

Green Flag Incentive Program



Vessel Speed Reduction Program



- **Slowing Ship Speed Reduces NO_x Emissions from Vessels**



What is NO_x?



- NO_x is oxidized nitrogen
- NO_x is a pollutant and can cause ozone, smog and haze



Where does NO_x come from?

- Nitrogen and oxygen, naturally occurring in air, form NO_x when exposed to high pressures and temperatures
- Air is exposed to high pressure and temperature in the Diesel Engine combustion chamber – producing NO_x





• 50% of NO_x in the US is from mobile sources such as ships and trucks (EPA)



Vessel Speed Reduction Program

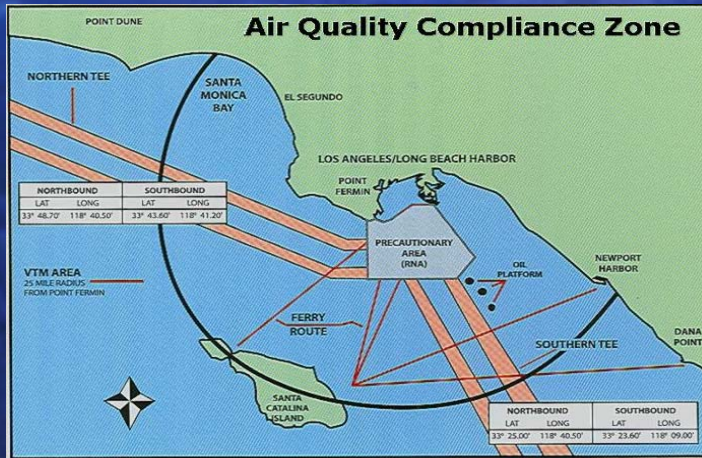


Memorandum of Understanding between:

- Ports of Long Beach and Los Angeles
- EPA
- South Coast Air Quality Management District (AQMD)
- California Air Resources Board
- Pacific Merchant Shipping Association
- Marine Exchange of Southern California



Vessel Speed Reduction Zone (12 Knots 20 Nautical Miles from Point Fermin)



Vessel Speed Reduction Program

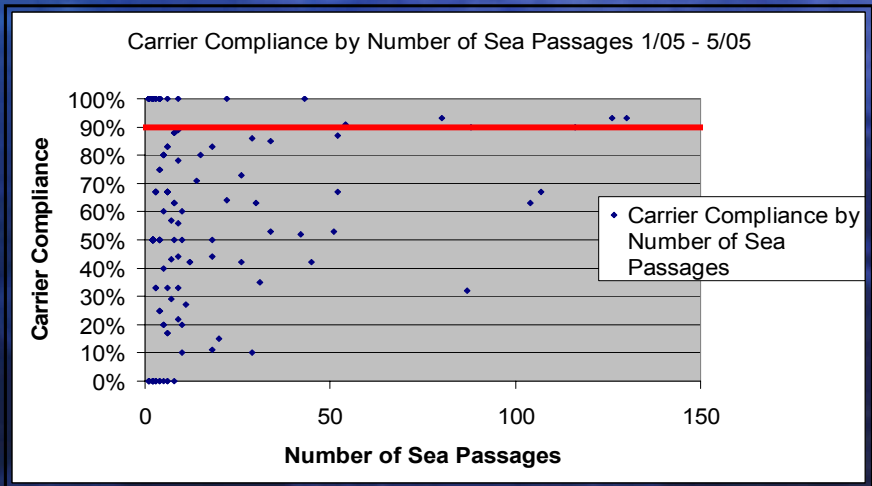
- Only about 1/3 of the vessels were in compliance with the program in 2004
- Close to 500 arrivals a month



pict0.jpg



Choosing Program Parameters





**THE PORT OF
LONG BEACH**

Green Flag Incentive Program



- Awards Vessels with Green Flags for one year of 100% compliance
- Rewards Carriers with 15% reduction in dockage for achieving 90% compliance



