

**MINUTE ITEM**

This Calendar Item No. C70 was approved as Minute Item No. 70 by the California State Lands Commission by a vote of 3 to 0 at its 4-17-03 meeting.

**CALENDAR ITEM  
C70**

A )  
Statewide  
S )

04/17/06  
W 9777.263  
L. Prabhu  
R. Varma

**CONSIDERATION OF APPROVAL OF THE SECOND ANNUAL REPORT OF THE CALIFORNIA OIL TRANSFER AND TRANSPORTATION AND RISK REDUCTION PROGRAM FOR THE YEAR 2005**

**PROPOSAL:**

The Commission Staff is proposing the approval of the second annual report of the California Oil Transfer and Transportation and Risk Reduction program for the year 2005.

**BACKGROUND:**

Assembly Bill 2083 of the statutes of 2002 (Public Resources Code Sections 8780 through 8789), established the California Oil Transfer and Transportation Emission and Risk Reduction (OTTER) program. The OTTER program collects data concerning air pollutants caused by the significant numbers of internal shipments of oil by vessels between the San Francisco Bay area and the Los Angeles/Long Beach area and ports in between. The legislature has declared that tracking trends in internal shipments of oil is necessary to promote public safety, health, and welfare, and to protect public and private property, wildlife, marine fisheries, and other ocean resources, and the natural environment in order to protect and to preserve the ecological balance of California's coastal zone, coastal waters, and coastal economy. The legislative declarations also indicate that current accessible and accurate data regarding oil transportation is critical to having adequate information of the potential environmental quality, public health, and environmental justice consequences that must be analyzed by state and local agencies for environmental impact reports and statements, emergency response planning, permit issuance, and air quality mitigation efforts.

The California OTTER program essentially requires the California State Lands

CALENDAR ITEM NO. C70 (CONT'D)

Commission (CSLC), in consultation with the industry, to develop an Oil Transfer and Transportation Emission and Risk Reduction Form for owners of oil to report information regarding the quantities and types of oil, the routes and duration of voyages and the estimated quantities of air emissions and certain other information associated with the internal shipments of oil. The CSLC is also required to receive quarterly OTTER reports from the responsible parties and file annual reports for the years 2004 to 2009 to the legislature.

Specifically, the OTTER form is required to contain the following:

- (1) The name, address, point of contact, and telephone number of the responsible party.
- (2) The name of the vessel transporting the oil.
- (3) The type and amount of oil being transported.
- (4) The source of crude oil.
- (5) The name and location of any terminal that loaded the vessel.
- (6) The name and location of any terminal that discharged the tanker or barge.
- (7) The dates of travel and the route.
- (8) The type of engine and fuel used to power the tanker or barge-towing vessel.
- (9) The estimated amount and type of air emissions. To the extent practicable, the emissions factors developed by the United States Environmental Protection Agency shall be used to estimate the amount of air emissions. The form shall be designed to ensure that charter vessel air emissions are not counted more than once.
- (10) An indication of whether the reason for the internal shipping of oil was due to a temporary shutdown or partial shutdown of a key refinery facility.
- (11) On and after January 1, 2004, if Division 36 (commencing with Section 71200) is repealed pursuant to Section 71271, the amount of any ballast discharge and the location of the discharge.

Additionally, the Bill requires that the "owners of oil" or "responsible party" engaged in internal shipments of oil to use the form to report the above-mentioned information to the Commission. Reports should be filed on a quarterly basis.

Consequent to the receipt of the above information, the Bill requires the CSLC to file annual reports with the legislature on or before April 1, each year for the years 2004 to 2009.

The reports are required, at a minimum, to provide the following information to the legislature:

- (1) A description of any trends in the total number of trips by oil type, amount of

CALENDAR ITEM NO. C70 (CONT'D)

shipment, and source of oil.

(2) The number of transfers due to refinery shutdowns.

(3) The location of air emissions and ballast discharge, and the type of vessel used during those events.

(4) A discussion of any other pertinent issues that the Commission determines should be included.

**CONCLUSION:**

The following is a summary of reported data for 2005:

Total number of internal voyages:	403
Number of voyages from San Francisco Bay Area to Los Angeles/Long Beach:	299
Number of voyages from Los Angeles/Long Beach to San Francisco Bay Area:	80
Number of voyages from Ellwood to Long Beach:	24
Number of voyages from Ellwood to San Francisco Bay Area:	0

Total volume of crude oil shipped as internal shipments:	1,099,502 barrels
Total volume of refined oil shipped as internal shipments:	38,362,831 barrels

All internal shipments of crude oil in 2005 were from the Elwood marine terminal, off the Coast of Santa Barbara County to the Los Angeles/Long Beach area. No crude oil was shipped as an internal shipment to the San Francisco Bay area.

Total air emissions resulting from internal shipments of oil:

NO <sub>x</sub> emission:	1186.61 short tons
HC emissions:	62.24 short tons
PM emissions:	73.12 short tons
CO emissions:	156.08 short tons

A total of 436.93 short tons of combined emissions occurred at 25 or more miles from the coastline by tank ships using the offshore route. 1041.12 short tons were emitted between 12 and 15 miles by barge/tug passages using the standard route via the Santa Barbara Channel Traffic Separation Schemes

Although there was a 10.4% increase in the number of internal voyages in 2005, the percentage increase of No<sub>x</sub> emissions was 0.15% and HC 3.8%. PM and CO emissions showed a decrease of 12% and 11.3% respectively

CALENDAR ITEM NO. C70 (CONT'D)

The average per voyage air emissions for 2004 and 2005 are inconsistent. The information reported for the year 2004 may have errors because of the initial problems encountered at the start of the program. CSLC staff believes that the average emissions for the year 2006 will be more consistent with the averages seen in 2005 because many of the initial problems in reporting have been eliminated.

During the year 2005, there were no internal shipments of oil due to refinery breakdowns.

This is the second in a series of annual reports to the California State Legislature. The first report included statistics of the number of internal shipments, the quantities of crude oil and refined products, the numbers of coastal and offshore voyages and the quantities of No<sub>x</sub>, HC, PM and CO emissions into the coastal and offshore regions off California for the year 2004. Prior to the first report, the information collected by the OTTER Program did not exist. Starting with this report, planning organizations, State and Federal Agencies and organizations developing information, particularly for environmental documentation, will have a much more complete picture of the movement of oil along the California coast and its quarterly and annual trends. Continued collection of OTTER information will allow future reports to look at trends and changes in oil transportation, estimates of vessel air emissions along our central coast and will allow planners to more exactly examine the impacts of moving oil by marine vessels.

**STATUTORY AND OTHER REGULATIONS:**

- A. P.R.C. Sections 8780 through 8789.

**PERMIT STREAMLINING ACT DEADLINE:**

N/A.

**OTHER PERTINENT INFORMATION:**

1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Cal. Code Regs. §10561), the Commission Staff has determined that this activity is exempt from the requirements of the CEQA because the activity is not a "project" as defined by the CEQA and the State CEQA Guidelines.

Authority: P.R.C. §21084 and 14 Cal. Code Regs. §15300.

2. The proposed report does not affect small businesses as defined in Gov. C. §11342, sub. (h), because all affected businesses transportation and warehousing businesses having annual gross receipts of more than \$1,500,000, as specified under Gov. C. §11342, sub. (h)(2)(I)(vii).

CALENDAR ITEM NO. C70 (CONT'D)

**EXHIBIT:**

- A. The California Oil Transfer and Transportation Emission and Risk Reduction (OTTER) second Annual Report for the year 2005

**IT IS RECOMMENDED THAT THE COMMISSION:**

1. FIND THAT THE ACTIVITY IS EXEMPT FROM THE REQUIREMENTS OF CEQA PURSUANT TO TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15061 BECAUSE THE ACTIVITY IS NOT A PROJECT AS DEFINED BY PUBLIC RESOURCES CODE SECTION 21065 AND TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15378
2. FIND THAT THE REPORT WILL NOT AFFECT SMALL BUSINESSES AS DEFINED IN GOVERNMENT CODE SECTION 11342(h), BECAUSE ALL AFFECTED BUSINESSES ARE TRANSPORTATION AND WAREHOUSING BUSINESSES HAVING ANNUAL GROSS RECEIPTS OF MORE THAN \$1,500,000, AS SPECIFIED UNDER GOVERNMENT CODE SECTION 11342(h)(2)(I)(VII).
3. FIND THAT THE REPORT WILL NOT HAVE A SIGNIFICANT IMPACT ON THE CREATION OR ELIMINATION OF JOBS OR NEW OR EXISTING BUSINESSES WITH CALIFORNIA, NOR WILL IT HAVE AN ADVERSE ECONOMIC IMPACT ON BUSINESS, INCLUDING THE ABILITY OF CALIFORNIA BUSINESSES TO COMPETE WITH BUSINESSES IN OTHER STATES.
4. APPROVE THE REPORT SUBSTANTIALLY IN THE FORM AS SET FORTH IN EXHIBIT "A".

**ANNUAL REPORT TO THE CALIFORNIA LEGISLATURE FOR  
THE YEAR 2005**

**THE CALIFORNIA OIL TRANSFER AND TRANSPORTATION  
EMISSION AND RISK REDUCTION PROGRAM  
2004 to 2009**

**Prepared by the California State Lands Commission  
March 2006**

000336  
CALENDAR PAGE

000945  
MINUTE PAGE

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	i
PURPOSE OF THE PROGRAM .....	1
INFORMATION REQUIREMENTS .....	1
VOYAGE ROUTES .....	2
THE OTTER DATABASE .....	3
REPORT TO THE LEGISLATURE .....	3
OIL TRANSFER AND TRANSPORTATION EMISSION AND RISK REDUCTION ACT, STATISTICS FOR 2005 .....	3
ANNUAL SUMMARY 2005 VOYAGES .....	3
ANNUAL STATISTICS TABLE .....	4
TANK VESSELS (2005) .....	5
NUMBER OF INTERNAL SHIPMENTS (2004-2005) .....	6
VOLUME OF OIL TRANSFERRED (2004-2005) .....	6
OCEAN AND COASTAL VOYAGES .....	7
VOYAGE DISTRIBUTION (2005) .....	7
VOLUME OF OIL TRANSFERRED (2005) .....	8
TYPE OF OIL TRANSFERRED .....	9
QUARTERLY AGGREGATES OF CRUDE OIL AND PRODUCT (2005) .....	9
QUARTERLY AGGREGATES OF CRUDE OIL (2004-2005) .....	9
QUARTERLY AGGREGATES OF PRODUCTS (2004-2995) .....	10
VOLUME OF PRODUCTS TRANSFERRED BETWEEN LOCATIONS (2004-2005) .....	10
VOLUME PRODUCTS TRANSFERRED BETWEEN LOCATIONS IN 2004 AND 2005 .....	11
AIR EMISSIONS .....	12
NITROGEN OXIDE EMISSIONS (2005) .....	12
TOTAL NO <sub>x</sub> EMISSIONS (2004-2005) .....	12
HYDROCARBON EMISSIONS (2005) .....	13
TOTAL HC EMISSIONS (2004-2005) .....	14
PARTICULATE MATTER EMISSIONS (2005) .....	14
TOTAL PM EMISSIONS (2004-2005) .....	15
CARBON MONOXIDE EMISSIONS (2005) .....	15
CO EMISSIONS (2004-2005) .....	16
DISTRIBUTION OF EMISSIONS (2005) .....	17
CONCLUSION .....	17
APPENDIX I: THE OIL TRANSFER AND TRANSPORTATION EMISSION AND RISK REDUCTION ACT OF 2002	
APPENDIX II: THE OIL TRANSFER AND TRANSPORTATION EMISSION AND RISK REDUCTION FORM	

000337

CALENDAR PAGE

000947

MINUTE PAGE

## EXECUTIVE SUMMARY

The Oil Transfer and Transportation Emission and Risk Reduction Act of 2002, Public Resources Code Sections 8780 through 8789, (Act) established the California Oil Transfer and Transportation Emission and Risk Reduction (OTTER) program under the direction of the California State Lands Commission (CSLC). The Act requires the CSLC to file a report with the legislature summarizing the information collected under the program.

