallon upper tank farm
- ◆ Two former lower tank farms ~100 feet from San Diego Bay
- ◆ Marine terminal pier, wharf and pipelines
- ◆ Stormwater discharges into San Diego Bay

Chevron



Chevron

Evidence of Releases

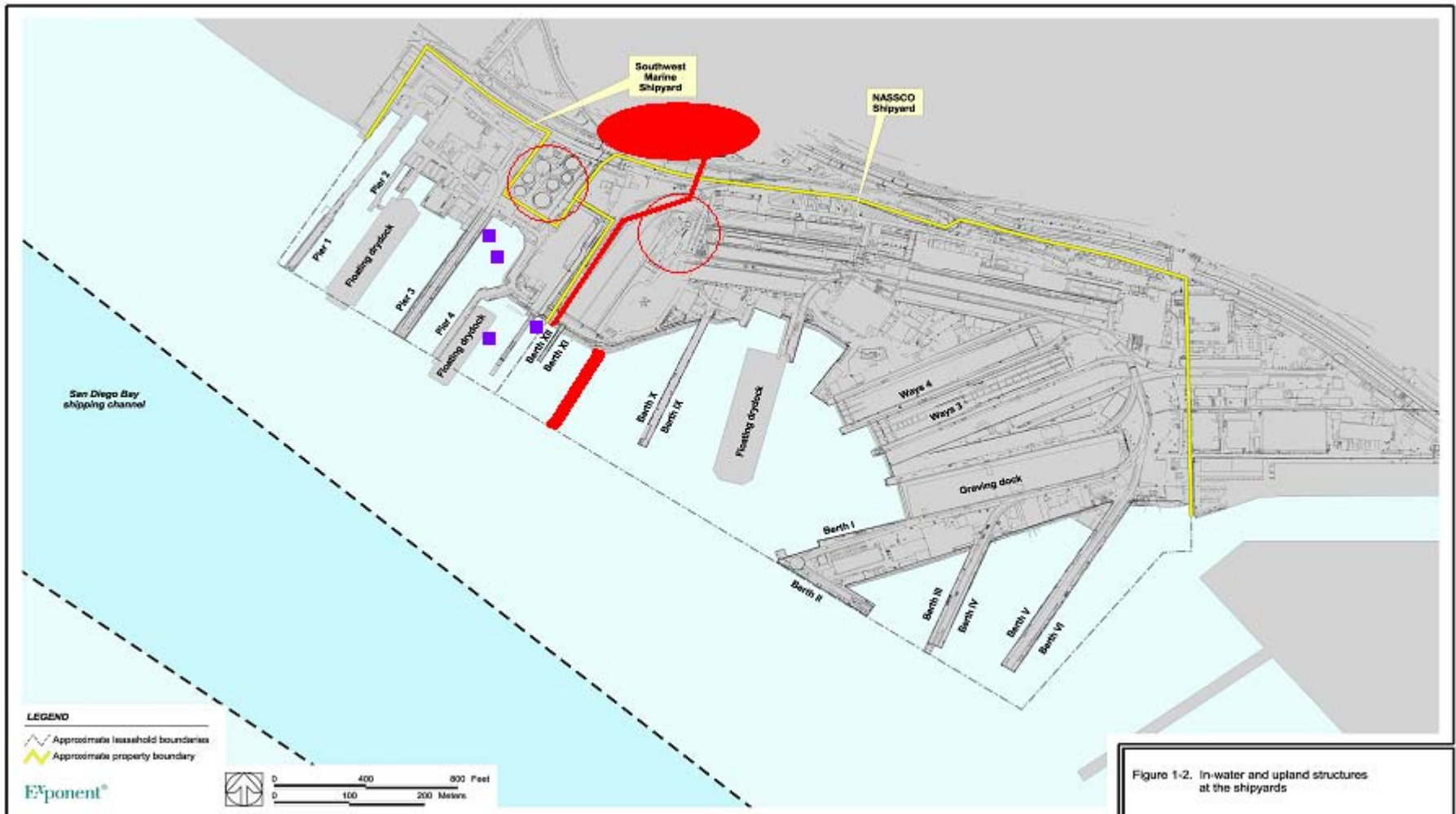
- ◆ **Approximately 30 groundwater monitoring wells installed – 20 reported free product**
- ◆ **2001 Belt Street pipeline release**
- ◆ **1973 release to San Diego Bay**
- ◆ **1967 diesel fuel release**
- ◆ **1913 two million gallon release and fire in Bay**
- ◆ **Sampled stormwater discharges have consistently reported elevated concentrations of zinc, lead, cadmium, copper, oil & grease and single instances of benzene and phenol in 1989.**

