

AAPA



**American Association
of Port Authorities**

Alliance of the Ports of Canada, the Caribbean,
Latin America and the United States



Environmental Issues Impacting the Cruise Industry



*AAPA Cruise Seminar, Mazatlán, México
February 19, 2009*

*Peter Dailey
Deputy Director, Maritime*



TOM DOW

Vice President, Public Affairs
Carnival Corporation & PLC

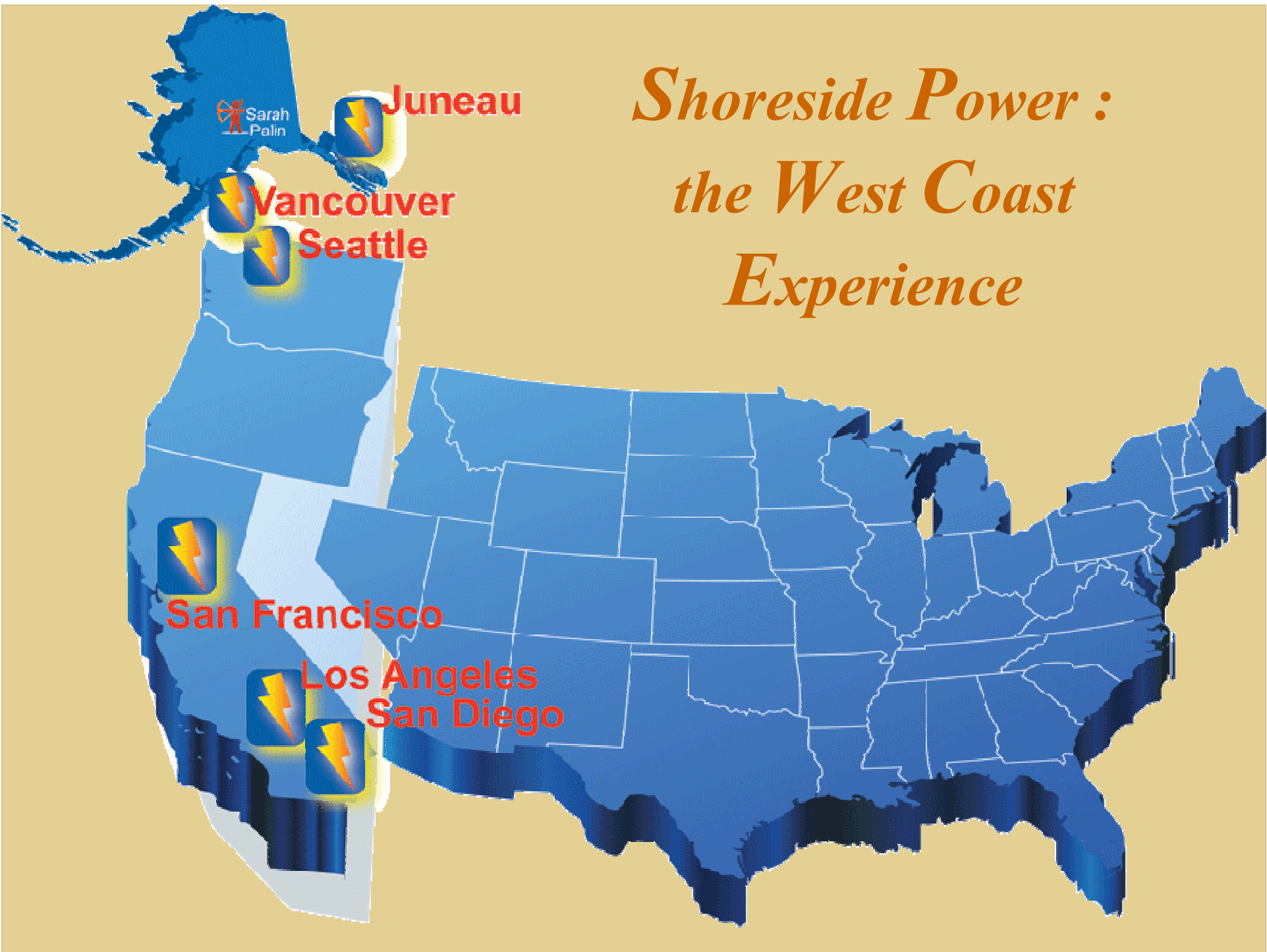


MIKE WATTS

Manager, Marine Division
Cochran, Inc.