This is the second in a series of annual reports to the legislature. The first report to the California Legislature prepared in April 2005 can be accessed at:  
[http://www.slc.ca.gov/Division\\_Pages/MFD/MFD\\_Programs/OTTER/OTTER.htm](http://www.slc.ca.gov/Division_Pages/MFD/MFD_Programs/OTTER/OTTER.htm)

The OTTER program collects data related to the intra-state or internal shipment of oil by marine vessels between facilities in the San Francisco Bay area and the Los Angeles/Long Beach area. The legislature found that current, accessible and accurate data regarding oil transportation is critical to having adequate information of the potential environmental quality, public health, and environmental justice consequences that must be analyzed by state and local agencies for environmental impact reports and statements, emergency response planning, permit issuance, and air quality mitigation efforts. It also declared that tracking trends in internal shipment of oil is necessary to promote public safety, health, and welfare, and to protect public and private property, wildlife, marine fisheries, and other ocean resources, and the natural environment in order to protect and to preserve the ecological balance of California's coastal zone, coastal waters, and coastal economy.

To gather the necessary data as defined in the Act the CSLC was directed to develop the "Oil Transfer and Transportation Emission and Risk Reduction Form" to be completed by the owner of the oil involved in the internal shipment of oil. The form was developed and has been used by the responsible parties.

The CSLC is required to aggregate the OTTER information and provide it to the legislature in the form of annual reports for the years 2004 through 2009. The report is to discuss trends, provide specific information on air emissions and vessel types used as well as the number of transfers related to the shutdown of refineries.

OTTER report forms for the year 2005 indicate:

Total number of internal voyages:	403
Number of voyages from San Francisco Bay Area to Los Angeles/Long Beach:	299
Number of voyages from Los Angeles/Long Beach to San Francisco Bay Area:	80
Number of voyages from Ellwood to Long Beach:	24
Number of voyages from Ellwood to San Francisco Bay Area:	0

Total volume of crude oil shipped as internal shipments:	1,099,502 barrels
Total volume of refined oil shipped as internal shipments:	38,362,831 barrels



All internal shipments of crude oil in 2005 were from the Elwood marine terminal, off the Coast of Santa Barbara County to the Los Angeles/Long Beach area. No crude oil was shipped as an internal shipment to the San Francisco Bay area.

Total air emissions resulting from internal shipments of oil:

NO <sub>x</sub> emission:	1186.61 short tons
HC emissions:	62.24 short tons
PM emissions:	73.12 short tons
CO emissions:	156.08 short tons

During the year 2005, there were no internal shipments of oil due to refinery breakdowns.

The Act also required CSLC to report the amount and location of ballast discharge in the event that Sections 71200 through 71271 of the Public Resources Code are repealed. The Marine Invasive Species Act of 2003 has been reauthorized and it enhances the state's program to prevent the introduction of non-indigenous aquatic nuisance species through vessel's ballast water discharges. This report therefore contains no information regarding the discharge of ballast.

Quarterly and annual comparisons and trends of reported data are discussed later in this report. An analysis of the data for 2004 and 2005 shows that:

- Total number of voyages increased by 10.4%
- Total volume of oil shipped as internal shipments increased by 15.82%
- Although the number of voyages increased by 10.4% reported emissions of No<sub>x</sub> and HC increased accordingly while PM and CO emissions decreased
- There are generally higher emissions from coastal voyages mainly because there were nearly four times as many coastal voyages as offshore voyages
- Generally tug/barge voyages produce lesser emissions than tank ship voyages

## **PURPOSE OF THE PROGRAM**

The Oil Transfer and Transportation Emission and Risk Reduction Act of 2002, Public Resources Code Sections 8780 through 8789, (Act) established the California Oil Transfer and Transportation Emission and Risk Reduction (OTTER) program under the direction of the California State Lands Commission (CSLC). The Act requires the CSLC to develop a program to implement the requirements of the Act.

The purpose of the OTTER program is to collect data related to the intra-state or internal shipments of oil by marine vessels between the San Francisco Bay area and the Los Angeles/Long Beach area. The legislature found that current, accessible and accurate data regarding oil transportation is critical to having adequate information of the potential environmental quality, public health, and environmental justice consequences that must be analyzed by state and local agencies for environmental impact reports and statements, emergency response planning, permit issuance, and air quality mitigation efforts. It also declared that tracking trends in internal shipments of oil is necessary to promote public safety, health, and welfare, and to protect public and private property, wildlife, marine fisheries, and other ocean resources, and the natural environment in order to protect and to preserve the ecological balance of California's coastal zone, coastal waters, and coastal economy.

To gather the required data as defined in the Act, the CSLC was directed to develop the "Oil Transfer and Transportation Emission and Risk Reduction Form" to be completed by the owner of the oil or a designated responsible party engaged in the internal shipment of oil. The form was developed and has been used by the oil owners and responsible parties. The CSLC is required to aggregate the OTTER information and provide it to the legislature in the form of annual reports for the years 2004 through 2009.

## **INFORMATION REQUIREMENTS**

The Act required the CSLC, in consultation with the industry, to develop an Oil Transfer and Transportation Emission and Risk Reduction Form for owners of oil or designated responsible parties to report information regarding the volume and types of oil, the routes and duration of voyages and the estimated quantities of air emissions associated with the internal shipments of oil.

Specifically, the Act requires that the form contain the following:

- (1) The name, address, point of contact, and telephone number of the responsible party.
- (2) The name of the vessel transporting the oil.
- (3) The type and amount of oil being transported.
- (4) The source of crude oil.

- (5) The name and location of any terminal that loaded the vessel.
- (6) The name and location of any terminal that discharged the tanker or barge.
- (7) The dates of travel and the route.
- (8) The type of engine and fuel used to power the tanker or barge-towing vessel.
- (9) The estimated amount and type of air emissions. To the extent practicable, the emissions factors developed by the United States Environmental Protection Agency shall be used to estimate the amount of air emissions. The form shall be designed to ensure that charter vessel air emissions are not counted more than once.
- (10) An indication of whether the reason for the internal shipping of oil was due to a temporary shutdown or partial shutdown of a key refinery facility.
- (11) On and after January 1, 2004, if Division 36 (commencing with Section 71200) is repealed pursuant to Section 71271, the amount of any ballast discharge and the location of the discharge. This requirement was not invoked as The Marine Invasive Species Act of 2003 reauthorized and enhanced the state's program to prevent the introduction of nonindigenous aquatic nuisance species through vessel's ballast water discharges.

Prior to the commencement of the reporting of internal shipments of oil, CSLC staff, in consultation with a technical advisory group of industry participants, developed the OTTER form which is shown in Appendix II of this report. Details of the collaboration with industry for development of the OTTER reporting form can be found in the first annual report for the year 2004.

## **VOYAGE ROUTES**

The Act requires the reporting of vessel routes. Tank ships and barges typically travel on routes that are prescribed distances from shore based upon agreements between the oil industry and state government agencies. Most barges travel in the internationally designated Traffic Separation Scheme (TSS) in the Santa Barbara Channel and travel up the coast. On these voyages, tank barges are generally 12 to 15 nautical miles offshore. Most tank ships travel at a distance greater than 25 miles offshore. For simplicity of reporting it was decided to use the designation "S" for vessels utilizing the Santa Barbara Channel TSS. For the others, "O" is used to designate an offshore voyage. If a different type of route is used, it is to be reported by a notation to the OTTER Form.

## THE OTTER DATABASE

The information received by CSLC is entered into an electronic database. At the end of each quarter the information is aggregated and entered into a table. At the end of the year, the table enables staff to prepare the mandated annual report to the legislature. It also allows staff to compare quarterly trends in the internal shipments of oil. Additionally, raw data in the OTTER Database has already been of value to some state and local planning agencies.

## REPORT TO THE LEGISLATURE

The Act requires the CSLC to submit a report to the legislature and to make the report available to other parties requesting it. Annual reports are to be filed with the legislature on or before April 1, each year for the years 2004 to 2009.

The Act requires the Annual Reports to include, at a minimum, the following:

- (1) A description of any trends in the total number of trips by oil type, amount of shipment, and source of oil.
- (2) The number of transfers due to refinery shutdowns.
- (3) The location of air emissions and ballast discharge, and the type of vessel used during those events.
- (4) A discussion of any other pertinent issues that the Commission determines should be included.

### **Oil Transfer and Transportation Emission and Risk Reduction Act Statistics for 2005**

#### **ANNUAL SUMMARY 2005 – VOYAGES**

Total number of internal shipment voyages:	403
Number of voyages from San Francisco Bay to Los Angeles/Long Beach:	299
Number of voyages from Los Angeles/Long Beach to San Francisco Bay:	80
Number of voyages from Ellwood to Long Beach:	24
Number of voyages from Ellwood to San Francisco Bay:	0
Number of offshore voyages (O) : > 25 nautical miles from land	134
Number of coastal voyages (S): 12 to 15 nautical miles from land	269

The following table is a compilation of all submitted OTTER information for Calendar Year 2005.

