

NATIONAL PETROLEUM COUNCIL
REPORT OF THE COMMITTEE ON
PETROLEUM STORAGE CAPACITY (1957)

CHAIRMAN OF THE COMMITTEE: R. L. MILLIGAN

OCTOBER 3, 1957

NATIONAL PETROLEUM COUNCIL

OFFICERS

Walter S. Hallanan, Chairman

R. G. Follis, Vice-Chairman

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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF OIL AND GAS
Washington 25, D. C.

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March 1, 1957

Mr. Walter S. Hallanan
Chairman, National Petroleum Council
1625 K Street, N. W.
Washington, D. C.

Dear Mr. Hallanan:

Problems connected with the oil lift to Europe have focused attention on the United States inventories of crude oil, natural gas liquids and petroleum products.

There have been substantial additions to storage capacity since the October 1954 report of the National Petroleum Council on petroleum storage capacity and inventories.

It is now desirable that the Government have up to date information on the storage capacity for crude oil, natural gas liquids and the principal products, gasoline, distillates including kerosene, and residual fuels. The data should include information on the amount of crude oil, natural gas liquids and products normally reported in inventory, but unavailable. Information should also be included on the inventory levels for crude, natural gas liquids and products reasonably required from the operations standpoint.

It is requested that the National Petroleum Council bring up to date its report of October 1954, giving effect to the foregoing matters together with such recommendations or comments as are considered appropriate.

It is understood that the Council now has under preparation a report on underground storage so it will not be necessary to include this in the study now being requested.

Sincerely yours,

/s/ H. A. Stewart

Director

COMMITTEE ON PETROLEUM STORAGE CAPACITY (1957)

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The Quincy Oil Company

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Socony Mobil Oil Company, Inc.

NATIONAL PETROLEUM COUNCIL

REPORT OF THE COMMITTEE ON PETROLEUM STORAGE CAPACITY (1957)

OCTOBER 3, 1957

Members of the National Petroleum Council:

Gentlemen:

This report is being made in response to the recommendations of the Agenda Committee upon which affirmative action was taken by the Council at its March meeting in connection with a communication dated March first, 1957, from Mr. H. A. Stewart, Director, Office of Oil and Gas, U. S. Department of the Interior, requesting another periodic study of the above ground storage capacity in the United States for crude oil and the principal petroleum products, - gasoline, kerosine, distillate fuel oils and residual fuel oils, as well as a reappraisal of the portion of these products normally reported in inventory but unavailable.

In accord with this action, your Committee on Petroleum Storage Capacity was reactivated and requested to bring up to date the situation in the industry with respect to these items.

As in previous reports your Committee again thought it desirable to relate its analysis to a previously reported actual inventory situation and chose March 31 of this year as the reporting date, because of the obvious desirability of determining inventory and storage relationships at this seasonal turn in the operations of the industry.

Questionnaires were sent, along with the necessary map showing district outlines, definitions, and other explanations, to all refiners and other holders of crude oil and principal product inventories and storage capacity.

In comparison with the inventories previously developed by the Bureau of Mines as of March thirty-first last, the crude oil section of this report represents 96.9 per cent of the refinery, pipe line and tank farm stocks, crude oil in transit and producers' inventories. The gasoline figures reported to the survey total about 96.3 per cent of all of that product reported in storage as of March thirty-first; while kerosine covered 97.5 per cent; distillate fuel oil 98.8 per cent; and residual fuel oil 98.4 per cent of their total inventory. The latter included all of the stocks in the various categories that are gathered and reported on by the Bureau of Mines, monthly and annually.

These figures were all analyzed from the point-of-view of so-called unavailable inventories including pipe line fill, unavailable inventories at refineries, tank bottoms, amounts required in refinery lines and refinery operating equipment, pipe line operating requirements, and other unavailables in transit by truck, tank car, barge or tanker. The so-called available inventories include both those that could be shipped currently for immediate consumption, and those that have been accumulated against normal seasonal requirements.

Your Committee appreciates the extremely gratifying response shown by the industry and takes this opportunity to thank all of those who reported to this survey and who so promptly returned the information requested.

Returns were not received from a few relatively small companies. The reported inventories are such a large portion of total industry inventories that the committee feels this analysis can be assumed to be representative of the entire industry.

Attached to the report, in consolidated form, are reproductions of all of the questionnaire forms used in the survey, showing all of the details with respect to so-called unavailable inventories as well as information indicating the assignment of storage capacity to crude oil and the four principal refined products earlier indicated.

The following is a summary of the pertinent returns and analysis of the crude oil section.

TABLE I - CRUDE OIL INVENTORIES, STORAGE CAPACITY AND UNAVAILABLES
(EXCLUDING PRODUCER'S LEASE STOCKS)

MARCH 31, 1957 - BARRELS 42 U. S. GALLONS

(1) <u>Total Inventories:</u>	
Reported by Bureau of Mines	232,733,000
Reported to Survey	225,516,000
Survey Represents (Per Cent)	96.9
(2) <u>Total Unavailable:</u>	157,582,000
Per Cent of Reported Inventories	69.9
(3) <u>Available for Use or Shipment:</u>	67,934,000
Per Cent of Reported	30.1
(4) <u>Storage Capacity: *</u>	415,422,000
(5) <u>Amount in Tanks:</u>	173,264,000
Per Cent Full	41.7

*Includes about 8,900,000 barrels of reservoir storage in West Coast (California).

The following Table II shows all of the above figures by the general supply and demand areas of the country, while the attached consolidated forms show all details of the unavailables and other items by Bureau of Mines' refining districts and sub-divisions thereof.

TABLE II

ANALYSIS OF ACTUAL AND UNAVAILABLE CRUDE OIL INVENTORIES AND STORAGE CAPACITY

(MARCH 31, 1957 - (Barrels 42 Gallons))

<u>District</u>	<u>Actual</u> <u>B. of M.</u> <u>March 31, 1957</u>	<u>Questionnaires</u> <u>Returned</u>		<u>Unavailable</u> <u>in Column 2</u>		<u>Storage March 31, 1957</u> <u>Capacity</u> <u>Reported*</u>	<u>Amount</u> <u>in Tanks (a)</u>
	<u>(1)</u>	<u>Total</u> <u>(2)</u>	<u>%</u> <u>(3)</u>	<u>Total</u> <u>(4)</u>	<u>%</u> <u>(5)</u>	<u>(6)</u>	<u>(7)</u>
	<u>Inventories at Refineries, in Pipe Line and Tank Farm and In Transit Thereto</u>						
I	20,642,000	20,501,000	99.3	15,214,000	74.2	34,174,000	16,246,000
II	69,153,000	65,909,000	95.3	46,750,000	70.9	109,053,000	45,510,000
III	104,982,000	102,136,000	97.3	69,588,000	68.1	184,699,000	79,921,000
IV	12,898,000	12,838,000	99.5	7,727,000	60.2	20,797,000	9,664,000
V	25,058,000	24,132,000	96.3	18,303,000	75.8	66,699,000	21,923,000
TOTAL U.S.	232,733,000	225,516,000	96.9	157,582,000	69.9	415,422,000	173,264,000
	<u>Producers' Lease Stocks - No Analysis Requested - Considered Operating Stocks</u> <u>(Shown as reported by U. S. Bureau of Mines)</u>						
TOTAL U.S.	22,178,000	22,178,000	100.0	22,178,000	100.0	Not Available	22,178,000
	<u>Total all Crude Oil Stocks</u>						
UNITED STATES	254,911,000	247,694,000	97.2	179,760,000	72.6	Not Available	195,442,000

* Includes about 8,900,000 barrels of reservoir storage in District V.

(a) Total Crude Stocks excluding Producer's Lease Stocks, In Transit and Pipeline Fill.

This fifth study of petroleum storage capacity presents an opportunity for an analysis of trends through a nine year period. The more significant trends with respect to crude oil are shown in the following table:

TABLE III

ANALYSIS OF CRUDE OIL STOCKS
(Excluding Producers Lease Stocks and
Cargoes in Transit from Foreign Countries)

(Thousands of Barrels)

	<u>March 31,</u> <u>1948</u>	<u>June 30,</u> <u>1950</u>	<u>March 31,</u> <u>1952</u>	<u>March 31,</u> <u>1954</u>	<u>March 31,</u> <u>1957</u>
Total Stocks Held by Reporting Companies	213,224	224,948	238,413	243,692	225,516
<u>Unavailable Stocks</u>					
Contents of Tank Bottoms, in Refinery Pipe Lines and minimum quantity required to assure continuous processing, handling and blending various grades of Crude	34,067	38,031	39,364	41,423	41,277
Pipe Line Fill	30,579	36,618	41,028	44,341	47,036
Other Unavailable	<u>68,279</u>	<u>67,790</u>	<u>70,514</u>	<u>80,884</u>	<u>69,269</u>
Total Unavailable	132,925	142,439	150,906	166,648	157,582
Unavailable Per Cent of Total Reported	<u>62.3%</u>	<u>63.3%</u>	<u>63.3%</u>	<u>68.4%</u>	<u>69.9%</u>
Total Available	<u>80,299</u>	<u>82,509</u>	<u>87,507</u>	<u>77,044</u>	<u>67,934</u>

The Trends revealed present a measurement of known shifting tendencies in the industry. Following are some of the more interesting individual changes.

1. The aggregate of crude stocks has increased only 13 million barrels during the nine year period. This is an increase of only 6 percent during a time period when total demand has increased by 43.8 percent. The total available stocks have dropped by over 12 million barrels.
2. The industry has sought increased efficiencies through providing additional pipe line capacity and a more rapid inventory turn. The increased quantity of inventory tied up in pipeline fill amounts to approximately 16.5 million barrels. An additional increase of 7 million barrels was unavailable as the minimum required in refinery pipe lines and amounts required to assure continuous operations. These two items are the primary explanation of the increased unavailable quantities of crude oil.