*Shoreside Power :
the West Coast
Experience*



Sarah
Palin

Juneau

Vancouver

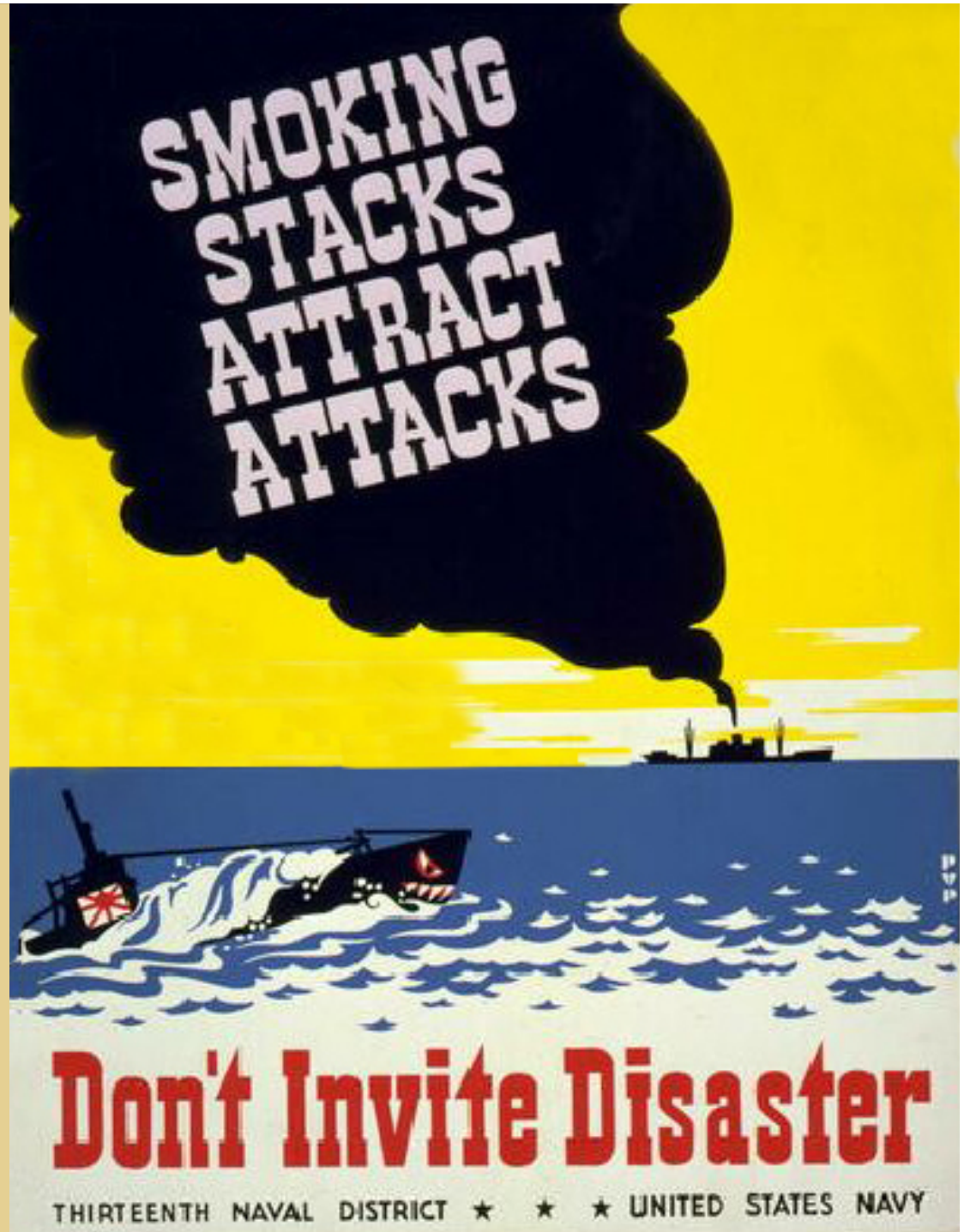
Seattle

San Francisco

Los Angeles

San Diego

OR ...





An Industry Initiative

Princess Developed . . .

In Juneau	—	2001
Seattle	—	2005
Vancouver	—	2009
San Francisco	—	2010
San Diego	—	2010
Long Beach	—	
Los Angeles	—	?

is Now the Law

2008 California EPA Regulation —

What is the compliance schedule?

Date	Reduced Onboard Power Generation Option
Jan. 1, 2010	Shore-power equipped ships must use shore power if available at berth
Jan. 1, 2014	50% of all cruise ship calls on shore-power
Jan. 1, 2017	70% of all cruise ship calls on shore-power
Jan. 1, 2020	80% of all cruise ship calls on shore-power

OR – equivalent emissions reduction by other means



WHY ?