**ANNUAL OTTER REPORT 2005**

**Annual Statistics Table**

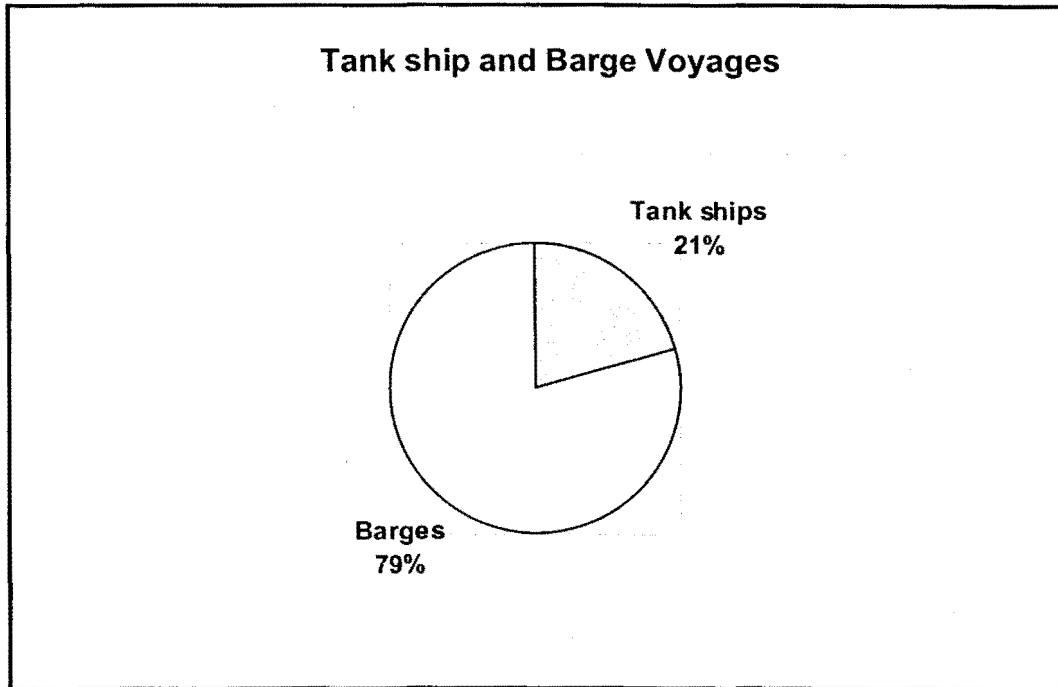
CALENDAR PAGE

MINUTE PAGE

Items	1 <sup>st</sup> . Quarter	2 <sup>nd</sup> . Quarter	3 <sup>rd</sup> . Quarter	4 <sup>th</sup> . Quarter	Aggregate Year 2005
Total number of internal shipments of oil	94	111	96	102	403
Number of internal shipments by tanker	20	24	15	25	84
Number of internal shipments by barge/tug	74	87	81	77	319
Number of barrels of crude oil shipped	307,825	272,358	237,404	281,915	1,099,502
Number of barrels of refined oil shipped	9,206,053	9,983,415	7,963,690	11,209,673	38,362,831
Number of barrels of other oil shipped	0	0	0	0	0
Total NO <sub>x</sub> emissions in short tons	296.98	294.99	276.39	318.25	1186.61
Total HC emissions in short tons	14.43	17.84	12.31	17.66	62.24
Total PM emissions in short tons	18.94	19.86	12.59	21.72	73.11
Total CO emissions in short tons	41.95	35.97	37.08	41.10	156.10
NO <sub>x</sub> emissions 25 miles from coastline in short tons	97.95	78.86	79.04	53.08	308.93
NO <sub>x</sub> emissions 12 to 15 miles from coastline in short tons	199.03	216.13	197.35	265.17	877.68
HC emissions 25 miles from coastline in short tons	6.53	8.32	4.75	5.40	25.00
HC emissions 12 to 15 miles from coastline in short tons	7.90	9.52	7.56	12.26	37.24
PM emissions 25 miles from coastline in short tons	12.63	15.43	8.19	15.00	51.25
PM emissions 12 to 15 miles from coastline in short tons	6.31	4.43	4.40	6.72	21.86
CO emissions 25 miles from coastline in short tons	19.49	11.76	12.93	7.57	51.75
CO emissions 12 to 15 miles from coastline in short tons	22.46	24.20	24.15	33.53	104.34
No. of internal shipments because of refinery breakdowns	0	0	0	0	0

## Tank Vessels (2005)

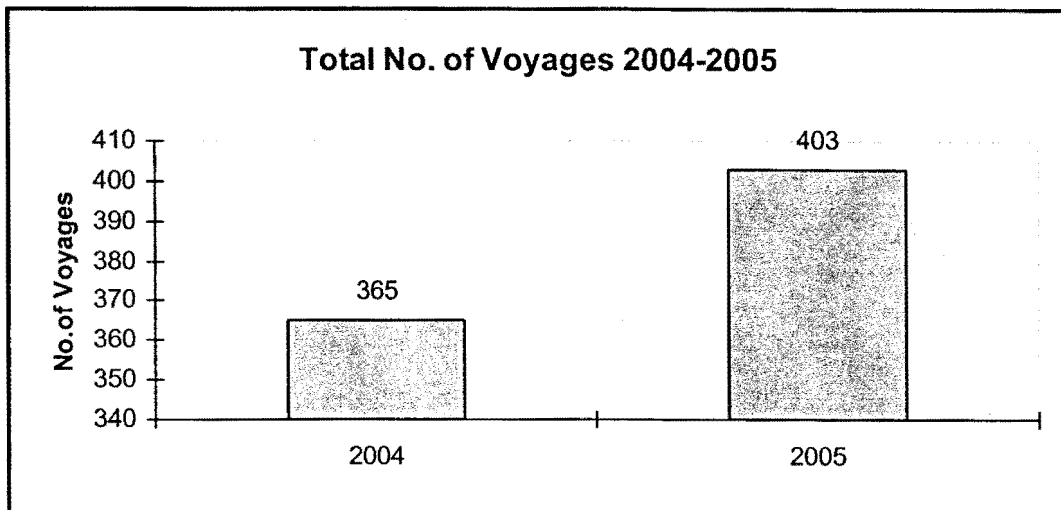
Total number of internal shipment voyages:	403
Voyages by tank ships:	84
Voyages by barges:	319



The data shows that there were approximately 3.8 times more internal shipments of oil by barges than there were by tank ships during 2005.

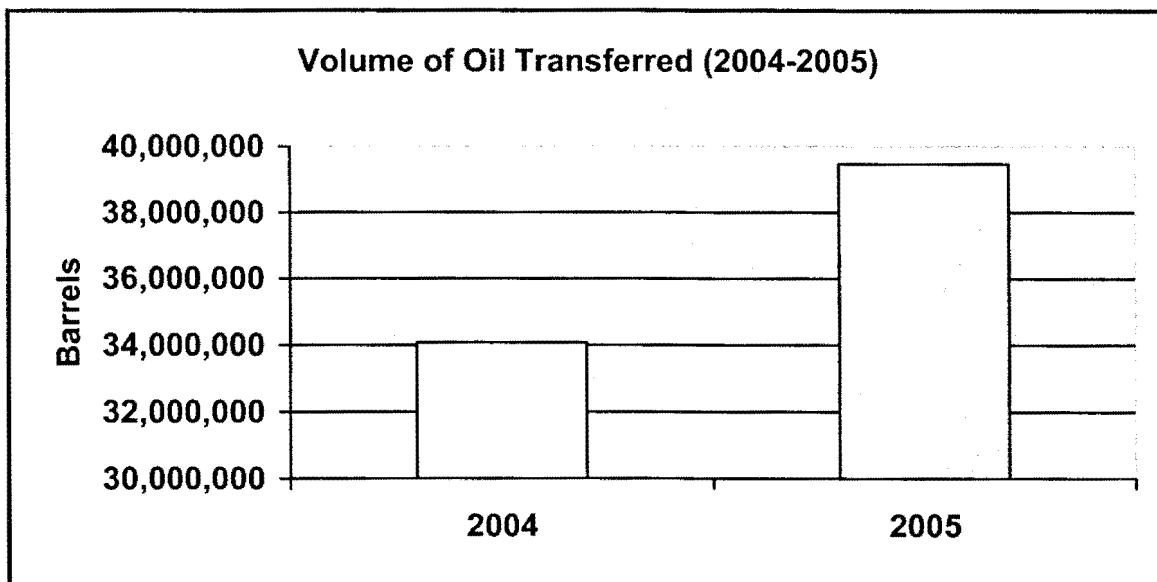
When compared with the year 2004 there were 10 less voyages by tank ships and 48 more voyages by barges during 2005.

### Number of Internal Shipments (2004-2005)



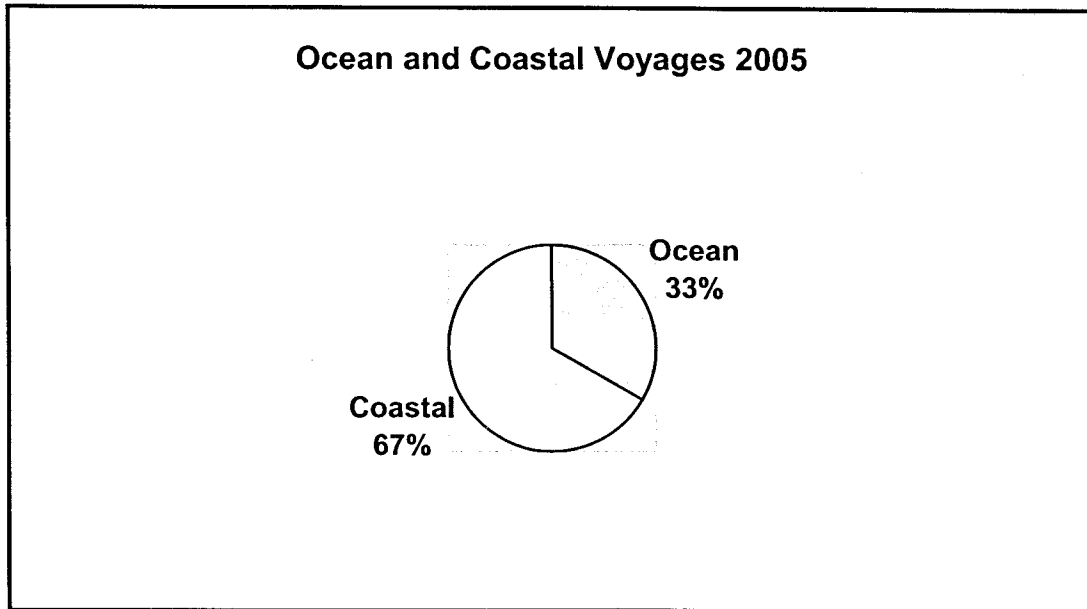
There were 10.4% more internal voyages in 2005 when compared with 2004. A breakdown of the reported information indicates that there were 10 less tank ship voyages and 48 more barge voyages during 2005.

### Volume of Oil Transferred (2004-2005)



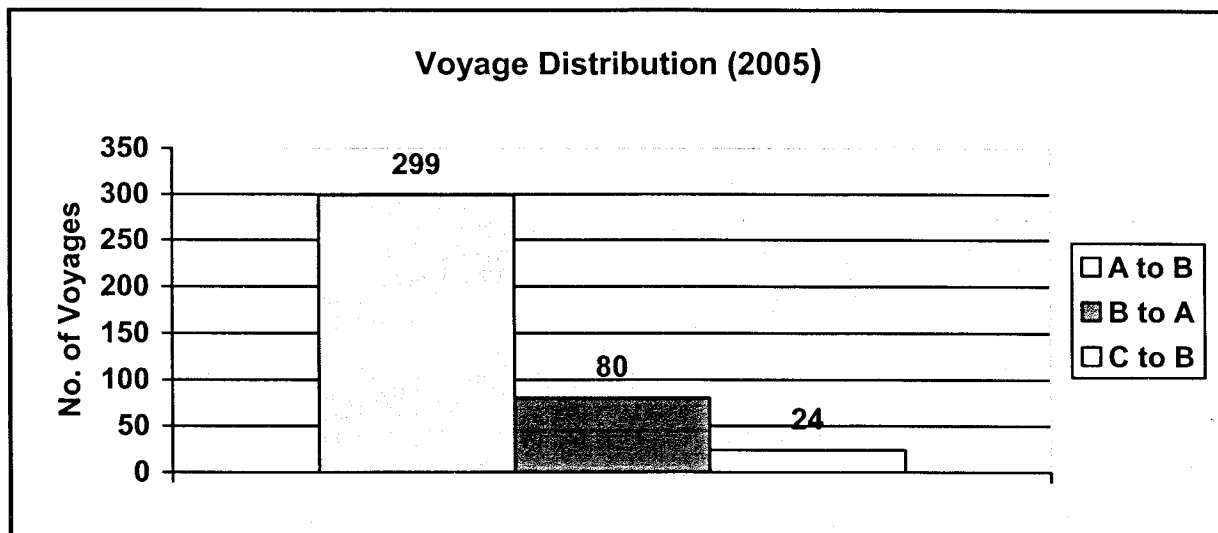
There were 5,389,375 more barrels of oil transferred by internal shipments in 2005 when compared with 2004. This indicates an increase of 15.82 percent in the total volume of internal shipments of oil in 2005.