CLEAN PRODUCTS

In all previous Council surveys of storage capacity, the industry was asked to report on "clean" products as a group. This was thought desirable because of the great degree of interchangeability of storage as between and among these products. This year, however, the Office of Oil and Gas requested that information on gasoline, kerosine and distillate fuel oil be shown separately.

The tabulation which follows includes a group of pertinent information on these products and, for comparative purposes against earlier surveys, a clean products total is also shown.

(See Following Page)

TABLE IV - CLEAN PRODUCTS

INVENTORIES, STORAGE CAPACITY AND UNAVAILABLES

MARCH 31, 1957

(Barrels 42 U. S. Gallons)

	<u>Gasoline</u>	<u>Kerosine</u>	<u>Distillate Fuel Oil</u>	<u>Total Clean Products</u>
(1) <u>Total Inventories:</u>				
Reported by Bureau of Mines	206,716,000	20,223,000	76,245,000	303,184,000
Reported to Survey	199,064,000	19,712,000	75,351,000	294,127,000
Survey Represents (Per Cent)	96.3	97.5	98.8	97.0
(2) <u>Total Unavailable:</u>	71,287,000	6,471,000	25,781,000	103,539,000
Per Cent of Reported Inventories	35.8	32.8	34.2	35.2
(3) <u>Available for Current Shipment, or Held as Seasonal Require- ments:</u>	127,777,000	13,241,000	49,570,000	190,588,000
Per Cent of Reported Inventories	64.2	67.2	65.8	64.8
(4) <u>Storage Capacity Assigned:</u> (as of March 31, 1957)	331,413,000	45,868,000	*182,534,000	*559,815,000
(5) <u>Amount in Tanks:</u>	182,802,000	18,665,000	69,131,000	270,598,000
Per Cent Full	55.2	40.7	37.9	48.3

* Includes about 1,000,000 barrels of slate pit distillate fuel oil storage in East Coast district.

Tables V, VI and VII which follow, show the details of Table IV by general supply and demand areas of the country, for gasoline, kerosine and distillate fuel oil individually.

TABLE V - ANALYSIS OF ACTUAL AND UNAVAILABLE INVENTORIES AND STORAGE CAPACITY AS OF MARCH 31, 1957
FOR GASOLINE

(Barrels 42 Gallons)

B. of M. Refining Districts	Actual	Questionnaires		Unavailable		Storage	March 31, 1957
	B. of M. March 31, 1957 (1)	Total (2)	% (3)	Total (4)	% (5)	Capacity Reported (6)	Amount in Tanks (7)
<u>Includes Inventories at Refineries, Terminals, Pipe Lines and In Transit Thereto:</u> <u>Excludes Gasoline Component of Jet Fuels.</u>							
East Coast	44,111,000	42,224,000	95.7	17,438,000	41.3	72,467,000	36,992,000
Appalachian							
District I	5,097,000	4,974,000	97.6	1,593,000	32.0	8,102,000	4,228,000
District II	3,090,000	3,124,000	101.1	1,066,000	34.1	5,198,000	2,964,000
Ind. Ill. Ky.	38,083,000	36,674,000	96.3	13,095,000	35.7	59,886,000	34,341,000
Minn. Wisc.							
N. & S. Dak.	6,921,000	7,122,000	102.9	1,882,000	26.4	12,052,000	6,497,000
Okla. Kans. Mo.	20,980,000	20,388,000	97.2	7,924,000	38.9	29,463,000	17,458,000
Texas Inland	8,105,000	7,683,000	94.8	2,251,000	29.3	12,633,000	6,962,000
Texas Gulf	27,765,000	26,514,000	95.5	8,531,000	32.2	45,547,000	26,092,000
Louisiana Gulf	11,679,000	10,308,000	88.3	1,878,000	18.2	18,232,000	9,905,000
North La. - Ark.	4,976,000	4,980,000	100.1	1,998,000	40.1	7,250,000	3,835,000
New Mexico	418,000	310,000	74.1	141,000	45.5	377,000	194,000
Other Rocky Mountain	8,263,000	7,696,000	93.1	2,108,000	27.4	10,623,000	7,153,000
Total U.S. ex- cluding West Coast	179,488,000	171,997,000	95.8	59,905,000	34.8	281,830,000	156,621,000
West Coast	27,228,000	27,067,000	99.4	11,382,000	42.0	49,583,000	26,181,000
TOTAL U. S.	206,716,000	199,064,000	96.3	71,287,000	35.8	331,413,000	182,802,000

TABLE VI - ANALYSIS OF ACTUAL AND UNAVAILABLE INVENTORIES AND STORAGE CAPACITY AS OF MARCH 31, 1957
FOR KEROSENE

(Barrels 42 Gallons)

B. of M. Refining Districts	Actual	Questionnaires		Unavailable		Storage	March 31, 1957
	B. of M. March 31, 1957 (1)	Returned Total (2)	% (3)	in Column 2 Total (4)	% (5)	Capacity Reported (6)	Amount in Tanks (7)
<u>Includes Inventories at Refineries, Terminals, Pipe Lines and In Transit Thereto; Excludes Kerosine Component of Jet Fuels</u>							
East Coast	8,381,000	8,321,000	99.3	3,272,000	39.3	20,585,000	7,785,000
Appalachian							
District I	472,000	478,000	101.3	82,000	17.2	1,106,000	466,000
District II	346,000	372,000	107.5	141,000	37.9	654,000	362,000
Ind., Ill., Ky.	3,625,000	3,492,000	96.3	1,205,000	34.5	8,362,000	3,337,000
Minn. Wisc.							
N. & S. Dak.	416,000	416,000	100.0	189,000	45.4	1,914,000	410,000
Okla., Kans., Mo.	895,000	817,000	91.3	254,000	31.1	1,830,000	814,000
Texas Inland	305,000	281,000	92.1	93,000	33.1	1,033,000	262,000
Texas Gulf	2,811,000	2,887,000	102.7	495,000	17.1	5,237,000	2,835,000
Louisiana Gulf	1,539,000	1,289,000	83.8	237,000	18.4	2,875,000	1,264,000
North La., -Ark.	822,000	806,000	98.1	320,000	39.7	1,069,000	588,000
New Mexico	6,000	4,000	66.7	1,000	25.0	13,000	4,000
Other Rocky Mountain	280,000	224,000	80.0	58,000	25.9	406,000	220,000
Total U.S. ex- cluding West Coast	19,898,000	19,387,000	97.4	6,347,000	32.7	45,084,000	18,347,000
West Coast	325,000	325,000	100.0	124,000	38.2	784,000	318,000
TOTAL U. S.	20,223,000	19,712,000	97.5	6,471,000	32.8	45,868,000	18,665,000

TABLE VII ANALYSIS OF ACTUAL AND UNAVAILABLE INVENTORIES AND STORAGE CAPACITY AS OF MARCH 31, 1957
FOR DISTILLATE FUEL OILS
(Barrels 42 Gallons)

B. of M. Refining Districts	Actual	Questionnaires		Unavailable		Storage March 31, 1957	
	B. of M. March 31, 1957 (1)	Returned Total (2)	% (3)	in Column 2 Total (4)	% (5)	Capacity Reported (6)	Amount in Tanks (7)
East Coast	24,362,000	24,528,000	100.7	10,087,000	41.1	*72,360,000	21,647,000
Appalachian							
District I	1,941,000	1,923,000	99.1	372,000	19.3	4,469,000	1,789,000
District II	666,000	663,000	99.5	331,000	49.9	1,379,000	652,000
Ind. Ill. Ky.	11,682,000	11,478,000	98.3	3,566,000	31.1	25,940,000	10,963,000
Minn. Wisc. N. & S. Dak.	3,545,000	3,465,000	97.7	1,033,000	29.8	8,738,000	3,306,000
Okla. Kans. Mo.	6,937,000	7,079,000	102.0	3,084,000	43.6	14,758,000	5,852,000
Texas Inland	1,576,000	1,386,000	87.9	389,000	28.1	2,456,000	1,271,000
Texas Gulf	7,585,000	7,517,000	99.1	1,718,000	22.9	17,805,000	7,504,000
Louisiana Gulf	4,630,000	4,375,000	94.5	653,000	14.9	7,767,000	4,236,000
North La. -Ark.	1,801,000	1,692,000	93.9	594,000	35.1	2,771,000	1,360,000
New Mexico	78,000	35,000	44.9	17,000	48.6	106,000	25,000
Other Rocky Mountain	2,510,000	2,467,000	98.3	625,000	25.3	4,278,000	2,168,000
Total U.S. ex- cluding West Coast	67,313,000	66,608,000	99.0	22,469,000	33.7	162,827,000	60,773,000
West Coast	8,932,000	8,743,000	97.9	3,312,000	37.9	19,707,000	8,358,000
TOTAL U. S.	76,245,000	75,351,000	98.8	25,781,000	34.2	*182,534,000	69,131,000

*Includes about 1,000,000 barrels of slate pit storage in East Coast district.

The analysis of "Clean Products" inventories shown below indicates that Unavailable Stocks have increased 28,000,000 barrels over the last nine years. Of this increase 10,000,000 barrels were required as pipe line fill and another 4,700,000 barrels along these pipe lines.