Public Benefits of a Shoreside Project

Emission Reductions per Ship Call
(based on 77,441 GRT / 856' LOA as typical)

- ❑ 1.3 tons of nitrogen oxides (NO_x)
- ❑ 0.87 tons of sulfur oxides (SO_x)
- ❑ 19.7 tons of CO₂
- ❑ 140 lbs of PM





Shoreside Power

the San Francisco Experience

- 2004 — Cruise Terminal Environmental Advisory Committee
- 2005 — U.S. EPA Low Sulfur Fuel Incentive
- 2006 — Air Quality Board Grant **\$1.9** million
- 2010 — Shorepower Project Completion



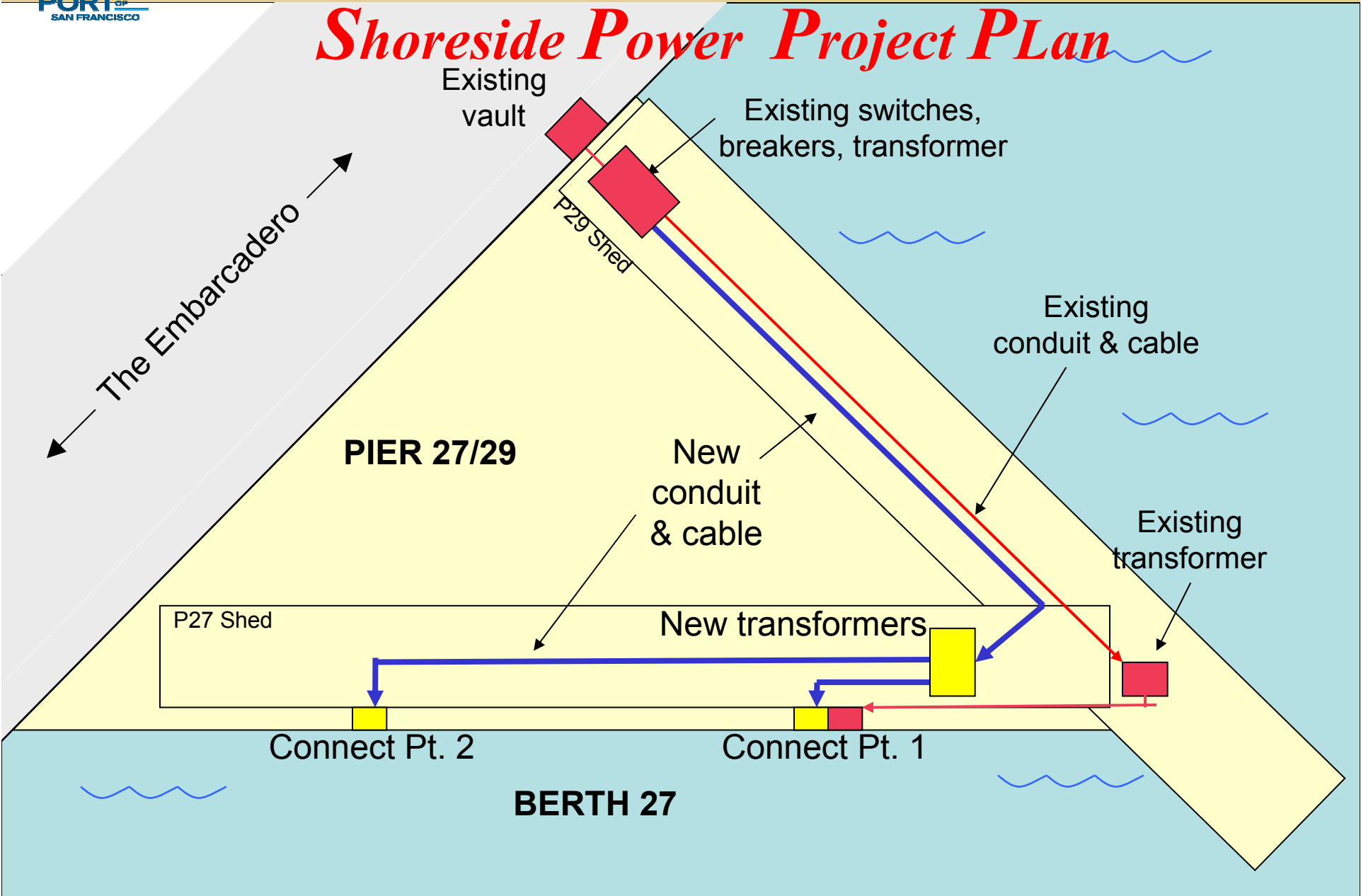
INITIAL TEST PHASE

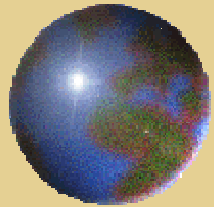




San Francisco's Pier 27

Shoreside Power Project Plan





COMING TO A PORT NEAR YOU

When Is Shore Power Sustainable ?

- ✦ Abundant Low Emitting Sources of Electricity
- ✦ Hydro; Natural Gas; Nuclear
- ✦ Available Distribution Infrastructure
- ✦ Frequent & Regular Cruise Ship Calls





Thank You