# Ocean and Coastal Voyages 2005



Of the total voyages, 33% were by the offshore route, generally by tank ships. This route keeps the vessel 25 or more nautical miles from the coast. 67% of the total number of voyages were undertaken on the coastal route 12 to 15 nautical miles from the coast. This route is generally used by barges.

## Voyage Distribution (2005)

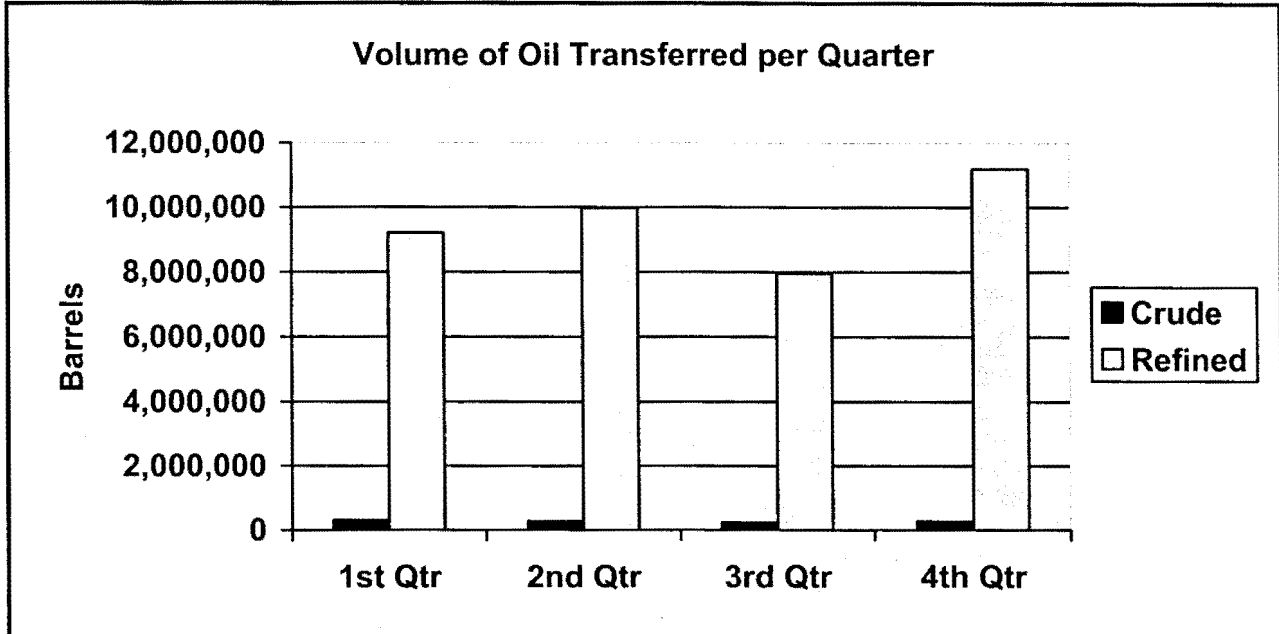


**A to B: San Francisco Bay to Los Angeles Long Beach**  
**B to A: Long Beach/Los Angeles to San Francisco Bay**  
**C to B: Ellwood to Los Angeles/Long Beach**



### Volume of Oil Transferred (2005)

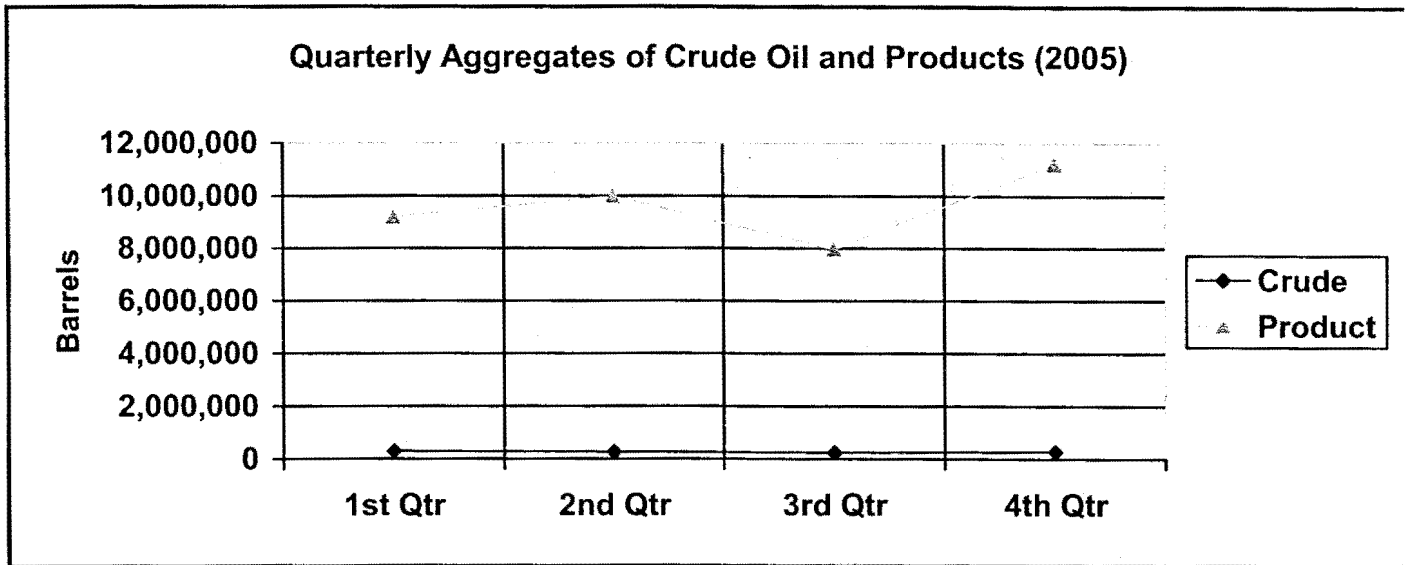
Total Volume: 39,462,333 barrels  
Crude oil: 1,099,502 barrels  
Refined Oil: 38,362,831 barrels



During 2005, all of the oil transported between the ports of the San Francisco Bay area and the Los Angeles/Long Beach area was refined products. No crude oil was shipped directly between these areas.

All internal shipments of crude oil in 2005 were from the Elwood marine terminal, off the Coast of Santa Barbara County, to the Los Angeles/Long Beach area. No crude oil was shipped as an internal shipment to the San Francisco Bay area.

### Type of Oil Transferred (2005)

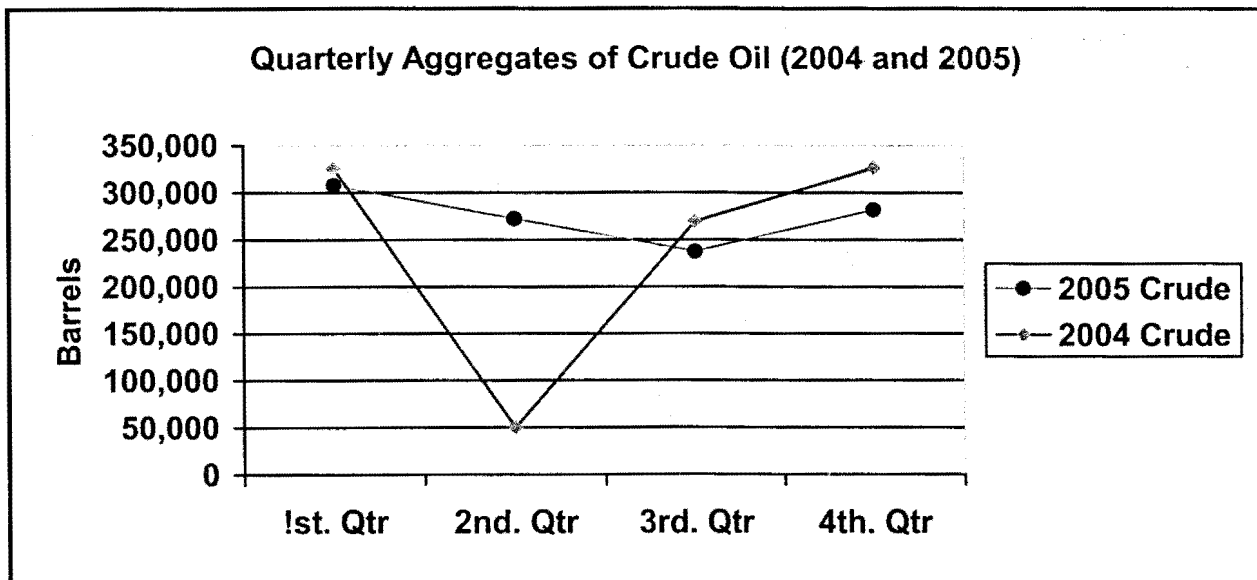


Crude Oil: The crude oil transfer volume was highest in the first quarter at 307,825 barrels and least during the third quarter at 237,404 barrels.

Refined Oils: The highest volume was transferred during the fourth quarter at 11,209,673 barrels and the least volume was transferred during third quarter at 7,963,690 barrels.

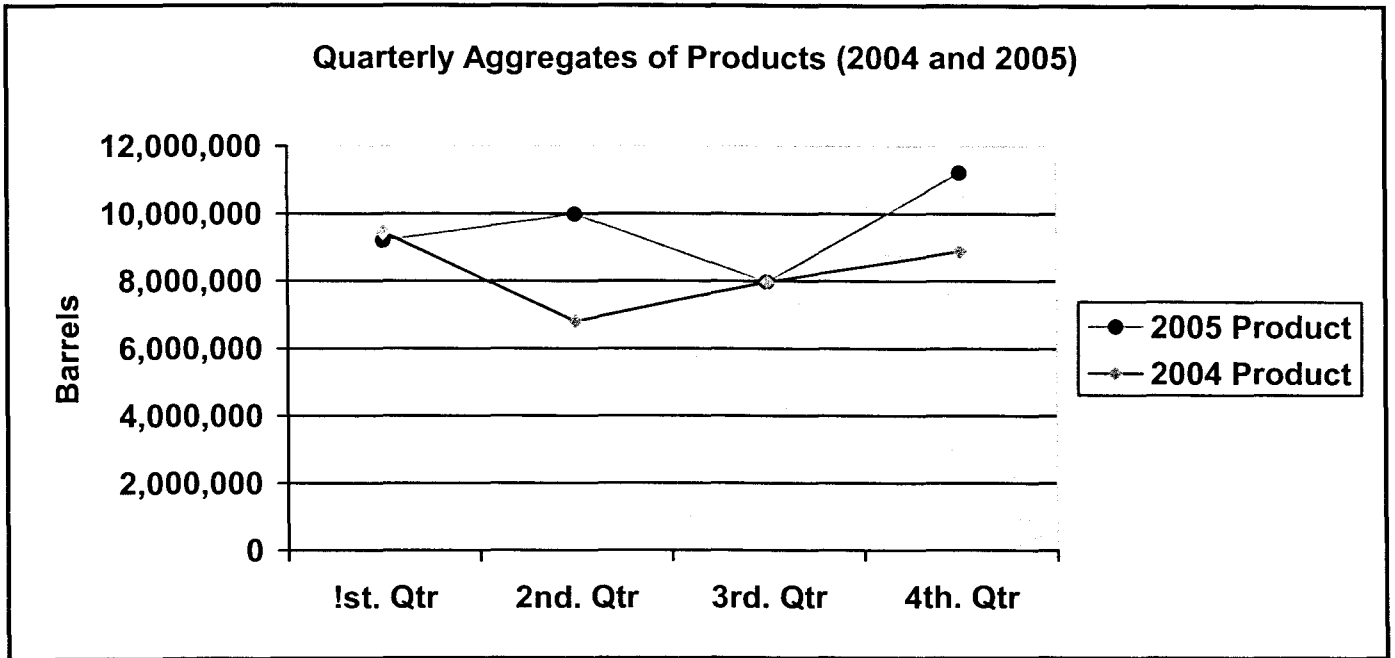
No specific pattern or trend can be determined during the year 2005