TABLE VIII
ANALYSIS OF CLEAN PRODUCTS STOCKS

(Thousands of Barrels)

	<u>March 31,</u> <u>1948</u>	<u>June 30,</u> <u>1950</u>	<u>March 31,</u> <u>1952</u>	<u>March 31,</u> <u>1954</u>	<u>March 31,</u> <u>1957</u>
Total Stocks Held by Reporting Companies	149,903	180,595	220,283	251,450	294,127
<u>Unavailable Stocks</u>					
Tank Bottoms	22,262	24,176	26,128	28,865	27,834
Unfinished at Refineries	8,957	9,403	10,739	7,234	11,520
Refinery Lines and Operating Equipment	1,524	1,641	1,768	1,772	1,802
One-half Average Size Water Cargo Receipt	9,993	10,077	13,083	13,417	14,856
Other Unavailable Stocks	14,776	11,877	14,648	12,557	12,836
Pipe Line Fill	4,813	4,046	8,202	12,747	14,816
Pipe Line Operating Requirements	6,446	6,702	4,158	7,963	11,162
In Transit-Truck, Tank Car, Barge and Tanker from Domestic Source	<u>6,462</u>	<u>6,030</u>	<u>8,265</u>	<u>7,239</u>	<u>8,713</u>
Total Unavailable	75,233	73,952	86,991	91,794	103,539
Unavailable per cent of Total Reported	<u>50.2%</u>	<u>41.0%</u>	<u>39.5%</u>	<u>36.5%</u>	<u>35.2%</u>
Total Available	<u>74,670</u>	<u>106,643</u>	<u>133,292</u>	<u>159,656</u>	<u>190,588</u>

TABLE IX - RESIDUAL FUEL OIL
INVENTORIES, STORAGE CAPACITY AND UNAVAILABLES
MARCH 31, 1957

The following comparisons represent the United States totals for the items indicated on Residual Fuel Oil. All figures are in 42 gallon barrels unless otherwise stated.

(1) <u>Total Inventories:</u>	
Reported by Bureau of Mines	37,371,000
Reported to Survey	36,764,000
Survey Represents (Per Cent)	98.4
(2) <u>Total Unavailable:</u>	13,945,000
Per Cent of Reported Inventories	37.9
(3) <u>Available for Current Shipment or Held as Seasonal Requirements:</u>	12,819,000
Per Cent of Reported Inventories	62.1
(4) <u>Storage Capacity Assigned:*</u> (As of March 31, 1957)	96,852,000
(5) <u>Amount in Tanks:</u>	34,889,000
Per Cent Full	36.0

* Includes about 28,700,000 barrels of reservoir storage on the West Coast (California) and about 50,000 barrels in Arkansas-Louisiana Inland District.

Table X, which follows, shows all of the above information by general supply and demand areas of the country.

TABLE X - ANALYSIS OF ACTUAL AND UNAVAILABLE INVENTORIES AND STORAGE CAPACITY AS OF MARCH 31, 1957
FOR RESIDUAL FUEL OIL
(Barrels 42 Gallons)

B. of M. Refining Districts	Actual B. of M. March 31, 1957	Questionnaires Returned		Unavailable in Column 2		Storage March 31, 1957 Capacity Reported*	Amount in Tanks
	(1)	Total (2)	% (3)	Total (4)	% (5)	(6)	(7)
Includes Inventories at Refineries, Terminals, Pipe Lines and In Transit Thereto; Excludes Heavy Residual Cracking Stock, which the Bureau of Mines classifies as an Unfinished Oil							
East Coast	9,002,000	8,951,000	99.4	4,099,000	45.8	20,349,000	8,606,000
Appalachian							
District I	438,000	430,000	98.2	58,000	13.5	971,000	430,000
District II	374,000	397,000	106.1	45,000	11.3	703,000	396,000
Ind. Ill. Ky.	4,712,000	4,586,000	97.3	1,281,000	27.9	8,221,000	4,585,000
Minn. Wisc.							
N. & S. Dak.	372,000	498,000	133.9	36,000	7.2	996,000	498,000
Okla. Kans. Mo.	853,000	895,000	104.9	184,000	20.6	2,579,000	892,000
Texas Inland	1,678,000	#1,588,000	94.6	#1,308,000	82.4	1,143,000	366,000
Texas Gulf	5,066,000	5,031,000	99.3	1,300,000	25.8	10,850,000	5,022,000
Louisiana Gulf	1,376,000	1,336,000	97.1	208,000	15.6	2,582,000	1,336,000
North La.-Ark.	98,000	114,000	116.3	16,000	14.0	345,000	113,000
New Mexico	56,000	24,000	42.9	4,000	16.7	53,000	24,000
Other Rocky Mountain	994,000	836,000	84.1	165,000	19.7	1,533,000	836,000
Total U.S. ex- cluding West Coast	25,019,000	24,686,000	98.7	8,704,000	35.3	50,325,000	23,104,000
West Coast	12,352,000	12,078,000	97.8	5,241,000	43.4	46,527,000	11,785,000
TOTAL U. S.	37,371,000	36,764,000	98.4	13,945,000	37.9	96,852,000	34,889,000

* Includes about 28,700,000 barrels of reservoir storage on the West Coast (California) and about 50,000 barrels in North Louisiana-Arkansas district. #About 1,200,000 barrels of "pitch" held in reservoir storage is included to conform with Bureau of Mines basis of reporting.

Trend Comparisons on "Residual Fuel Oil" are provided in the following table.

TABLE XI

ANALYSIS OF RESIDUAL FUEL OIL STOCKS

(Thousands of Barrels)

	<u>March 31,</u> <u>1948</u>	<u>June 30,</u> <u>1950</u>	<u>March 31,</u> <u>1952</u>	<u>March 31,</u> <u>1954</u>	<u>March 31,</u> <u>1957</u>
Total Stocks Held by Reporting Companies	41,297	40,570	37,856	42,705	36,764
<u>Unavailable Stocks</u>					
Tank Bottoms	6,965	6,252	5,715	5,261	4,259
Unfinished at Refineries	4,112	1,148	1,515	1,529	1,365
Refinery Lines and Operating Equipment	602	534	603	569	382
One-half Average Size Water Cargo Receipt	2,532	2,491	2,875	2,582	2,519
Other Unavailable Stocks	3,225	3,155	3,577	3,294	4,464
Pipe Line Fill	123	121	108	94	74
Pipe Line Operating Requirements	2,008	1,313	569	573	302
In Transit-Truck, Tank Car, Barge and Tanker from Domestic Source	<u>1,235</u>	<u>1,218</u>	<u>875</u>	<u>500</u>	<u>580</u>
Total Unavailable	20,802	16,232	15,837	14,402	13,945*
Unavailable per cent of Total Reported	<u>50.4%</u>	<u>40.0%</u>	<u>41.8%</u>	<u>33.7%</u>	<u>37.9%*</u>
Total Available	<u>20,495</u>	<u>24,338</u>	<u>22,019</u>	<u>28,303</u>	<u>22,819</u>

* Includes 1,200,000 barrels of "pitch" not available to market Inland Texas.

GENERAL

Again it may be said, as in all previous reports by this Committee, that one of the most interesting findings is the very large petroleum storage capacity indicated as necessary to maintain normal flexibility of petroleum industry operations.

Based on nine years experience, the industry has found it necessary to maintain a total storage capacity of more than two barrels for each barrel of actual inventory.

This relationship has had to be established in order to maintain flexibility and to provide for the large seasonal variation in demand, and has been consistently held over the entire period, as shown in the following tabulation:

<u>SURVEY OF</u>	<u>RATIO CAPACITY TO ACTUAL INVENTORY</u>
March 31, 1948	2.4 to 1
June 30, 1950	2.2 to 1
March 31, 1952	2.2 to 1
March 31, 1954	2.1 to 1
March 31, 1957	2.2 to 1

The Committee once again stresses the point to those not familiar with the requirements and necessities generated by oil industry operating problems, that in no sense can the difference between actual inventories and capacities herein shown be taken as an indication of available storage space. If the industry is successfully to handle winter seasonal demands running up to more than 11 million barrels per day, it must enjoy complete flexibility at all times if normal

operation of its far-flung transportation, manufacturing and distribution systems is to prevail, and if the necessary supplies are to be delivered to consumers efficiently and on schedule.

Also interesting to those not familiar with the details of oil industry operations, is the following summary of so-called unavailable inventories; - those in pipe lines, in transit, in operating equipment and as reserve against transportation or manufacturing breakdowns will show the very large portion of its total reported inventories that are always required if the industry is to operate efficiently and well, and to supply the ever-increasing demand for its products.

	<u>Total Inventories Surveyed (Barrels)</u>	<u>Per Cent of Bureau of Mines Total</u>	<u>Unavailable Inventories Reported (Barrels)</u>	<u>Per Cent of Total Surveyed</u>
Crude Oil	225,516,000	96.9	157,582,000	69.9
Gasoline	199,064,000	96.3	71,287,000	35.8
Kerosine	19,712,000	97.5	6,471,000	32.8
Distillate Fuel Oil	75,351,000	98.8	25,781,000	34.2
Residual Fuel Oil	<u>36,764,000</u>	<u>98.4</u>	<u>13,945,000</u>	<u>37.9</u>
Total	<u>556,407,000</u>	<u>97.1</u>	<u>275,066,000</u>	<u>49.4</u>

From the beginning, these surveys which are the only ones of their kind in this complete detail that have been developed for the industry as a whole, may be said to have definitely confirmed what long-term industry operating experience has indicated, - namely, that relatively low ratios of actual inventories to storage capacity in service is essential if the industry is to avoid inefficiencies in processing, handling or distribution, and further, that the amount of crude oil and products required in the industry's operating system represents a very substantial portion of its total inventories.

None of the figures in this report include either inventories or storage capacity, if any, in the hands and control of the military.

Respectfully submitted

FOR THE COMMITTEE ON PETROLEUM
STORAGE CAPACITY

/S/ R. L. Milligan
R. L. Milligan, Chairman

COMPARISON OF STORAGE CAPACITY REPORTED IN THIS AND EARLIER
SURVEYS

The industry's capacity to seasonally store and handle crude oil and the principal refined products has increased greatly since the first survey of this kind was made in 1948, particularly in the clean products groups, where the upward surge in demand would reflect itself primarily.

These comparative capacity figures are shown by major groups and by districts from 1948 through 1957 in Table XII which appears on the following page.