Monitoring Compliance

The Marine Exchange of Southern California is responsible for measuring compliance with the Voluntary Vessel Speed Reduction Program



Marine Exchange of Southern California



PortSource™

a non-profit organization established in 1923 / operating the Vessel Traffic Service since 1994

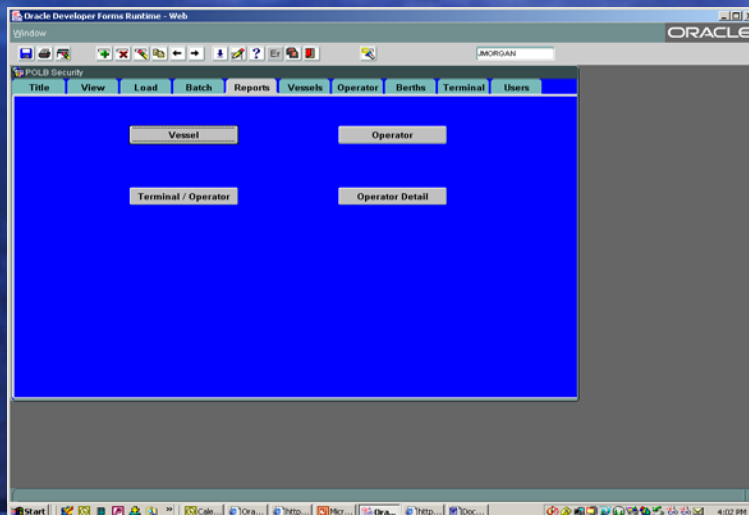


Tracking Compliance at the Port of Long Beach

- Compliance Data is collected from Marine Exchange
- Vessel data is input into the the Port of Long Beach tracking system
- Automatic Reports can be generated by Operator, Vessel, and Terminal



Reports



Operator Report

Oracle Developer Forms Runtime - Web

Window

Report Parameters

Start Date: 01/01/2005

End Date: 01/02/2005

Post: LB

Operator: _____

OK CANCEL

Operator Report

09/26/2005 03:59 PM

Operator Page: 1 of 1

01/01/2005 to 01/02/2005

Post: LB

Operator Name	Compliant	Non Compliant	Total	Percentage
CP Ships Ltd	1	0	1	100
China Shipping Container Lines	1	0	1	100
Corral Line	1	0	1	100
Eurobulk	1	0	1	100
Hanjin Shipping	2	0	2	100
Manuba	0	1	1	0
Matsuo Navigation	1	0	1	100
Mediterranean Shipping Co	0	1	1	0
Mitsui OSK Lines Ltd	1	0	1	100
Nippon Yusen Kaisha	1	0	1	100
Orient Overseas Container Line	1	0	1	100
Roefership	0	1	1	0
Tankers UK Agencies	1	0	1	100
Teekay Shipping Canada	1	0	1	100
GRAND TOTAL	12	3	15	80



Vessel Report

The screenshot shows the Oracle Developer Forms Runtime - Web interface. The window title is "Oracle Developer Forms Runtime - Web" and the user is logged in as "JMORGAN". The menu bar includes "Title", "View", "Load", "Batch", "Reports", "Vessels", "Operator", "Berths", "Terminal", and "Users". The "Vessels" menu is active, displaying a blue background with four buttons: "Vessel", "Operator", "Terminal / Operator", and "Operator Detail". The Windows taskbar at the bottom shows the Start button, several application icons, and the system clock displaying "4:02 PM".

Vessel Report

The screenshot shows the Oracle Developer Forms Runtime - Web interface with the "Vessels" menu active. A "Report Parameters" dialog box is overlaid on the menu. The dialog box has a title bar "Report Parameters" and contains the following fields and buttons:

- Start Date: 01/01/2005
- End Date: 01/02/2005
- Port: LB
- Vessel: (empty text field)
- OK button
- CANCEL button

The background menu shows the "Vessel" and "Terminal / Operator" buttons. The Windows taskbar at the bottom shows the Start button, application icons, and the system clock displaying "4:05 PM".