### Quarterly Aggregates of Crude Oil (2004 and 2005)



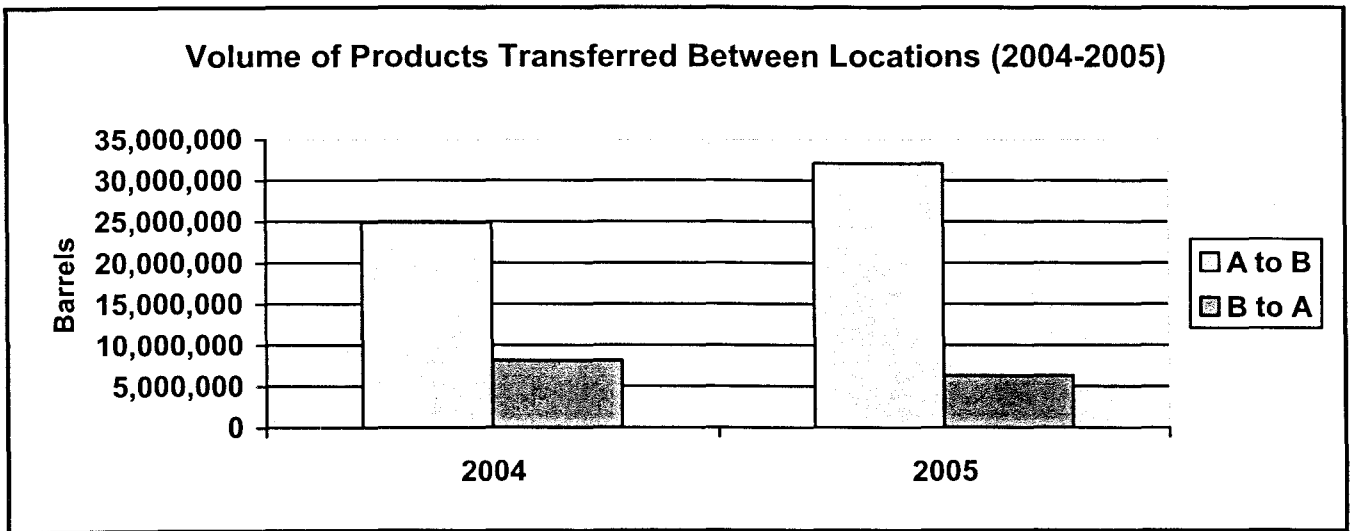
No conclusive patterns or trends can be determined from the above data.

**Quarterly Aggregates of Products (2004 and 2005)**



No conclusive patterns or trends can be determined from the above data.

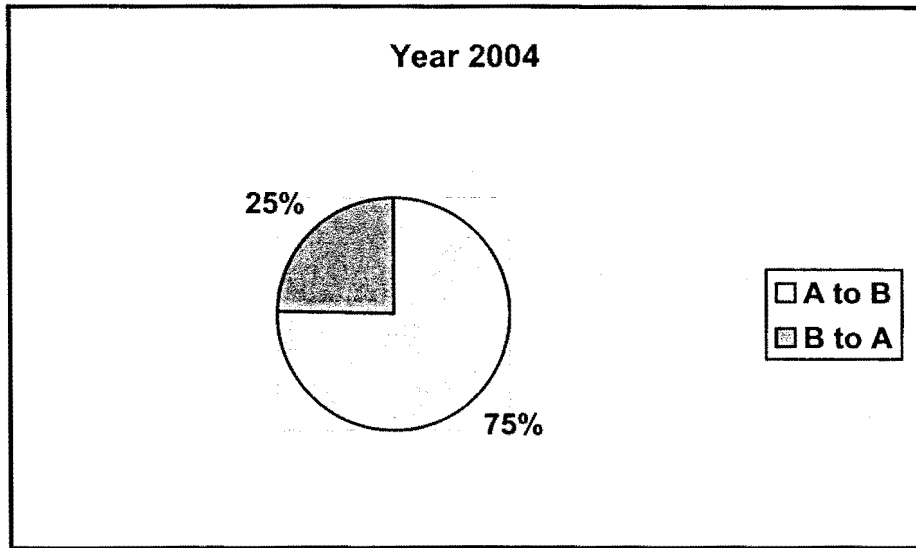
**Volume of Products Transferred Between Locations (2004-2005)**



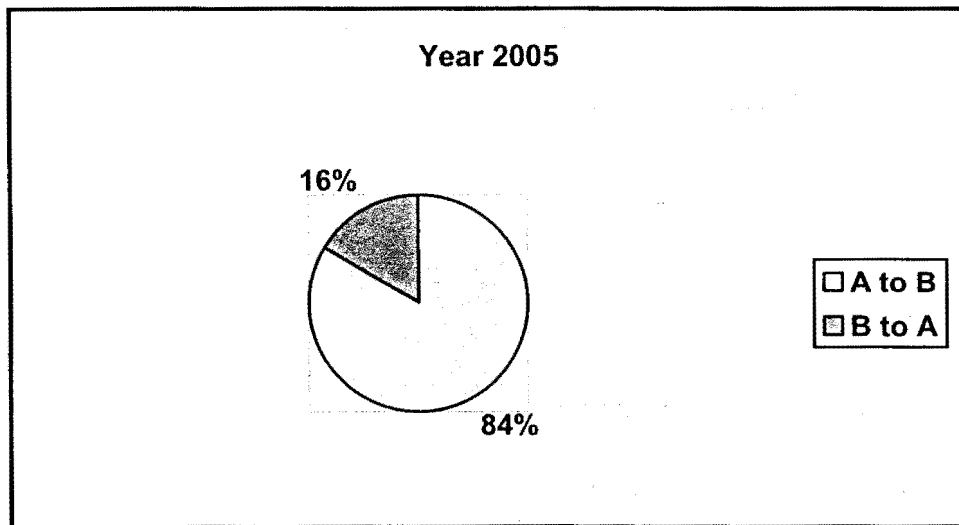
**A to B: San Francisco Bay area to Los Angeles/Long Beach**  
**B to A: Los Angeles/Long Beach to San Francisco Bay area**

In 2005, there were 7,189,216 more barrels of refined product transferred from the San Francisco Bay area to the Los Angeles/Long Beach area than in 2004. The volume of refined products shipped from the Los Angeles/Long Beach to the San Francisco Bay area declined by 1,864,720 barrels.

# Volume of Products Transferred Between Locations in 2004 and 2005



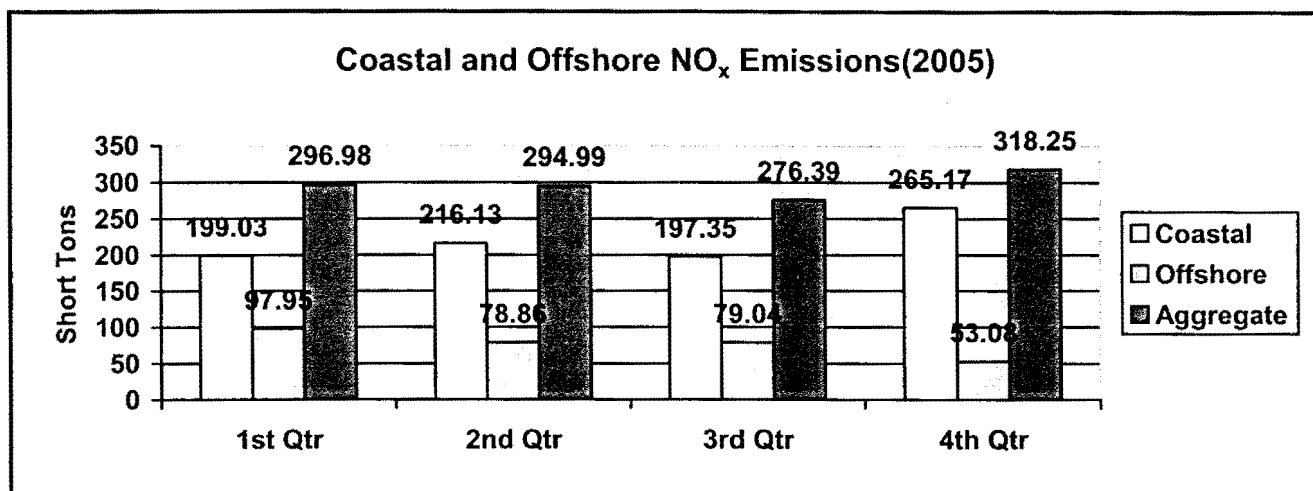
A to B: San Francisco Bay area to Los Angeles/Long Beach  
B to A: Los Angeles/Long Beach to San Francisco Bay area



In 2004, there was three times the volume of refined products transferred from the San Francisco Bay area to the Los Angeles/Long Beach area when compared with the volume from Los Angeles /Long beach to the Bay area. In 2005, the volume of refined products shipped from the Bay area increased to four times the volume shipped from Los Angeles/Long Beach.

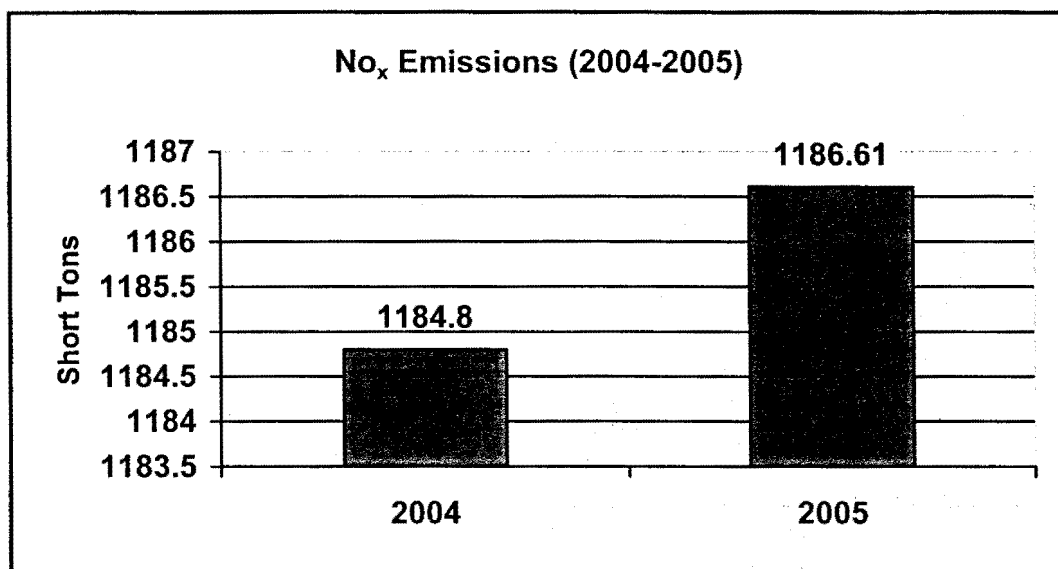
## AIR EMISSIONS

### Nitrogen Oxide (NO<sub>x</sub>) Emissions (2005)



The aggregate NO<sub>x</sub> emissions were the highest in the fourth quarter during which there were 102 internal shipments of oil. The least quarterly emissions occurred during the third quarter.