TABLE XII - COMPARISON OF STORAGE CAPACITY FROM 1948 THROUGH 1957 - (Figures in Thousands of Barrels)
 (These reports were as of March 31 of each year, except 1950 when it was for June 30)

NOTE: The 1952 relationship with prior years is somewhat overstated in Clean Products and to a lesser extent in Residual Fuel because of the broadened definition of a bulk terminal which became effective January 1, 1951. Also, 1954 is somewhat understated in comparison with 1952 because of the exclusion in 1954 of the storage capacity assigned to jet fuel, the component parts of which in 1952 were being included in the over-all inventories of each clean product.

District	CRUDE OIL (Includes all Crude categories except Producers' Storage)					CLEAN PRODUCTS (Gasoline, Kerosine and Distillate Fuels)					RESIDUAL FUEL (Residual Fuel Oils Only)				
	1948	1950	1952	1954	1957	1948	1950	1952	1954	1957	1948	1950	1952	1954	1957
East Coast	21,587	23,194	24,491	26,799	28,843	74,364	85,001	120,179	136,024	165,412	14,575	17,602	20,471	17,765	20,349
Appalachian:															
District I	5,277	7,002	5,999	5,703	5,331	5,060	5,336	8,908	10,637	13,677	455	378	933	1,357	971
District II	3,121	2,628	1,955	1,834	1,739	3,148	3,971	5,471	6,265	7,231	383	372	635	685	703
Ind. Ill. Ky.	37,356	44,322	46,045	44,200	42,142	60,275	69,118	85,114	98,330	94,188	8,814	8,611	9,536	9,431	8,221
Minn. Wisc. N. & S. Dak.	Not available separately 1948-1954				2,040	Not available separately 1948-1954				22,704	Not available separately 1948-1954				996
Okla. Kans. Mo.	80,142	75,683	69,625	71,588	63,132	24,501	28,526	38,474	44,279	46,051	4,034	3,831	3,267	2,805	2,579
Texas Inland	82,393	82,344	80,541	84,522	77,681	7,387	8,604	12,253	13,105	16,122	1,705	1,969	1,868	1,731	1,143
Texas Gulf	79,787	83,922	83,526	76,314	79,098	54,285	56,797	61,458	54,426	68,589	10,715	10,317	11,675	10,136	10,850
Louisiana Gulf	16,196	15,937	16,012	18,957	19,091	16,673	17,811	20,574	23,227	28,874	3,726	3,457	3,208	2,467	2,582
North La.- Arkansas	10,581	11,288	9,620	6,682	6,159	5,685	5,005	8,127	8,767	11,090	431	308	340	258	345
New Mexico	2,167	2,604	2,764	2,950	2,670	197	333	308	550	496	62	99	95	76	53
Other Rocky Mountain	18,525	18,482	18,448	18,538	20,797	7,669	11,036	11,373	14,290	15,307	1,888	1,942	2,057	1,836	1,533
Total U.S. excluding West Coast	357,132	367,406	359,026	358,087	348,723	259,244	291,538	372,239	409,900	489,741	46,788	48,886	54,085	48,547	50,325
West Coast (a)	59,595	(a)64,912	(a)70,325	(a)66,774	(a)66,699	60,515	56,526	53,221	57,104	70,074	(b)76,592	(b)57,172	(b)49,522	(b)50,348	(b)46,527
TOTAL U. S.	416,727	432,318	429,351	424,861	415,422	319,759	348,064	425,460	467,004	559,815	123,380	106,058	103,607	98,895	96,852

(a) Includes reservoir storage assigned to heavy crude oil as follows:

2,525 11,733 13,912 9,945 8,900

(b) Includes residual reservoir storage as follows

(c) Revised to correct previous error in reporting.

41,574 (c)34,751 31,447 31,938 28,750

COMPARISON OF UNAVAILABLE INVENTORIES REPORTED IN THIS AND
EARLIER SURVEYS

Unavailable inventories, or the amount of crude oil and refined products, which, in a sense, have to be locked up in the industry's far flung crude producing, refining, transportation and marketing system before normal operating levels can be achieved, have also increased over the last nine years, as will be seen from Table XIII which appears on the following page, again showing the figures by major groups and by districts.

TABLE XIII - COMPARISON OF UNAVAILABLE INVENTORY REPORTS FROM 1948 THROUGH 1957 - (Figures in thousands of Barrels)
(These reports were as of March 31 of each year, except 1950 when it was for June 30)

NOTE: The 1952 relationship with prior years is somewhat overstated in Clean Products and to a lesser extent in Residual Fuel because of the broadened definition of a bulk terminal which became effective January 1, 1951.

DISTRICT	CRUDE OIL (Includes all Crude categories except Producers' Storage)					CLEAN PRODUCTS (Gasoline, Kerosine and Distillate Fuels)					RESIDUAL FUEL (Residual Fuel Oils Only)				
	1948	1950	1952	1954	1957	1948	1950	1952	1954	1957	1948	1950	1952	1954	1957
East Coast	9,975	10,220	11,055	11,870	13,670	20,289	21,465	27,226	27,566	30,797	4,351	4,737	4,510	3,867	4,099
Appalachian:															
District I	1,159	2,006	1,848	2,065	1,544	954	1,030	1,691	2,056	2,047	72	83	142	125	58
District II	1,246	971	1,161	1,086	836	545	665	827	1,369	1,538	67	53	66	80	45
Ind. Ill. Ky.	15,662	18,783	22,129	20,598	19,151	12,483	13,434	14,790	16,729	17,866	1,240	1,131	1,007	1,055	1,281
Minn. Wisc. N & S. Dak.	Not available separately 1948-1954				1,095	Not available separately 1948-1954				3,104	Not available separately 1948-1954				36
Okla. Kans. Mo.	21,467	21,490	23,399	28,362	25,668	6,165	5,141	8,098	9,009	11,262	520	526	280	410	184
Texas Inland	25,663	32,009	31,950	39,682	34,904	2,049	2,239	2,310	2,635	2,733	314	245	169	168	*1,308
Texas Gulf	29,301	27,152	29,595	30,514	25,346	10,329	10,764	10,984	9,628	10,744	1,808	1,398	1,195	1,117	1,300
Louisiana Gulf	3,104	4,240	4,579	5,410	6,204	3,399	3,307	3,254	3,489	2,768	349	413	373	240	208
North La.-Ark.	2,791	3,580	2,593	2,484	1,798	1,452	739	1,999	2,776	2,912	35	20	28	18	16
New Mexico	1,037	1,067	1,039	1,061	1,336	21	81	29	72	159	5	17	7	7	4
Other Rocky Mountain	3,520	3,697	4,397	5,424	7,727	1,201	1,670	2,066	2,855	2,791	204	236	215	190	165
Total U.S. ex- cluding West Coast	114,925	125,215	133,745	148,556	139,279	58,887	60,535	73,274	78,184	88,721	8,965	8,859	7,992	7,277	8,704
West Coast	18,000	17,224	17,161	18,092	18,303	16,346	13,417	13,717	13,610	14,818	11,838	7,373	7,845	7,125	5,241
TOTAL U. S.	132,925	142,439	150,906	166,648	157,582	75,233	73,952	86,991	91,794	103,539	20,803	16,232	15,837	14,402	13,945
Unavailable Portion of Reported Inventory	62.3%	63.3%	63.3%	68.4%	69.9%	50.2%	41.0%	39.5%	36.5%	35.2%	50.4%	40.0%	41.8%	33.7%	**37.9%

NOTE: Crude oil percentage unavailable calculated on basis all categories except Producers' Stocks on which above district break-up not reported.

* Includes 1,200,000 barrels of "pitch" not available to market. **See Texas Inland note.

NOTE: Figures should be shown in Barrels of 42 U. S. Gallons by location in Bureau of Mines refining districts and should include only those categories of stocks regularly reported to the Bureau. Include foreign oil actually in storage but not crude or products in transit from foreign sources.