Chevron

Relationship to Shipyard Sediment Contamination

- ◆ Highest PAH concentrations in vicinity of former operations
- ◆ SW 20 (11,000 ppb HPAH)
Approx. 200 feet southwest of lower tank farm
- ◆ SW 24 (52,000 ppb HPAH)
approx. 270 feet southwest of lower tank farm
- ◆ SW 27 (12,000 ppb HPAH)
approx. 260 feet southwest of pipelines
- ◆ SW 28 (17,000 ppb HPAH)
approx. 60 feet southwest of pipelines

Chevron



BP / ARCO

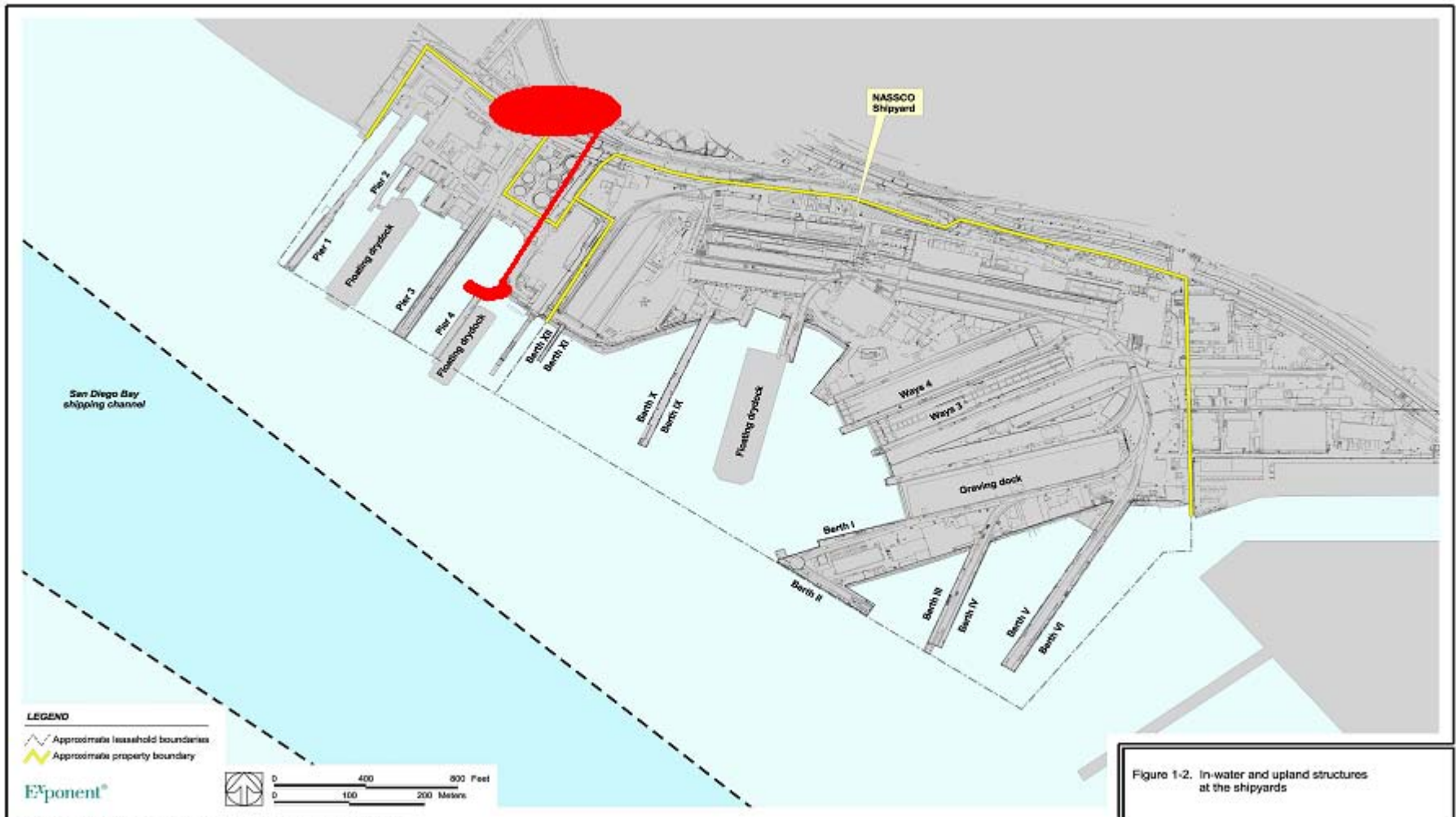
- ◆ **Operations since early 1900s**
- ◆ **Facilities**
- ◆ **Evidence of releases**
- ◆ **Stormwater discharges**
- ◆ **Relationship to sediment contamination**