### Total No<sub>x</sub> Emissions (2004-2005)



Although there was a 10.4% increase in the number of internal voyages in 2005, the percentage increase of NO<sub>x</sub> emissions was only 0.15%.

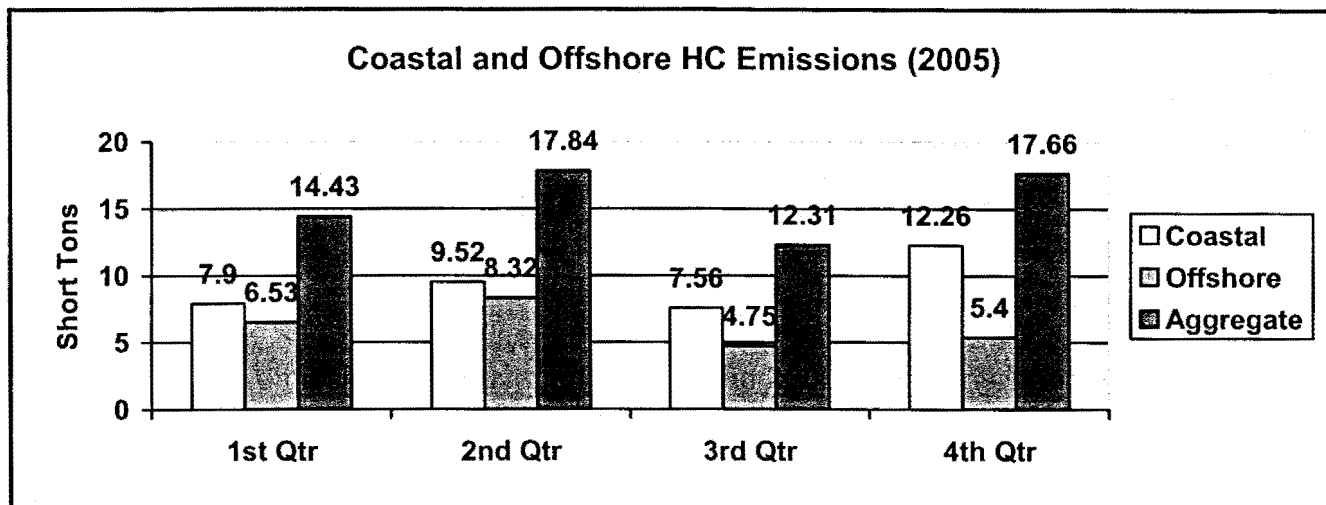
	<u>2005</u>	<u>2004</u>
Average NO <sub>x</sub> emissions per tank ship voyage in short tons:	3.68	7.41
Average NO <sub>x</sub> emissions per barge/tug voyage in short tons:	2.75.	1.80

000401

000951

The average No<sub>x</sub> emissions per voyage for 2004 and 2005 are inconsistent. The OTTER program commenced in 2004, and, as stated in the 2004 annual report, there were several problems encountered in the reporting of information. Towards the end of 2004, most of these problems were eliminated by communication with reporters of internal shipments and outreach by CSLC staff. CSLC staff believes that the average emissions for the year 2006 will be more consistent with the averages seen in 2005.

### Hydrocarbon (HC) Emissions (2005)

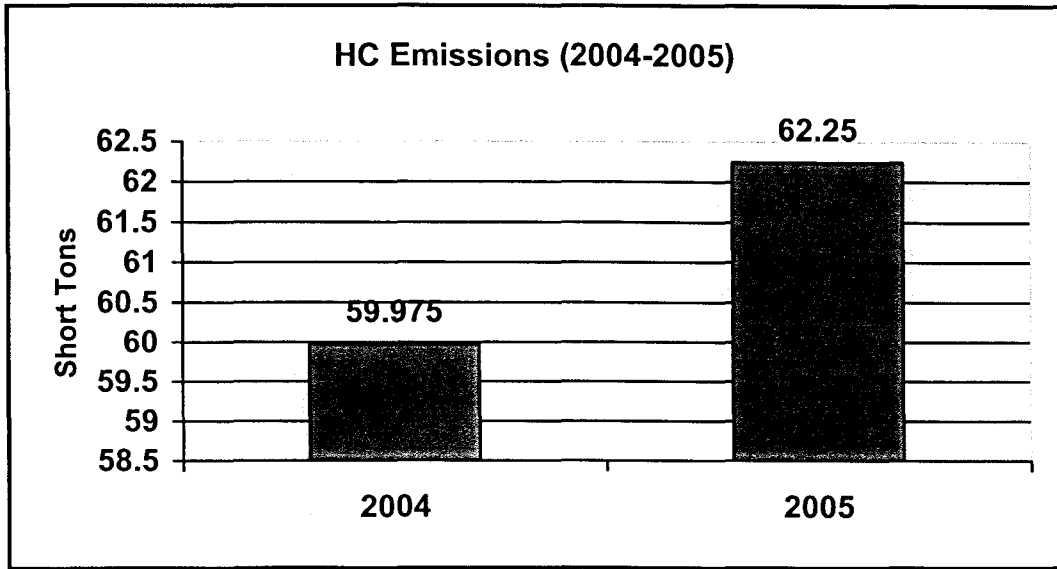


HC emissions were highest in the second quarter and lowest in the third quarter. The vessels using the coastal voyage route emitted more HC gases than those using the offshore voyage route.

	<u>2005</u>	<u>2004</u>
Average HC emissions per tank ship voyage in short tons:	0.297	0.409
Average HC emissions per barge/tug voyage in short tons:	0.117	0.08

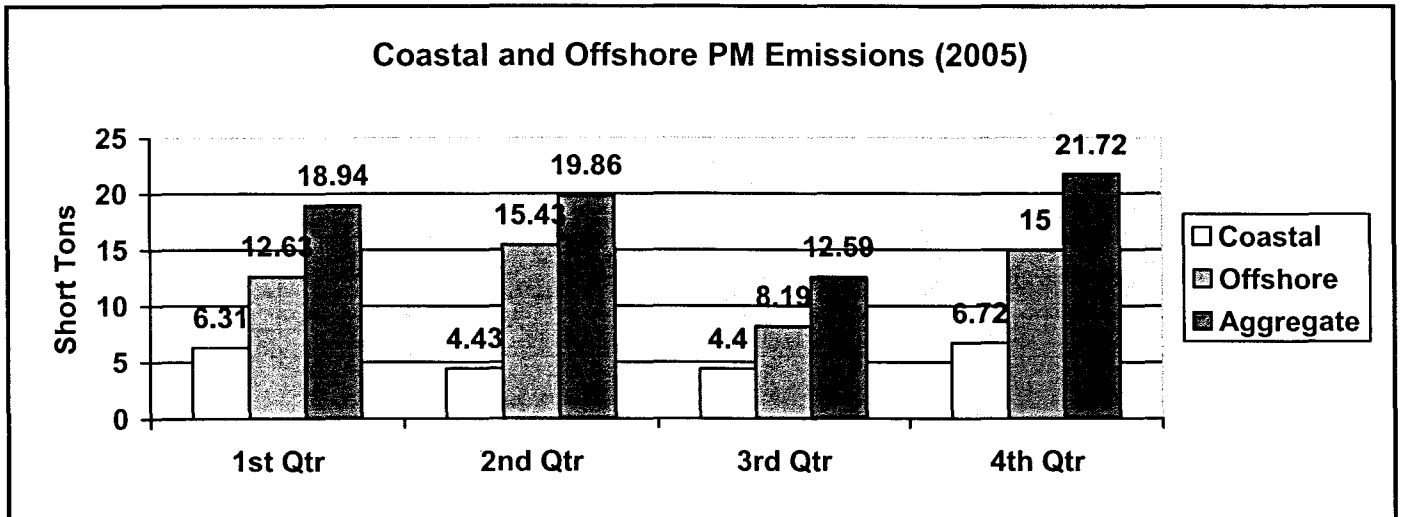
The average per voyage HC emissions for 2004 and 2005 are inconsistent. The information reported for the year 2004 may have errors because of the initial problems encountered at the start of the program. CSLC staff believes that the average emissions for the year 2006 will be more consistent with the averages seen in 2005 because many of the initial problems in reporting have been eliminated.

**Total HC Emissions (2004-2005)**



Although there was a 10.4 percent increase in the number of internal voyages in 2005, the percentage increase of HC emissions was only 3.8%.

**Particulate Matter (PM) Emissions (2005)**

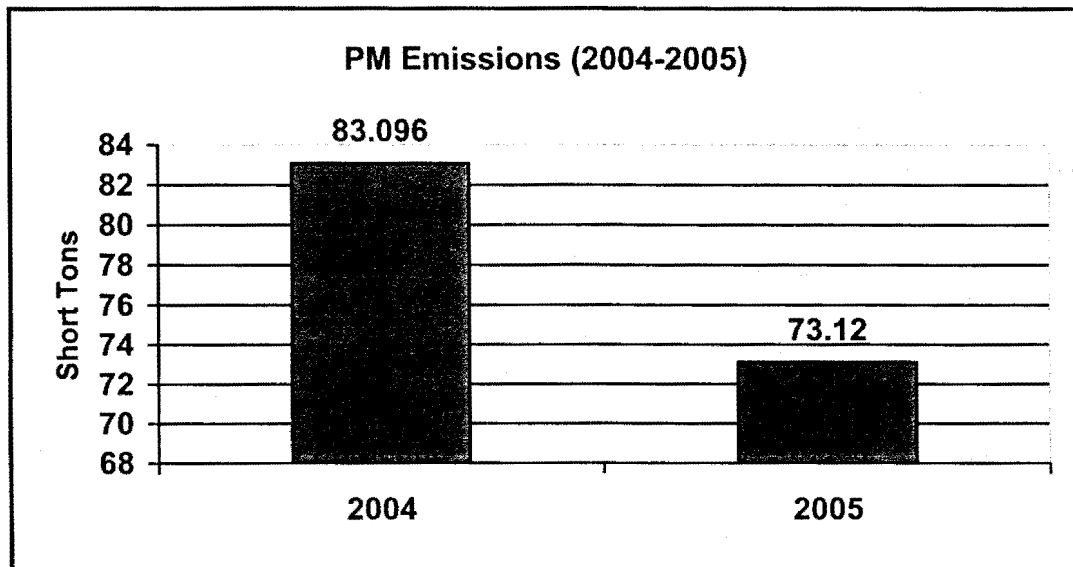


PM emissions were highest in the fourth quarter and lowest in the third quarter. The PM emission in all quarters remained higher from the vessels using the offshore voyage route than those vessels using the coastal voyage route. Generally, tank ships appear to generate more PM emissions than Tugs/barges.