	East Coast	Appalachian		Indiana Illinois Kentucky	Minn., Wis., No. Dak. and So. Dakota	Oklahoma Kansas Missouri	Texas Inland	Texas Gulf	Louisiana Gulf	Arkansas-Louisiana Inland	New Mexico	Other Rocky Mountain	U. S. Excluding West Coast	West Coast	Total U. S.
CRUDE OIL															
1. Fill in here amount of crude oil stocks you reported to B. of M. as of March 31, 1957 as at refineries or in transit thereto from domestic sources—Section 1, Form 6-1311.	17,655,360	697,229	68,515	8,925,568	742,795	4,966,116	879,233	13,599,993	5,306,608	458,449	127,812	2,141,227	55,568,905	11,010,951	66,579,856
(a) Of the above quantity, how much was unavailable—such as oil content of tank bottoms, in refinery pipe lines, and the minimum quantity required to assure continuous processing, handling and blending various grades of crude.	9,848,112	487,399	68,515	6,248,634	402,986	1,953,435	537,261	11,200,539	1,717,780	55,875	15,296	881,589	33,417,421	7,859,170	41,276,591
(b) As In Transit to refineries by truck, tank car, barge or tanker from Domestic Sources.	3,807,240	-	-	312,976	16,045	-	-	63,716	659,138	10,000	-	90,498	4,959,613	256,800	5,216,413
Total Unavailable Refinery (Sum of (a) and (b) above)	13,655,352	487,399	68,515	6,561,610	419,031	1,953,435	537,261	11,264,255	2,376,918	65,875	15,296	972,087	38,377,034	8,115,970	46,493,004
Total Available Refinery	4,000,008	209,830	-	2,363,958	323,764	3,012,681	341,972	2,335,738	2,929,690	392,574	112,516	1,169,140	17,191,871	2,894,981	20,086,852
2. Fill in here amount you reported to B. of M. as Pipe Line and Tank Farm Stocks of Crude. Section 2, Form 6-1311, as of March 31, 1957.	123,967	2,024,448	1,248,500	18,875,919	814,331	30,267,616	44,281,324	26,852,154	6,285,402	2,831,887	1,513,298	10,696,302	145,815,148	13,121,480	158,936,628
(a) Of the above quantity, how much was unavailable as pipe line fill.	1,042	446,754	342,500	5,600,176	527,642	13,599,567	14,331,972	3,740,231	1,631,081	1,370,208	409,247	3,083,299	45,083,719	1,952,699	47,036,418
(b) As minimum required in tankage to assure continuous operation of pipe lines (this should reflect the absolute minimum below which you would get into operating difficulties).	-	539,416	425,000	6,989,157	145,033	9,521,392	19,505,068	9,999,383	2,117,965	310,695	892,102	2,539,086	52,984,297	6,179,814	59,164,111
(c) Oil content of bottoms of tank farm tanks if you include same in your reports to the B. of M.	14,031	70,118	-	-	3,735	593,819	529,333	342,596	78,436	50,772	19,000	1,132,000	2,833,840	2,054,763	4,888,603
Total Unavailable Pipe Line-Tank Farm Crude Oil. (Sum of (a), (b) and (c) above)	15,073	1,056,288	767,500	12,589,333	676,410	23,714,778	34,366,373	14,082,210	3,827,482	1,731,675	1,320,349	6,754,385	100,901,856	10,187,276	111,089,132
Total Available Pipe Line-Tank Farm	108,894	968,160	481,000	6,286,586	137,921	6,552,838	9,914,951	12,769,944	2,457,920	1,100,212	192,949	3,941,917	44,913,292	2,934,204	47,847,496
NOTE: For the purpose of this survey Producers' Lease Stocks, Section 3, Form 6-1311 will be considered as completely unavailable.															
GASOLINE															
(Deal only with those inventories regularly reported on B. of M. Forms 6-1300; 6-1302 and 6-1303)															
1. Fill in here amount you reported to B. of M. as at Refineries, at Terminals, or in Pipe Lines or In Transit thereto as of March 31, 1957 on Forms 6-1300; 6-1302; 6-1303.	42,223,932	4,974,534	3,123,603	36,673,716	7,122,176	20,388,102	7,683,268	26,514,081	10,307,855	4,979,851	309,749	7,695,775	171,996,652	27,067,475	199,064,127
2. Memo: Total Capacity all tankage in Gasoline Service (Copy from Questionnaire #2).	72,467,021	8,101,455	5,198,379	59,885,939	12,052,286	29,462,500	12,632,980	45,546,903	18,231,809	7,250,402	377,296	10,623,402	281,830,372	49,582,561	331,412,933
3. Analysis of Unavailable Stocks included in Item 1 above:															
(a) Credit tank bottoms as you carry them in your own inventory statements	3,786,232	318,688	274,909	2,689,732	363,894	1,135,427	683,083	2,817,778	884,169	245,111	17,291	530,904	13,747,218	3,362,273	17,109,491
(b) Unavailable Unfinished at Refineries	1,443,432	115,264	18,900	2,064,950	47,549	912,540	354,261	2,449,763	259,207	16,519	1,045	399,934	8,083,364	2,328,126	10,411,490
(c) In Refinery Lines and Refinery Operating Equipment	54,274	12,019	3,263	76,626	15,745	53,497	11,934	149,628	34,800	1,500	1,300	25,754	440,340	872,156	1,312,496
(d) One-Half of Average Size Water Cargo Receipt. (Total of each individual grade calculated separately.) (See explanation attached.)	5,544,389	293,102	85,998	796,458	343,181	116,566	-	174,261	118,052	88,106	-	-	7,560,113	905,769	8,465,882
(e) Other Unavailable Stocks. (Include Filter House Naphtha and Unavailable Unblended Finished.) (See explanation.)	904,278	52,271	114,674	2,682,943	109,541	1,099,427	191,595	1,577,252	79,000	5,000	6,621	398,842	7,221,444	2,997,269	10,218,713
(f) Pipe Line Fill	1,590,601	350,506	144,215	1,760,680	624,835	2,918,071	716,037	386,672	293,435	1,130,815	115,339	542,187	10,573,393	352,696	10,926,089
(g) Pipe Line Operating Requirements	472,564	55,056	408,400	2,451,630	377,300	1,676,155	288,281	940,622	100,000	497,000	-	210,174	7,477,182	30,000	7,507,182
(h) Unavailable In Transit by truck, tank car, barge or tanker from Domestic Sources (include only if you report these to B. of M.)	3,642,129	395,967	15,454	572,449	-	12,000	5,703	35,286	109,236	14,000	-	290	4,802,514	533,364	5,335,878
Total Unavailable Gasoline. (Sum of (a) to (h) above.)	17,437,899	1,592,873	1,065,813	13,095,468	1,882,045	7,923,683	2,250,894	8,531,262	1,877,899	1,998,051	141,596	2,108,085	59,905,568	11,381,653	71,287,221
Total Available Gasoline	24,786,033	3,381,661	2,057,790	23,578,248	5,240,131	12,464,419	5,432,374	17,982,819	8,429,966	2,981,800	168,153	5,587,690	112,091,084	15,685,822	127,776,906
KEROSINE															
(Deal only with those inventories regularly reported on B. of M. Forms 6-1300; 6-1302 and 6-1303)															
1. Fill in here amount you reported to B. of M. as at Refineries, at Terminals, or in Pipe Lines or In Transit thereto as of March 31, 1957 on Forms 6-1300; 6-1302; 6-1303.	8,320,978	477,605	372,230	3,491,523	415,646	817,241	281,454	2,887,367	1,288,998	805,536	4,259	223,553	19,386,390	325,490	19,711,880
2. Memo: Total Capacity all tankage in Kerosine Service (Copy from Questionnaire #2).	20,585,230	1,105,735	653,945	8,361,602	1,914,060	1,830,160	1,033,285	5,236,980	2,874,819	1,069,321	12,662	406,068	45,083,867	784,255	45,868,122
3. Analysis of Unavailable Stocks included in Item 1 above:															
(a) Credit tank bottoms as you carry them in your own inventory statements	961,431	47,665	35,074	218,528	36,779	46,741	45,243	293,517	138,523	35,941	921	8,911	1,869,274	51,202	1,920,476
(b) Unavailable Unfinished at Refineries	99,850	700	525	65,500	-	36,314	4,525	13,500	18,000	4,654	-	8,000	251,568	-	251,568
(c) In Refinery Lines and Refinery Operating Equipment	16,054	676	1,000	7,377	6,600	4,500	2,856	21,045	9,418	75	30	1,483	71,114	9,584	80,698
(d) One-Half of Average Size Water Cargo Receipt. (Total of each individual grade calculated separately.) (See explanation attached.)	1,493,776	14,467	7,071	170,089	59,540	40,009	-	16,899	15,114	5,831	-	-	1,822,796	33,962	1,856,758
(e) Other Unavailable Stocks. (Include Unavailable Unblended Finished.) (See explanation.)	47,766	2,053	16,752	182,654	17,763	56,000	479	28,097	1,000	-	-	16,772	369,336	21,427	390,763
(f) Pipe Line Fill	147,768	8,233	11,090	126,762	6,008	3,544	17,378	51,869	24,633	217,183	357	3,593	618,418	403	618,821
(g) Pipe Line Operating Requirements	116,952	5,011	69,500	406,533	62,000	66,870	20,940	70,223	30,000	56,000	-	19,578	923,607	-	923,607
(h) Unavailable In Transit by truck, tank car, barge or tanker from Domestic Sources (include only if you report these to B. of M.)	388,371	3,542	-	27,445	-	-	2,058	-	-	-	-	-	421,416	7,100	428,516
Total Unavailable Kerosine. (Sum of (a) to (h) above.)	3,271,968	82,347	141,012	1,204,888	188,690	253,978	93,479	495,150	236,688	319,684	1,308	58,337	6,347,529	123,678	6,471,207
Total Available Kerosine	5,049,010	395,258	231,218	2,286,635	226,956	563,263	187,975	2,392,217	1,052,310	485,852	2,951	165,216	13,038,861	201,812	13,240,673

NOTE: Figures should be shown in Barrels of 42 U. S. Gallons by location in Bureau of Mines refining districts and should include only those categories of stocks regularly reported to the Bureau. Include foreign oil actually in storage but not crude or products in transit from foreign sources.