BP / ARCO

Fuel storage, transport, and transfer operations since 1925

- ◆ Current upper tank farm
- ◆ Marine terminal pier, wharf and pipelines
- ◆ Stormwater discharges into San Diego Bay

BP / ARCO



BP / ARCO

Evidence of Releases

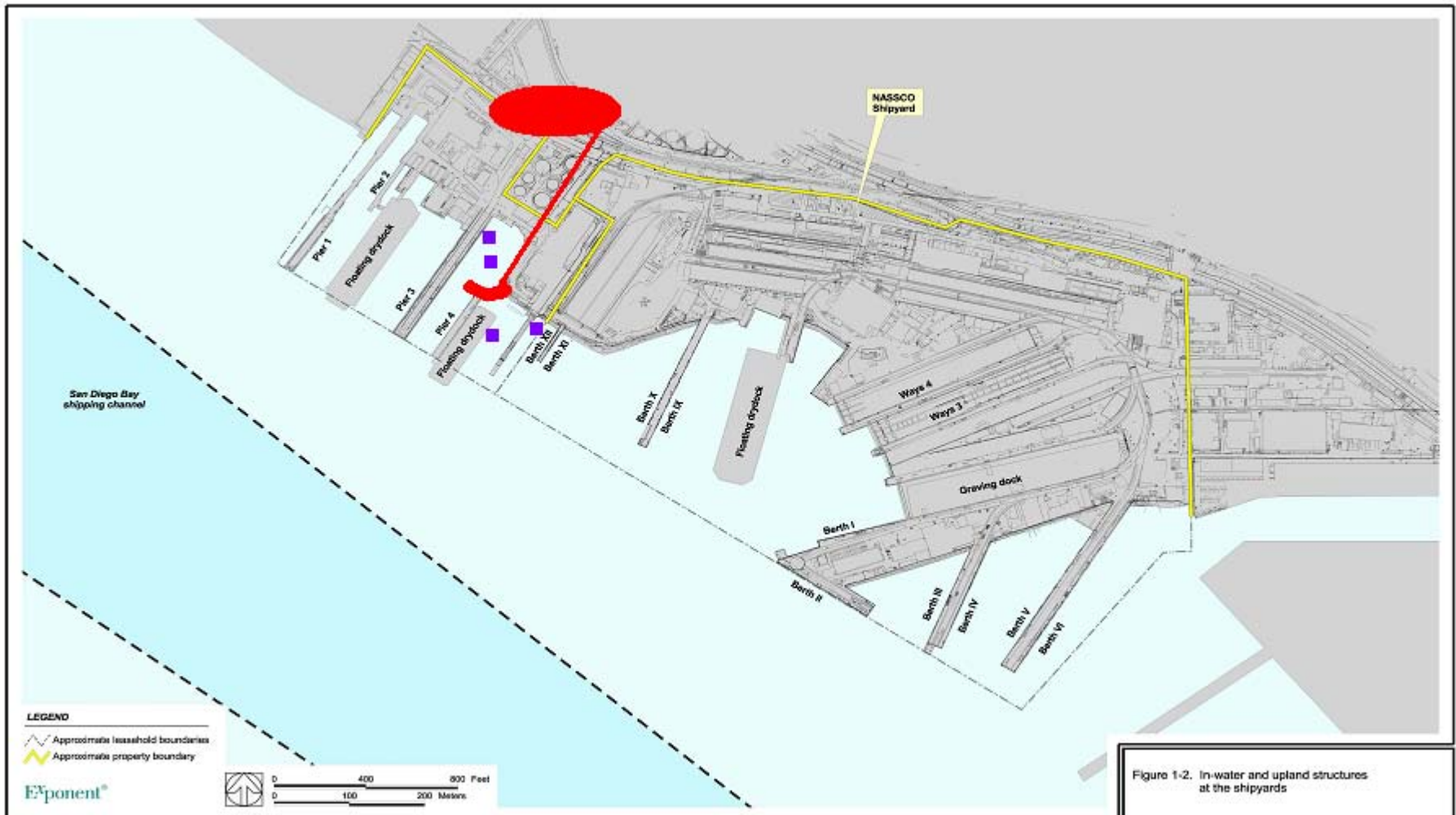
- ◆ **Approximately 35 groundwater monitoring wells installed – 18 reported free product**
- ◆ **Sampled stormwater discharges have frequently reported elevated total suspended solids, specific conductance, total organic carbon, oil & grease and single instances of benzene, ethylbenzene and toluene in 1995.**

BP / ARCO

Relationship to Shipyard Sediment Contamination

- ◆ Highest PAH concentrations in vicinity of former operations
- ◆ SW 20 (11,000 ppb HPAH)
approx. 275 feet north of the former ARCO pier.
- ◆ SW 24 (52,000 ppb HPAH)
approx. 150 feet north of the former ARCO pier.
- ◆ SW 27 (12,000 ppb HPAH)
approx. 200 feet south of the former ARCO pier.
- ◆ SW 28 (17,000 ppb HPAH)
approx. 200 feet southeast of the former ARCO pier.

BP / ARCO



SDG&E

- ◆ **Operations from ~1943 to 1990**
- ◆ **Facilities**
- ◆ **Evidence of releases**
- ◆ **Stormwater discharges**
- ◆ **Relationship to sediment contamination**

SDG&E

- ◆ **Power generation**
- ◆ **Cooling water tunnels**
- ◆ **Waste holding ponds (PCBs)**
- ◆ **Metals discharged into San Diego Bay**
- ◆ **Stormwater discharged into San Diego Bay**