	<u>2005</u>	<u>2004</u>
Average PM emissions per tank ship voyage in short tons:	0.61	0.60
Average PM emissions per barge/tug voyage in short tons	0.068	0.098

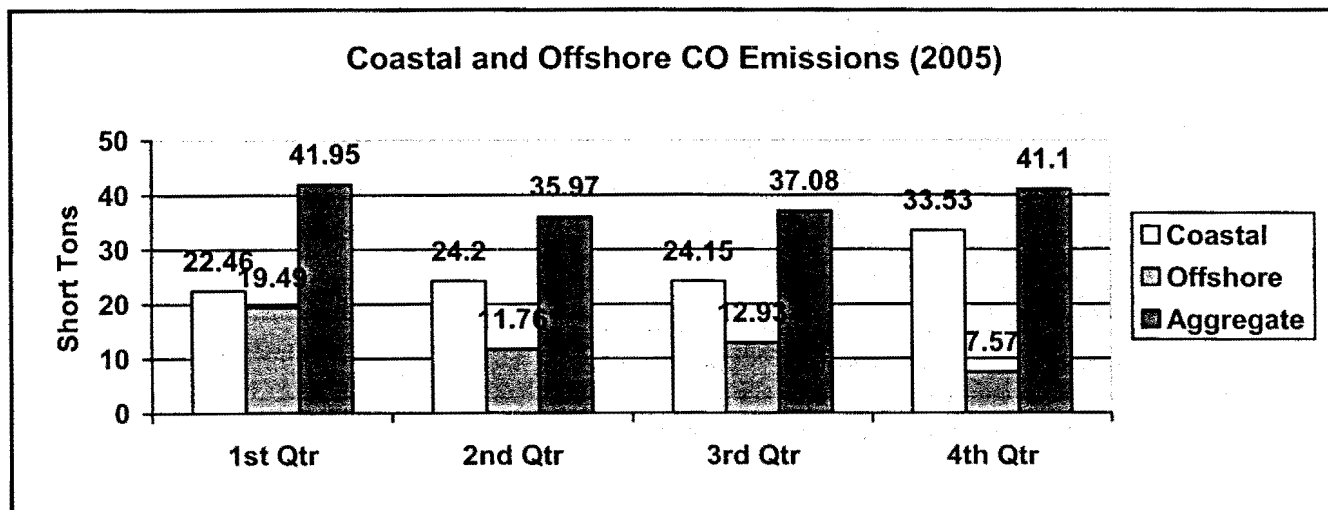
The average PM emissions per voyage for tank ships and barge/tug appear to be consistent.

### Total PM Emissions (2004-2005)



Although there was a 10.4% increase in the number of internal voyages in 2005, the PM emissions showed a decrease of 12%.

### Carbon Monoxide (CO) Emissions (2005)



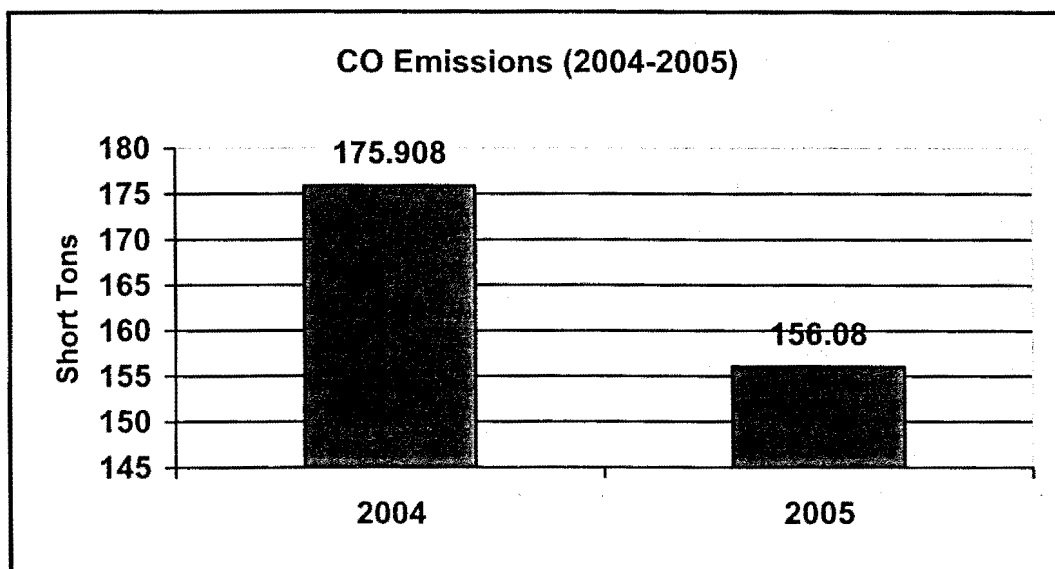


The highest quantity of CO was emitted during the first quarter of 2005 and least in the second quarter. Vessels navigating the coastal voyage route emitted higher quantities of CO than those taking the offshore route.

	<u>2005</u>	<u>2004</u>
Average CO emissions per tank ship voyage in short tons:	0.616.	1.147
Average CO emissions per barge/tug voyage in short tons:	0.327	0.251.

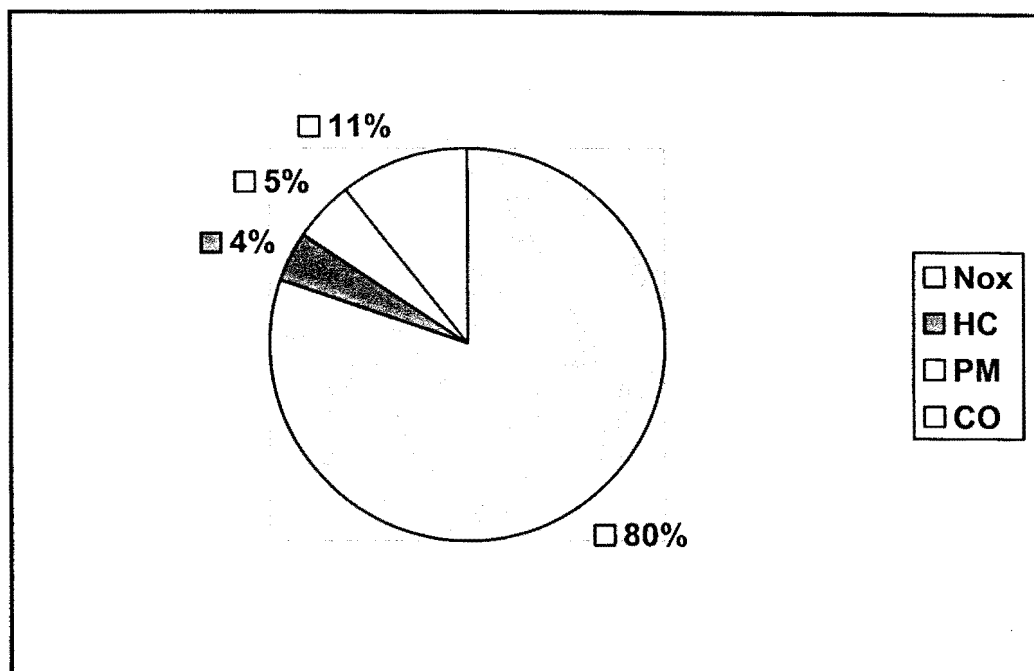
The average per voyage CO emissions for 2004 and 2005 are inconsistent. The information reported for the year 2004 may have errors because of the initial problems encountered at the start of the program. CSLC staff believes that the average emissions for the year 2006 will be more consistent with the averages seen in 2005.

**CO Emissions (2004-2005)**



Although there was a 10.4% increase in the number of internal voyages in 2005, the CO emissions showed a decrease of 11.3%.

## Distribution of Emissions (2005)



NO <sub>x</sub> emission:	1,186.61 short tons or 80% of total emissions
HC emissions:	62.25 short tons or 4% of total emissions
PM emissions:	73.12 short tons or 5% of total emissions
CO emissions:	156.08 short tons or 11% of total emissions

## CONCLUSION

This is the second in a series of annual reports to the California State Legislature.

The first report included statistics of the number of internal shipments, the quantities of crude oil and refined products, the numbers of coastal and offshore voyages and the quantities of NO<sub>x</sub>, HC, PM and CO emissions into the coastal and offshore regions off California for the year 2004. Prior to the first report, the information collected by the OTTER Program did not exist. Starting with this report, planning organizations, State and Federal Agencies and organizations developing information, particularly for environmental documentation, will have a much more complete picture of the movement of oil along the California coast and its quarterly and annual trends. Continued collection of OTTER information will allow future reports to look at trends and changes in oil transportation, estimates of vessel air emissions along our central coast and will allow planners to more exactly examine the impacts of moving oil by marine vessels.

**APPENDIX I**

The Oil Transfer and Transportation Emission and Risk Reduction Act of 2002

000407

CALENDAR PAGE

000957

MINUTE PAGE

## LEGISLATIVE COUNSEL'S DIGEST

AB 2083, Jackson. Public resources: oil spill prevention and response. Existing law establishes oil spill prevention, inspection, response, containment, and cleanup programs.

This bill would require the State Lands Commission to develop a form that is to be completed by the responsible party, as defined, engaged in the internal shipment of oil. The form would be designed to enable the commission to obtain and track the amount and type of oil transported, as well as the name of the vessel, the vessel's route, and air emissions relating to the internal shipment of that oil.

The bill would require the commission, on or before April 1 of each year, for the calendar years 2004 to 2009, inclusive, to file a report with the Legislature summarizing certain information and transmit a copy of the report to any interested agency or member of the public, upon request.

The bill would require the commission to consult with the administrator for oil spill response, other state agencies, and agencies of the federal government, including the United States Coast Guard and the federal Department of Transportation, to the maximum extent feasible, before undertaking actions under these provisions.

The bill would require the administrator to reimburse the commission for the costs of administering these provisions from the Oil Spill Prevention and Administration Fund.

These provisions would be repealed on January 1, 2010.

### DIVISION 7.9. OIL TRANSFER AND TRANSPORTATION EMISSION AND RISK REDUCTION ACT OF 2002

8780. This division shall be known and may be cited as the Oil Transfer and Transportation Emission and Risk Reduction Act of 2002.

8781. The Legislature finds and declares all of the following:

(a) Thirty years ago the people of California passed the California Coastal Zone and Conservation Act of 1972 after a disastrous oil spill that affected hundreds of miles of coast and severely affected the coastal economy.

(b) A clean and healthy coastal environment is critical to maintaining a vibrant coastal economy, including opportunities for sustainable fisheries, flourishing tourism, and healthy recreation.

(c) The coastal communities contribute billions of dollars and hundreds of thousands of jobs to the state economy.

(d) Much of the oil extracted off California's coast is highly viscous, the refining of which results in heavy byproducts such as fuel oil and coke, which tend to be shipped to overseas markets. The storage and shipment of such byproducts will also have air quality impacts.