	East Coast	Appalachian District		Indiana Illinois Kentucky	Minn., Wisc. No. Dak. and So. Dakota	Oklahoma Kansas Missouri	Texas Inland	Texas Gulf	Louisiana Gulf	Arkansas-Louisiana Inland	New Mexico	Other Rocky Mountain	U. S. Excluding West Coast	West Coast	Total U. S.
DISTILLATE FUEL OIL															
(Deal only with those inventories regularly reported on B. of M. Forms 6-1300; 6-1302 and 6-1303)															
1. Fill in here amount you reported to B. of M. as at Refineries, at Terminals, or in Pipe Lines or In Transit thereto as of March 31, 1957 on Forms 6-1300; 6-1302; 6-1303.	24,527,696	1,922,936	662,940	11,478,162	3,464,946	7,079,479	1,385,831	7,517,530	4,374,939	1,692,022	34,848	2,466,792	66,608,121	8,743,019	75,351,140
2. Memo: Total Capacity all tankage in Distillate Fuel Oil Service (Copy from Questionnaire #2).	72,360,362	4,468,840	1,379,521	25,939,759	8,737,471	14,757,975	2,455,996	17,804,687	7,766,781	2,771,216	106,278	4,277,936	162,826,822	19,707,436	182,534,258
3. Analysis of Unavailable Stocks included in Item 1 above:															
(a) Credit tank bottoms as you carry them in your own inventory statements	3,444,333	172,589	90,807	1,031,078	476,322	658,293	125,387	959,718	395,071	99,685	4,919	204,444	7,662,646	1,141,743	8,804,389
(b) Unavailable Unfinished at Refineries	116,144	10,000		235,025	20,000	202,515	11,000	38,500	-	-	-	21,375	654,559	202,000	856,559
(c) In Refinery Lines and Refinery Operating Equipment	30,952	712	1,773	44,783	5,745	19,546	4,785	59,996	20,737	3,500	15	8,661	201,205	207,341	408,546
(d) One-Half of Average Size Water Cargo Receipt. (Total of each individual grade calculated separately.) (See explanation attached.)	3,267,230	38,693	20,578	265,077	212,157	86,316	-	63,516	61,684	5,757	-	-	4,021,008	512,766	4,533,774
(e) Other Unavailable Stocks. (Include Unavailable Unblended Finished.) (See explanation.)	162,860	10,889	82,727	462,523	44,115	157,469	103,516	295,618	16,000	-	1,612	41,266	1,378,595	847,935	2,226,530
(f) Pipe Line Fill	462,828	88,891	379	446,408	159,229	1,226,785	103,578	7,683	74,460	332,036	10,022	298,771	3,211,070	60,237	3,271,307
(g) Pipe Line Operating Requirements	184,712	5,040	124,400	1,012,468	115,600	733,405	30,000	287,259	20,000	153,000	-	49,816	2,715,700	15,000	2,730,700
(h) Unavailable In Transit by truck, tank car, barge or tanker from Domestic Sources (include only if you report these to B. of M.)	2,418,036	45,267	10,003	68,699	-	-	10,973	6,000	64,716	-	-	-	2,623,694	325,256	2,948,950
Total Unavailable Distillate Fuel Oil. (Sum of (a) to (h) above.)	10,087,095	372,081	330,667	3,566,061	1,033,168	3,084,329	389,239	1,718,290	652,668	593,978	16,568	624,333	22,468,477	3,312,278	25,780,755
Total Available Distillate Fuel Oil	14,440,601	1,550,855	332,273	7,912,101	2,431,778	3,995,150	996,592	5,799,240	3,722,271	1,098,044	18,280	1,842,459	44,139,644	5,430,741	49,570,385
RESIDUAL FUEL OIL															
(Deal only with those inventories regularly reported on B. of M. Forms 6-1300; 6-1302 and 6-1303)															
1. Fill in here amount you reported to B. of M. as at Refineries, at Terminals, or in Pipe Lines or In Transit thereto as of March 31, 1957 on Forms 6-1300; 6-1302; 6-1303.	8,951,128	430,306	396,958	4,586,563	497,829	894,778	*1,588,420	5,030,871	1,336,362	113,634	23,510	836,140	24,686,499	12,077,694	36,764,193
2. Memo: Total Capacity all tankage in Residual Fuel Oil Service (Copy from Questionnaire #2).	20,349,341	970,699	703,274	8,220,385	996,099	2,579,299	1,143,245	10,849,993	2,582,192	344,451	52,577	1,533,318	50,324,873	46,526,766	96,851,639
3. Analysis of Unavailable Stocks included in Item 1 above:															
(a) Credit tank bottoms as you carry them in your own inventory statements	1,207,887	39,381	16,677	303,134	33,512	95,835	57,305	682,686	123,313	15,100	3,104	66,729	2,644,663	1,614,684	4,259,347
(b) Unavailable Unfinished at Refineries	148,022	2,940	-	293,676	-	8,355	8,019	422,884	-	-	-	18,975	902,871	462,114	1,364,985
(c) In Refinery Lines and Refinery Operating Equipment	52,351	671	80	15,065	870	21,013	17,050	27,309	9,551	-	20	6,684	150,664	231,537	382,201
(d) One-Half of Average Size Water Cargo Receipt. (Total of each individual grade calculated separately.) (See explanation attached.)	1,877,681	7,000	3,000	19,668	-	-	-	18,000	44,500	-	-	-	1,969,849	549,138	2,518,987
(e) Other Unavailable Stocks. (Include Unavailable Unblended Finished.) (See explanation.)	468,212	7,881	4,027	512,307	-	56,130	*1,224,019	134,916	30,985	-	1,000	72,934	2,512,411	1,951,327	4,463,738
(f) Pipe Line Fill	1,533	-	700	2,020	50	-	-	2,694	-	700	-	-	7,697	66,151	73,848
(g) Pipe Line Operating Requirements	238	-	20,000	135,200	1,800	-	-	5,000	-	-	-	-	162,238	140,100	302,338
(h) Unavailable In Transit by truck, tank car, barge or tanker from Domestic Sources (include only if you report these to B. of M.)	343,316	-	-	-	-	2,180	1,329	6,554	-	-	-	-	353,379	226,472	579,851
Total Unavailable Residual Fuel Oil. (Sum of (a) to (h) above.)	4,099,240	57,873	44,484	1,281,070	36,232	183,513	1,307,722	1,300,043	208,349	15,800	4,124	165,322	8,703,772	5,241,523	13,945,295
Total Available Residual Fuel Oil	4,851,888	372,433	352,474	3,305,493	461,597	711,265	280,698	3,730,828	1,128,013	97,834	19,386	670,818	15,982,727	6,836,171	22,818,898

*About 1,200,000 barrels of "pitch" held in reservoir storage, is included to conform with Bureau of Mines basis of reporting.

— Total Fixed Unavailable Stocks of Crude Oil, Gasoline, Kerosine, Distillate Fuel Oil and Residual Fuel Oil as of March 31, 1957, Covering East Coast, Indiana, Illinois, Kentucky and Minnesota, Wisconsin, North Dakota and South Dakota and West Coast Break-Up.

NOTE: Figures should be shown in Barrels of 42 U.S. Gallons by location in Bureau of Mines refining districts and should include only those categories of stocks regularly reported to the Bureau. Include foreign oil actually in storage but not crude or products in transit from foreign sources.

	(a) East Coast Col. 1 (Cols. 2, 3, 4)	New England Col. 2	(b) North Atlantic Col. 3	(c) South Atlantic Col. 4	(a) Ind., Ill., Kentucky, etc. Col. 5 (Cols. 6, 7, 8)	Kentucky-Tennessee Col. 6	(d) Portion of Ohio in District and Michigan Col. 7	Indiana Illinois Col. 8	(a) Minn., Wisc., No. Dak. and So. Dak. Col. 9 (Cols. 10, 11, 12)	Wisconsin Col. 10	Minnesota Col. 11	No. Dak. and So. Dak. Col. 12	Total in 5 Pacific Coast States Col. 13 (Col. 14, 15)	Washington and Oregon only Col. 14	Arizona California Nevada Col. 15
CRUDE OIL															
1. Fill in here amount of crude oil stocks you reported to B. of M. as of March 31, 1957 as at refineries or in transit thereto from domestic sources—Section 1, Form 6-1311.	17,655,360	760,272	16,325,927	569,161	8,925,568	1,012,320	2,252,882	5,660,366	742,795	23,920	342,680	376,195	11,010,951	751,900	10,259,051
(a) Of the above quantity, how much was unavailable—such as oil content of tank bottoms, in refinery pipe lines, and the minimum quantity required to assure continuous processing, handling and blending various grades of crude.	9,848,112	134,272	9,475,040	238,800	6,248,634	552,256	1,478,090	4,218,288	402,986	-	101,486	301,500	7,852,170	494,000	7,365,170
(b) As In Transit to refineries by truck, tank car, barge or tanker from Domestic Sources.	3,807,240	406,000	3,395,960	5,280	312,976	302,410	-	10,566	16,045	7,899	8,146	-	256,800	76,600	180,200
Total Unavailable Refinery (Sum of (a) and (b) above)	13,655,352	540,272	12,871,000	244,080	6,561,610	854,666	1,478,090	4,228,854	419,031	7,899	109,632	301,500	8,115,970	570,600	7,545,370
Total Available Refinery	4,000,008	220,000	3,454,927	325,081	2,363,958	157,654	774,792	1,431,512	323,764	16,021	233,048	74,695	2,894,981	181,300	2,713,681
2. Fill in here amount you reported to B. of M. as Pipe Line and Tank Farm Stocks of Crude. Section 2, Form 6-1311, as of March 31, 1957.	123,967	-	-	123,967	18,875,919	1,186,263	4,460,313	13,229,343	814,331	25,178	587,514	201,639	13,121,480	5,000	13,116,480
(a) Of the above quantity, how much was unavailable as pipe line fill.	1,042	-	-	1,042	5,600,176	65,164	917,729	4,617,283	527,642	5,000	324,536	198,106	1,952,699	5,000	1,947,699
(b) As minimum required in tankage to assure continuous operation of pipe lines (this should reflect the absolute minimum below which you would get into operating difficulties).	-	-	-	-	6,989,157	422,411	1,300,000	5,266,746	145,033	-	141,500	3,533	6,179,814	-	6,179,814
(c) Oil content of bottoms of tank farm tanks if you include same in your reports to the B. of M.	14,031	-	-	14,031	-	-	-	-	3,735	-	3,735	-	2,054,763	-	2,054,763
Total Unavailable Pipe Line-Tank Farm Crude Oil. (Sum of (a), (b) and (c) above)	15,073	-	-	15,073	12,589,333	487,575	2,217,729	9,884,029	676,410	5,000	469,771	201,639	10,187,276	5,000	10,182,276
Total Available Pipe Line-Tank Farm	108,894	-	-	108,894	6,286,586	698,688	2,242,584	3,345,314	137,921	20,178	117,743	-	2,934,204	-	2,934,204

NOTE: For the purpose of this survey Producers' Lease Stocks, Section 3, Form 6-1311 will be considered as completely unavailable.

(a) Figures entered here should check those reported on Form #1; (b) For this survey North Atlantic states are the portions of New York and Pennsylvania that are in the East Coast Refinery District, New Jersey, Delaware, Maryland and District of Columbia; (c) South Atlantic are Virginia, North and South Carolina, Georgia and Florida; (d) Only a portion of the State of Ohio is in the Indiana, Illinois, Kentucky refining district.