Vessel Report

09/26/2005 04:06 PM

Vessel Percentage Page: 1 of 1

01/01/2005 to 01/02/2005

Port: LB

Vessel Name	Compliant	Non Compliant	Total	Percentage
ANDROMEDA LEADER	1	0	1	100
CIELO DE EUROPA	1	0	1	100
CSCL AMERICA	1	0	1	100
FINOLA	1	0	1	100
GLORY	0	1	1	0
HAMPSTEAD	1	0	1	100
HANJIN MARSEILLES	1	0	1	100
HANJIN PRAHA	1	0	1	100
LEYTE SPIRIT	1	0	1	100
MARTORELL	1	0	1	100
MATSONIA	1	0	1	100
MSC JENNY	0	1	1	0
NIKOLAOS P.	1	0	1	100
OOCL ROTTERDAM	1	0	1	100
SIERRA LAUREL	0	1	1	0
GRAND TOTAL:	12	3	15	80



Terminal Reports

Oracle Developer Forms Runtime - Web

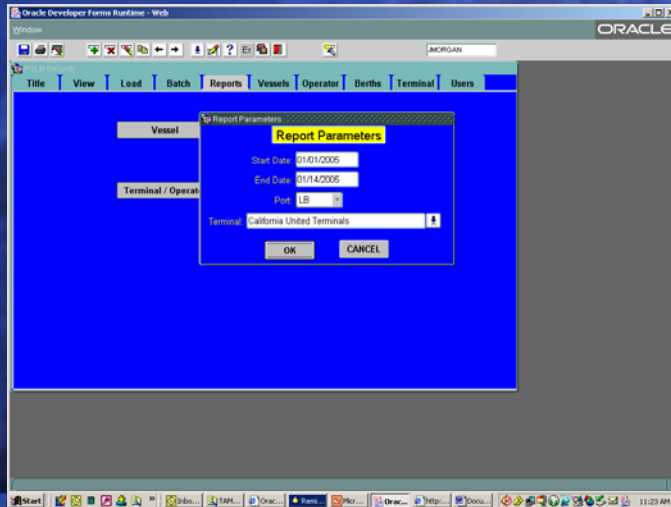
POLB Security

Menu: Title View Load Batch Reports Vessels Operator Berths Terminal Users

Buttons: Vessel Operator Terminal / Operator Operator Detail



Terminal Reports



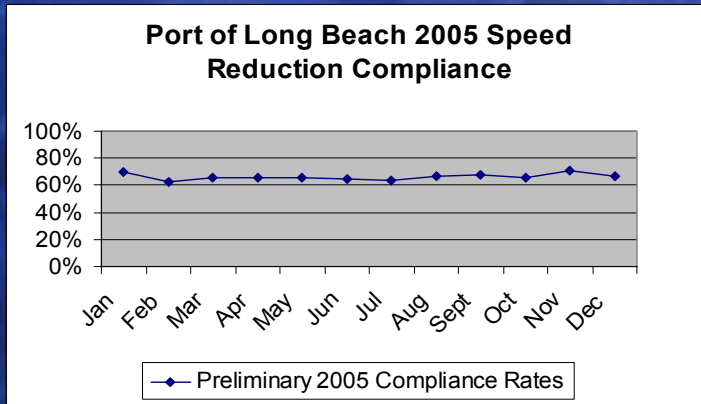
Terminal Reports

The screenshot shows a Microsoft Internet Explorer browser window displaying a report titled 'Terminal / Operator'. The report is dated 09/27/2005 at 11:22 AM and covers the period from 01/01/2005 to 01/14/2005. The report is for Port: LB and Terminal: California United Terminals. The data is presented in a table with columns for Operator, Compliant, Non Compliant, Total, and Percentage.

Operator	Compliant	Non Compliant	Total	Percentage
China Navigation	2	0	2	100
Eurobulk	1	1	2	50
Hyundai Merchant Marine	4	0	4	100
Inul Steamship	2	0	2	100
Terminal Totals	9	1	10	90



2005 Compliance Statistics



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