(e) There is significant internal shipment of oil by vessel between the San Francisco Bay area and the Los Angeles area.

(f) Although vessels transporting oil are eventually required to be double hulled, this will not be completed until January 1, 2015.

(g) The thousands of sea birds that have been injured or killed in 2001 and 2002 by oil leaking from a freighter that sank off California's coast in 1953 are a strong reminder of the serious consequences of vessel mishaps.

(h) One of the results of vessel traffic along the central coast and into the ports of the Los Angeles and San Francisco areas is tons of oxides of nitrogen emitted into the air each day, which could negate efforts made on land to meet federal ozone standards and other public health air quality goals.

(i) Current, accessible and accurate data regarding oil transportation is critical to having adequate information of the potential environmental quality, public health, and environmental justice consequences that must be analyzed by state and local agencies for environmental impact reports and statements, emergency response planning, permit issuance, and air quality mitigation efforts.

(j) Tracking trends in internal shipment of oil is necessary to promote public safety, health, and welfare, and to protect public and private property, wildlife, marine fisheries, and other ocean resources, and the natural environment in order to protect and to preserve the ecological balance of California's coastal zone, coastal waters, and coastal economy.

8782. Unless the context requires otherwise, the following definitions govern the construction of this division:

(a) "Administrator" means the administrator for oil spill response appointed by the Governor under Section 8670.4 of the Government Code.

(b) "Barge" means any vessel that carries oil in commercial quantities as cargo but is not equipped with a means of self-propulsion.

(c) "Commission" means the State Lands Commission.

(d) "Internal shipment of oil" means the loading, transporting by vessel, and offloading of oil that originates and terminates at the San Francisco Bay area and the Los Angeles and Long Beach area, or points in between. Internal shipment of oil does not include lightering, as defined in paragraph (4) of subdivision (l) of Section 790 of Title 14 of the California Code of Regulations.

000409

CALENDAR PAGE

2

000959

MINUTE PAGE

(e) "Marine facility" means any facility of any kind, other than a vessel, that is or was used for the purpose of exploring for, drilling for, producing, storing, handling, transferring, processing, refining, or transporting oil and is located in marine waters, or is located where a discharge could impact marine waters, unless the facility (1) is subject to Chapter 6.67 (commencing with Section 25270) or Chapter 6.75 (commencing with Section 25299.10) of Division 20 of the Health and Safety Code or (2) is placed on a farm, nursery, logging site, or construction site and does not exceed 20,000 gallons in a single storage tank. A drill ship, semisubmersible drilling platform, jack-up type drilling rig, or any other floating or temporary drilling platform is a "marine facility." A small craft refueling dock is not a "marine facility."

(f) "Marine terminal" means any facility used for transferring oil to or from tankers or barges. A marine terminal includes all piping not integrally connected to a tank facility as defined in subdivision (k) of Section 25270.2 of the Health and Safety Code.

(g) "Oil" means any kind of petroleum, liquid hydrocarbons, or petroleum products or any fraction or residues therefrom, including, but not limited to, crude oil, bunker fuel, gasoline, diesel fuel, aviation fuel, oil sludge, oil refuse, oil mixed with waste, and liquid distillates from unprocessed natural gas.

(h) "Operator," when used in connection with a vessel means any person or entity that owns, has an ownership interest in, charters, leases, rents, operates, participates in the operation of, or uses, that vessel.

(i) "Person" means an individual, trust, firm, joint stock company, or corporation, including, but not limited to, a government corporation, partnership, or association. "Person" also includes any city, county, city and county, district, commission, the state or any department, agency, or political subdivision thereof, and the federal government or any department or agency thereof to the extent permitted by law.

(j) "Responsible party" or "party responsible" means the "Responsible party" or "Party responsible" means the owner of the oil or a person or entity who accepts responsibility for the oil for purposes of this division.

(k) "Tanker" means any self-propelled, waterborne vessel, constructed or adapted for the carriage of oil in bulk or in commercial quantities as cargo.

(l) "Vessel" means a tanker or barge as defined in this section.

8783. (a) The commission shall develop a form that is to be completed by the responsible party engaged in the internal shipment of oil. The form shall be known as the "Oil Transfer and Transportation Emission and Risk Reduction Form." The form shall be designed to enable the commission to obtain and track the amount and type of oil transported, as well as the name of the vessel, the vessel's route, and air emissions relating to the internal shipment of that oil.

(b) The form shall contain, but need not be limited to, all of the following information:

000410  
CALENDAR PAGE

000970  
MINUTE PAGE

- (1) The name, address, point of contact, and telephone number of the responsible party.
- (2) The name of the vessel transporting the oil.
- (3) The type and amount of oil being transported.
- (4) The source of crude oil.
- (5) The name and location of any terminal that loaded the vessel.
- (6) The name and location of any terminal that discharged the tanker or barge.
- (7) The dates of travel and the route.
- (8) The type of engine and fuel used to power the tanker or barge-towing vessel.
- (9) The estimated amount and type of air emissions. To the extent practicable, the emissions factors developed by the United States Environmental Protection Agency shall be used to estimate the amount of air emissions. The form shall be designed to ensure that charter vessel air emissions are not counted more than once.
- (10) An indication of whether the reason for the internal shipping of oil was due to a temporary shutdown or partial shutdown of a key refinery facility.
- (11) On and after January 1, 2004, if Division 36 (commencing with Section 71200) is repealed pursuant to Section 71271, the amount of any ballast discharge and the location of the discharge.

(c) The form shall be filed with the commission on a quarterly basis by the responsible party engaged in the internal shipment of oil for the activities of the preceding quarter.

(d) In developing the form and the reporting process, the commission shall consult with the interested parties including operators, responsible parties, and the International Maritime Organization.

8784. (a) On or before April 1 of each year, for the calendar years 2004 to 2009, inclusive, the commission shall file a report with the Legislature summarizing the information and including all of the following:

- (1) A description of any trends in the total number of trips by oil type, amount of shipment, and source of oil.
- (2) The number of transfers due to refinery shutdowns.
- (3) The location of air emissions and ballast discharge, and the type of vessel used during those events.

(4) A discussion of any other pertinent issues that the commission determines should be included.

(b) The commission shall transmit a copy of the report to any interested agency or member of the public, upon request.

8785. The commission shall consult with the administrator, other state agencies, and agencies of the federal government, including, but not limited to, the United States Coast Guard and the federal Department of Transportation, to the maximum extent feasible, before undertaking actions under this division.

8786. The administrator shall reimburse the commission for the costs of administering this division from the Oil Spill Prevention and Administration Fund, pursuant to paragraph (8) of subdivision (e) of Section 8670.40 of the Government Code.

8787. This division applies to all terminals, pipelines, vessels, and activities in the state, whether on lands that have been granted by the Legislature to local governments or on lands that remain ungranted.

8788. Any information collected under this division for the purpose of explaining why oil was transferred shall be kept confidential and reported only in the aggregate by the commission, in a manner that protects the competitive nature of the information.

8789. This division shall remain in effect only until January 1, 2010, and as of that date is repealed, unless a later enacted statute, which is enacted before January 1, 2010, deletes or extends that date.

SEC. 3. Section 1.5 of this bill incorporates amendments to Section 8670.40 of the Government Code proposed by both this bill and SB 849. It shall only become operative if (1) both bills are enacted and become effective on or before January 1, 2003, (2) each bill amends Section 8670.40 of the Government Code, and (3) this bill is enacted after SB 849, in which case Section 1 of this bill shall not become operative.



**APPENDIX II**

**The Oil Transfer and Transportation Emission and  
Risk Reduction Form**

000413

CALENDAR PAGE

000973

MINUTE PAGE

**OIL TRANSFER AND TRANSPORTATION EMISSION AND  
RISK REDUCTION FORM**

Public Resources Code - Sections 8780 through 8789

1/1/2004

Submission Date:

<b>Name of Vessel/Barge</b>	<b>IMO/Vessel ID No.</b>

<b>Name of Loading Terminal</b>	<b>Location</b>
1.	
2.	
3.	

<b>Cargo Transported</b>	<b>Quantity (BBLs)</b>	<b>Source (Crude only)</b>
1.		
2.		
3.		

<b>Name of Discharge Terminal</b>	<b>Location</b>
1.	
2.	
3.	

Dates of Travel				
<b>Departure</b>	<b>Time</b>	<b>Route</b>	<b>Arrival</b>	<b>Time</b>

<b>Engine Type (Tanker)</b>	<b>Engine Type (Barge/Tug)</b>	<b>Engine Fuel</b>

Engine Air Emissions (g/kw-hr)			
<b>NO<sub>x</sub></b>	<b>HC</b>	<b>PM</b>	<b>CO</b>

<b>Was the reason for shipping this cargo due to a temporary or partial shutdown of a key refinery facility?</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
--	------------------------------	-----------------------------

<b>Point of Contact</b>	
<b>Address</b>	
<b>Telephone No.</b>	
<b>Signature of Responsible Party</b>	

## INSTRUCTIONS

1. The responsible party of an "internal shipment" {Public Resources Code §8782(d)} of oil from either the San Francisco Bay area or Los Angeles/Long Beach areas or ports in between shall be responsible for filing the form with the California State Lands Commission's Marine Facilities Division. As provided by Public Resources Code §8788, the information provided by the responsible party through the form shall be kept confidential and reported only in the aggregate by the Commission, as provided by Public Resources Code §8784, in a manner that protects the competitive nature of the information.
2. **Loading Terminal** - The name of each terminal loading an internal shipment of oil.
3. **Location of Terminal** - Either 'A' - San Francisco Bay area; 'B' - Los Angeles/Long Beach area; or 'C' - name of port if not 'A' or 'B'.
4. **Cargo Transported** - Types indicated in broad categories, such as: CRUDE OIL, REFINED OIL, or OTHER (please specify).
5. **Source** - The source or origin of oil should be entered only if the oil shipped is crude oil.
6. **Dates of Travel** - The date and time of departure from the last loading terminal in areas 'A' or 'B' or 'C' (see 3. above) and the date and time of arrival at the first discharge terminal of the internal shipment.
7. **Route** - 'S' - Standard route using the Santa Barbara Channel Traffic Separation Schemes; 'O' - Offshore route at least 25 miles from the coastline; if neither 'S' nor 'O', a brief explanation.
8. **Engine Type** - The types of engines for main propulsion. Types include INTERNAL COMBUSTION, GAS TURBINE and STEAM.
9. **Engine Fuel** - The type of fuel used by the tanker or tug, e.g., DIESEL, FUEL OIL, HEAVY FUEL OIL, BUNKER 'C' or GAS OIL.
10. **Air Emissions** - For estimating air emissions, use either individual vessel emission factors or those found in USEPA's Document "Compilation of Air Pollutant Emission Factors, AP-42." Reported emissions are for main propulsion unit only and for the transit time of vessel or barge.
11. The responsible party should submit completed forms by mail or fax within 45 days of the end of each calendar quarter to: California State Lands Commission, Marine Facilities Division, 200 Oceangate, Suite 900, Long Beach, CA 90802. Fax (562) 499-6317.

**THERE IS NO TEXT FOR CALENDAR PAGE NUMBERS 000416 THRU000445**  
**THERE IS NO TEXT FOR MINUTE PAGE NUMBERS 000976 THRU 001005**