GASOLINE

(Deal only with those inventories regularly reported on B. of M. Forms 6-1300; 6-1302 and 6-1303)

1. Fill in here amount you reported to B. of M. as at Refineries, at Terminals, or in Pipe Lines or In Transit thereto as of March 31, 1957 on Forms 6-1300; 6-1302; 6-1303.	42,223,932	5,571,495	23,714,577	12,937,860	36,673,716	3,281,406	10,329,934	23,062,376	7,122,176	1,349,756	3,629,272	2,143,148	27,067,475	3,936,797	23,130,678
2. Memo: Total Capacity all tankage in Gasoline Service (Copy from Questionnaire #2).	72,467,021	8,965,994	42,236,456	21,264,571	59,885,939	5,205,637	17,141,342	37,538,960	12,052,286	3,689,792	5,519,422	2,843,072	49,582,561	6,187,469	43,395,092
3. Analysis of Unavailable Stocks included in Item 1 above:															
(a) Credit tank bottoms as you carry them in your own inventory statements	3,786,232	499,400	2,368,083	918,749	2,689,732	208,746	746,343	1,734,643	363,894	75,350	218,247	70,297	3,362,273	438,940	2,923,333
(b) Unavailable Unfinished at Refineries	1,443,432	4,702	1,293,730	145,000	2,064,950	23,926	329,000	1,712,024	47,549	-	4,000	43,549	2,328,126	40,460	2,287,666
(c) In Refinery Lines and Refinery Operating Equipment	54,274	4,252	43,144	6,878	76,626	4,191	11,174	61,261	15,745	-	645	15,100	872,156	97,847	774,309
(d) One-Half of Average Size Water Cargo Receipt. (Total of each individual grade calculated separately.) (See explanation attached.)	5,544,389	1,108,733	1,638,402	2,797,254	796,458	338,422	227,420	231,616	343,181	248,045	95,136	-	905,769	350,264	555,505
(e) Other Unavailable Stocks. (Include Filter House Naphtha and Unavailable Unblended Finished.) (See explanation.)	904,278	234	594,044	310,000	2,682,943	87,626	436,807	2,158,510	109,541	3,776	3,145	102,620	2,997,269	319,272	2,677,997
(f) Pipe Line Fill	1,590,601	40,870	1,035,643	514,088	1,760,680	35,891	615,857	1,108,932	624,835	34,107	420,540	170,188	352,696	72,941	279,755
(g) Pipe Line Operating Requirements	472,564	46,350	313,074	113,140	2,451,630	52,000	603,300	1,796,330	377,300	-	-	377,300	30,000	-	30,000
(h) Unavailable In Transit by truck, tank car, barge or tanker from Domestic Sources (include only if you report these to B. of M.)	3,642,129	869,844	1,305,055	1,467,230	572,449	385,331	99,251	86,867	-	-	-	-	533,364	326,608	206,756
Total Unavailable Gasoline. (Sum of (a) to (h) above.)	17,437,899	2,574,385	8,591,175	6,272,339	13,095,468	1,136,133	3,069,152	8,890,183	1,882,045	361,278	741,713	779,054	11,381,653	1,646,332	9,735,321
Total Available Gasoline	24,786,033	2,997,110	15,123,402	6,665,521	23,578,248	2,145,273	7,260,782	14,172,193	5,240,131	988,478	2,887,559	1,364,094	15,685,822	2,290,465	13,395,357

KEROSINE

(Deal only with those inventories regularly reported on B. of M. Forms 6-1300; 6-1302 and 6-1303)

1. Fill in here amount you reported to B. of M. as at Refineries, at Terminals, or in Pipe Lines or In Transit thereto as of March 31, 1957 on Forms 6-1300; 6-1302; 6-1303.	8,320,978	1,774,379	3,309,239	3,237,360	3,491,523	515,700	1,019,952	1,955,871	415,646	92,025	192,687	130,934	325,490	57,723	267,767
2. Memo: Total Capacity all tankage in Kerosine Service (Copy from Questionnaire #2).	20,585,230	4,369,202	8,692,287	7,523,741	8,361,602	1,157,044	3,428,913	3,775,645	1,914,060	675,827	763,648	474,585	784,255	111,151	673,104
3. Analysis of Unavailable Stocks included in Item 1 above:															
(a) Credit tank bottoms as you carry them in your own inventory statements	961,431	211,511	465,744	284,176	218,528	39,157	64,149	115,222	36,779	12,019	24,647	113	51,202	5,937	45,265
(b) Unavailable Unfinished at Refineries	99,850	2,000	97,850	-	65,500	-	22,000	43,500	-	-	-	-	-	-	-
(c) In Refinery Lines and Refinery Operating Equipment	16,054	2,000	11,665	2,389	7,377	1,137	-	6,240	6,600	-	600	6,000	9,584	-	9,584
(d) One-Half of Average Size Water Cargo Receipt. (Total of each individual grade calculated separately.) (See explanation attached.)	1,493,776	413,535	389,046	691,195	170,089	66,083	34,417	69,589	59,540	38,540	21,000	-	33,962	20,576	13,386
(e) Other Unavailable Stocks. (Include Unavailable Unblended Finished.) (See explanation.)	47,766	-	47,766	-	182,654	15,923	10,246	156,485	17,763	63	700	17,000	21,427	-	21,427
(f) Pipe Line Fill	147,768	11,322	62,484	73,962	126,762	383	54,701	71,678	6,008	-	3,032	2,976	403	-	403
(g) Pipe Line Operating Requirements	116,952	11,637	54,001	51,314	406,533	9,000	128,500	269,033	62,000	-	-	62,000	-	-	-
(h) Unavailable In Transit by truck, tank car, barge or tanker from Domestic Sources (include only if you report these to B. of M.)	388,371	146,926	124,998	116,447	27,445	26,145	1,300	-	-	-	-	-	7,100	2,000	5,100
Total Unavailable Kerosine. (Sum of (a) to (h) above.)	3,271,968	798,931	1,253,554	1,219,483	1,204,888	157,828	315,313	731,747	188,690	50,622	49,979	88,089	123,678	28,513	95,165
Total Available Kerosine	5,049,010	975,448	2,055,685	2,017,877	2,286,635	357,872	704,639	1,224,124	226,956	41,403	142,708	42,845	201,812	29,210	172,602

— Total Fixed Unavailable Stocks of Crude Oil, Gasoline, Kerosine, Distillate Fuel Oil and Residual Fuel Oil as of March 31, 1957, Covering East Coast, Indiana, Illinois, Kentucky and Minnesota, Wisconsin, North Dakota and South Dakota and West Coast Break-up.

NOTE: Figures should be shown in Barrels of 42 U. S. Gallons by location in Bureau of Mines refining districts and should include only those categories of stocks regularly reported to the Bureau. Include foreign oil actually in storage but not crude or products in transit from foreign sources.