SDG&E

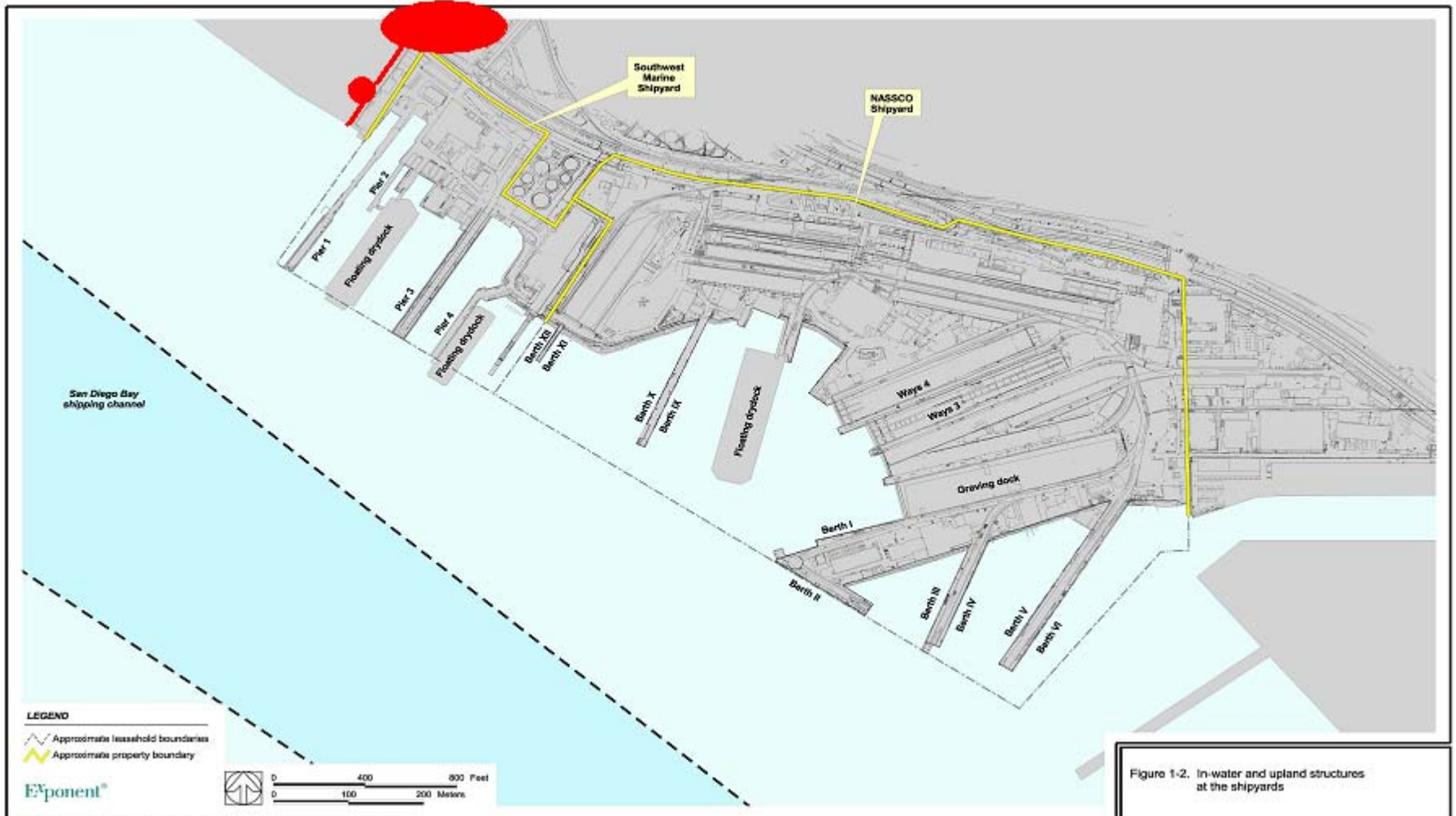
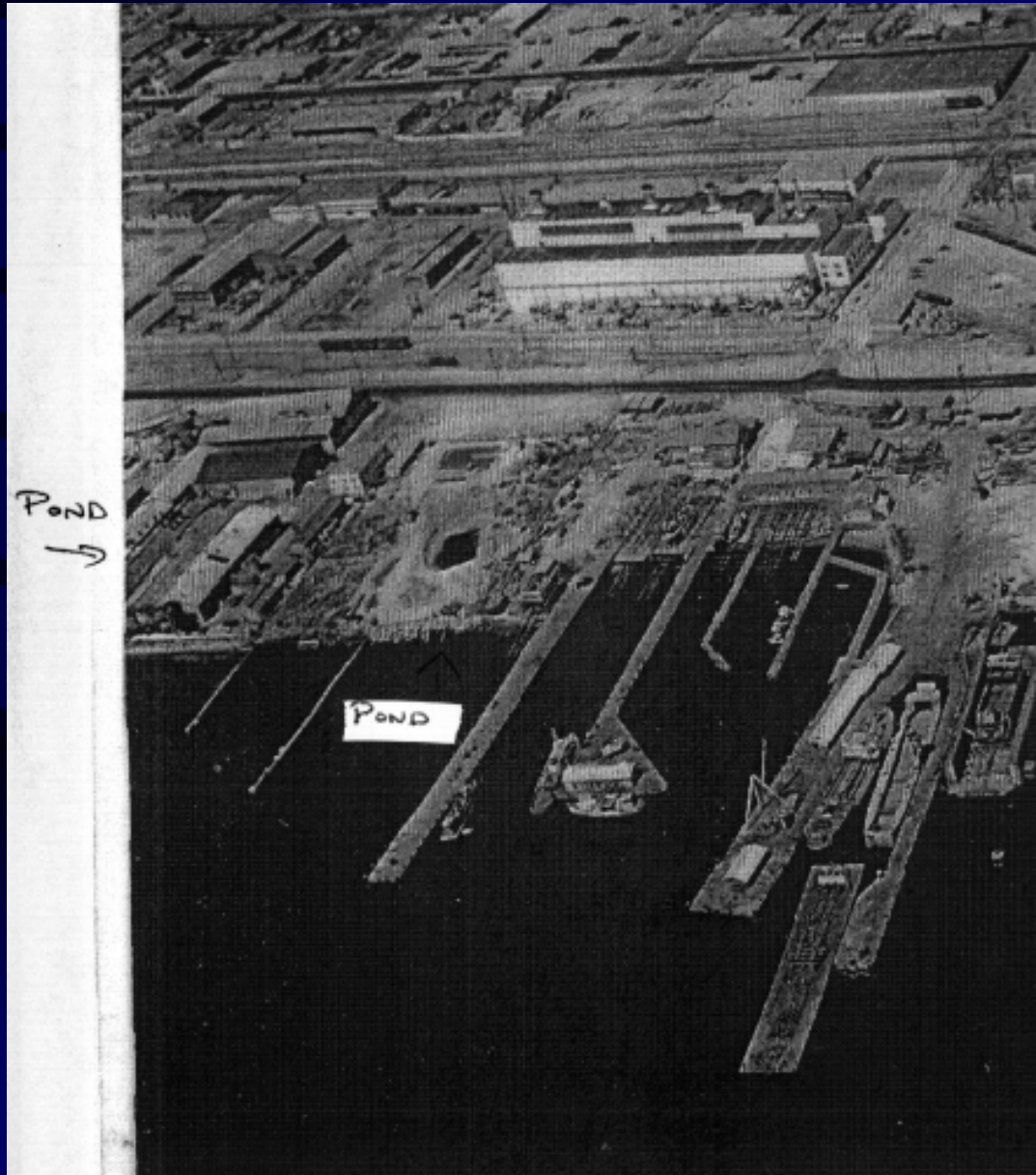


Figure 1-2. In-water and upland structures at the shipyards

SDG&E



SDG&E

Evidence of Releases

- ◆ **Sampled discharges have frequently reported elevated zinc and copper and a single instance of nickel in 1990.**

SDG&E

Relationship to Shipyard Sediment Contamination

- ◆ Highest PCB concentrations in vicinity of cooling water tunnels and waste holding ponds.

SDG&E