	(a) East Coast Col. 1 (Cols. 2, 3, 4)	New England Col. 2	(b) North Atlantic Col. 3	(c) South Atlantic Col. 4	(a) Ind., Ill., Kentucky, etc. Col. 5 (Cols. 6, 7, 8)	Kentucky-Tennessee Col. 6	(d) Portion of Ohio in District and Michigan Col. 7	Indiana Illinois Col. 8	(a) Minn., Wisc., No. Dak. and So. Dak. Col. 9 (Cols. 10, 11, 12)	Wisconsin Col. 10	Minnesota Col. 11	No. Dak. and So. Dak. Col. 12	Total in 5 Pacific Coast States Col. 13 (Col. 14, 15)	Washington and Oregon only Col. 14	Arizona California Nevada Col. 15
DISTILLATE FUEL OIL															
(Deal only with those inventories regularly reported on B. of M. Forms 6-1300; 6-1302 and 6-1303)															
1. Fill in here amount you reported to B. of M. as at Refineries, at Terminals, or in Pipe Lines or In Transit thereto as of March 31, 1957 on Forms 6-1300; 6-1302; 6-1303.	24,527,696	5,690,490	14,493,483	4,343,723	11,478,162	968,422	3,516,755	6,992,985	3,464,946	1,159,774	1,587,594	717,578	8,743,019	3,345,462	5,397,557
2. Memo: Total Capacity all tankage in Distillate Fuel Oil Service (Copy from Questionnaire #2).	72,360,362	14,497,756	48,345,561	9,517,045	25,939,759	1,977,028	8,442,763	15,519,968	8,737,471	2,945,930	4,376,751	1,414,790	19,707,436	5,558,115	14,149,321
3. Analysis of Unavailable Stocks included in Item 1 above:															
(a) Credit tank bottoms as you carry them in your own inventory statements	3,444,333	690,096	2,376,128	378,109	1,031,078	78,475	367,729	584,874	476,322	206,379	212,400	57,543	1,141,743	319,438	822,305
(b) Unavailable Unfinished at Refineries	116,144	4,194	111,950	-	235,025	25	-	235,000	20,000	-	-	20,000	202,000	30,000	172,000
(c) In Refinery Lines and Refinery Operating Equipment	30,952	1,192	28,877	883	44,783	2,390	2,436	39,957	5,745	-	645	5,100	207,341	19,036	188,305
(d) One-Half of Average Size Water Cargo Receipt. (Total of each individual grade calculated separately.) (See explanation attached.)	3,267,230	1,057,093	1,388,125	822,012	265,077	84,827	96,424	83,826	212,157	165,444	46,713	-	512,766	315,491	197,275
(e) Other Unavailable Stocks. (Include Unavailable Unblended Finished.) (See explanation.)	162,860	1,742	103,118	58,000	462,523	35,575	74,832	352,116	44,115	3,109	1,006	40,000	847,935	217,982	629,953
(f) Pipe Line Fill	462,828	25,928	297,166	139,734	446,408	555	123,767	322,086	159,229	1,271	153,040	4,918	60,237	37,202	23,035
(g) Pipe Line Operating Requirements	184,712	61,556	67,936	55,220	1,012,468	4,000	170,500	837,968	115,600	-	-	115,600	15,000	-	15,000
(h) Unavailable In Transit by truck, tank car, barge or tanker from Domestic Sources (include only if you report these to B. of M.)	2,418,036	807,417	1,251,301	359,318	68,699	57,699	10,000	1,000	-	-	-	-	325,256	223,342	101,914
Total Unavailable Distillate Fuel Oil. (Sum of (a) to (h) above.)	10,087,095	2,649,218	5,624,601	1,813,276	3,566,061	263,546	845,688	2,456,827	1,033,168	376,203	413,804	243,161	3,312,278	1,162,491	2,149,787
Total Available Distillate Fuel Oil	14,440,601	3,041,272	8,868,882	2,530,447	7,912,101	704,876	2,671,067	4,536,158	2,431,778	783,571	1,173,790	474,417	5,430,741	2,182,971	3,247,770
RESIDUAL FUEL OIL															
(Deal only with those inventories regularly reported on B. of M. Forms 6-1300; 6-1302 and 6-1303)															
1. Fill in here amount you reported to B. of M. as at Refineries, at Terminals, or in Pipe Lines or In Transit thereto as of March 31, 1957 on Forms 6-1300; 6-1302; 6-1303.	8,951,128	1,241,010	5,979,220	1,730,898	4,586,563	276,665	1,597,900	2,711,998	497,829	182,183	253,194	62,452	12,077,694	1,883,725	10,193,969
2. Memo: Total Capacity all tankage in Residual Fuel Oil Service (Copy from Questionnaire #2).	20,349,341	2,322,338	13,012,106	5,014,897	8,220,385	570,773	2,206,776	5,442,836	996,099	313,256	615,739	67,104	46,526,766	3,225,350	43,301,416
3. Analysis of Unavailable Stocks included in Item 1 above:															
(a) Credit tank bottoms as you carry them in your own inventory statements	1,207,887	155,938	801,678	250,271	303,134	18,573	88,927	195,634	33,512	4,000	27,962	1,550	1,614,684	227,221	1,387,463
(b) Unavailable Unfinished at Refineries	148,022	-	148,022	-	293,676	-	-	293,676	-	-	-	-	462,114	22,114	440,000
(c) In Refinery Lines and Refinery Operating Equipment	52,351	2,304	33,866	16,181	15,065	100	2,790	12,172	870	-	720	150	231,537	11,290	220,247
(d) One-Half of Average Size Water Cargo Receipt. (Total of each individual grade calculated separately.) (See explanation attached.)	1,877,681	434,796	677,664	765,221	19,668	7,000	-	12,668	-	-	-	-	549,138	312,312	236,826
(e) Other Unavailable Stocks. (Include Unavailable Unblended Finished.) (See explanation.)	468,212	20,050	442,868	5,294	512,307	5,914	29,017	477,376	-	-	-	-	1,951,327	98,200	1,853,127
(f) Pipe Line Fill	1,533	-	1,275	258	2,020	-	2,020	-	50	-	-	50	66,151	-	66,151
(g) Pipe Line Operating Requirements	238	-	44	194	135,200	-	200	135,000	1,800	-	-	1,800	140,100	-	140,100
(h) Unavailable In Transit by truck, tank car, barge or tanker from Domestic Sources (include only if you report these to B. of M.)	343,316	105,000	210,381	27,935	-	-	-	-	-	-	-	-	226,472	85,200	141,272
Total Unavailable Residual Fuel Oil. (Sum of (a) to (h) above.)	4,099,240	718,088	2,315,798	1,065,354	1,281,070	31,587	122,954	1,126,529	36,232	4,000	28,682	3,550	5,241,523	756,337	4,485,186
Total Available Residual Fuel Oil	4,851,888	522,922	3,663,422	665,544	3,305,493	245,078	1,474,946	1,585,469	461,597	178,183	224,512	58,902	6,836,171	1,127,388	5,708,783

NOTE: Express figures in Barrels of 42 U. S. Gallons by Bureau of Mines refining districts and report all tankage available for storing Crude Oil, Gasoline, Kerosine, Distillate Fuel Oil and Residual Fuel Oil, as shown below, but deal only with the tankage that is located at the points (Refineries, Pipe Lines, Tank Farms and Terminals) included in the stock figures you regularly report to the Bureau of Mines on Forms 6-1311 Crude (except Producers' Lease Stocks), and Product Forms 6-1300, 6-1302 and 6-1303. Do not include tankage at bulk plants, service stations, etc., the inventories in which you do not report to the Bureau.

	East Coast	Appalachian		Indiana Illinois Kentucky	Minn., Wisc. No. Dak. and So. Dakota	Oklahoma Kansas Missouri	Texas Inland	Texas Gulf	Louisiana Gulf	Arkansas-Louisiana Inland	New Mexico	Other Rocky Mountain	U. S. Excluding West Coast	West Coast	Total U. S.
		District I	District II												
CRUDE OIL TANKAGE															
1. Capacity of Tankage at Refineries—Section 1 Form 6-1311—March 31, 1957	27,982,757	971,250	161,552	14,062,995	1,469,816	8,707,334	2,461,919	24,788,524	8,469,013	1,186,500	242,866	3,631,682	94,136,208	21,508,295	115,644,503
2. Capacity of Tankage along Pipe Lines and on Tank Farms—Section 2 Form 6-1311	860,050	4,359,361	1,577,900	28,078,698	570,423	54,424,346	75,219,409	54,309,060	10,621,578	4,972,934	2,427,169	17,165,466	254,586,394	43,718,578	298,304,972
3. Capacity of Tankage at Bulk Terminals—(Not bulk plants)	-	-	-	-	-	-	-	-	-	-	-	-	-	1,472,299	1,472,299
4. Total Crude Oil Tankage Capacity (1), (2) and (3) above	28,842,807	5,330,611	1,739,452	42,141,693	2,040,239	63,131,680	77,681,328	79,097,584	19,090,591	6,159,434	2,670,035	20,797,148	348,722,602	(a) 66,699,172	(a) 415,421,774
NOTE: Do not report tankage involved in Producers' (Lease) Stocks—Section 3 Form 6-1311.	(a) Includes about 8,900,000 barrels of reservoir storage in West Coast.														
GASOLINE															
(Deal only with the tankage at the locations of inventories you regularly report to the Bureau of Mines)															
1. Capacity of Tankage at Refineries—Form 6-1300—March 31, 1957	22,961,246	2,488,439	1,329,907	35,823,463	2,881,257	17,938,088	8,028,738	41,673,156	14,361,800	1,421,925	258,369	8,510,202	157,676,590	33,532,366	191,208,956
2. Capacity of Tankage along Pipe Lines and on Tank Farms (if any)—Form 6-1303	4,589,014	48,000	1,145,969	9,885,178	1,941,611	5,419,546	951,867	2,044,581	1,563,441	3,600,387	-	804,000	31,993,594	6,741,542	38,735,136
3. Capacity of Tankage at Bulk Terminals—Form 6-1302	44,916,761	5,565,016	2,722,503	14,177,298	7,229,418	6,104,866	3,652,375	1,829,166	2,306,568	2,228,090	118,927	1,309,200	92,160,188	9,308,653	101,468,841
4. Total Gasoline Tankage Capacity—(1), (2) and (3) above	72,467,021	8,101,455	5,198,379	59,885,939	12,052,286	29,462,500	12,632,980	45,546,903	18,231,809	7,250,402	377,296	10,623,402	281,830,372	49,582,561	331,412,933
KEROSINE															
(Deal only with the tankage at the locations of inventories you regularly report to the Bureau of Mines)															
1. Capacity of Tankage at Refineries—Form 6-1300—March 31, 1957	3,556,792	272,424	122,645	4,266,865	443,897	953,547	578,641	4,878,227	2,068,502	378,350	11,762	344,768	17,876,420	607,904	18,484,324
2. Capacity of Tankage along Pipe Lines and on Tank Farms (if any)—Form 6-1303	978,241	38,000	212,176	1,613,614	391,897	346,319	220,909	302,296	540,169	326,605	-	15,500	4,985,726	-	4,985,726
3. Capacity of Tankage at Bulk Terminals—Form 6-1302	16,050,197	795,311	319,124	2,481,123	1,078,266	530,294	233,735	56,457	266,148	364,366	900	45,800	22,221,721	176,351	22,398,072
4. Total Kerosine Tankage Capacity—(1), (2) and (3) above	20,585,230	1,105,735	653,945	8,361,602	1,914,060	1,830,160	1,033,285	5,236,980	2,874,819	1,069,321	12,662	406,068	45,083,867	784,255	45,868,122
DISTILLATE FUEL OIL															
(Deal only with the tankage at the locations of inventories you regularly report to the Bureau of Mines)															
1. Capacity of Tankage at Refineries—Form 6-1300—March 31, 1957	22,797,900	973,769	400,847	13,485,325	1,204,990	8,196,050	1,710,774	17,008,071	6,272,277	688,184	68,161	3,283,336	76,089,684	12,006,965	88,096,649
2. Capacity of Tankage along Pipe Lines and on Tank Farms (if any)—Form 6-1303	2,717,509	77,000	328,754	4,653,927	1,311,902	2,693,195	275,487	535,898	703,643	1,627,319	-	339,000	15,263,634	1,788,938	17,052,572
3. Capacity of Tankage at Bulk Terminals—Form 6-1302	46,844,953	3,418,071	649,920	7,800,507	6,220,579	3,868,730	469,735	260,718	790,861	455,713	38,117	655,600	71,473,504	5,911,533	77,385,037
4. Total Distillate Fuel Oil Tankage Capacity—(1), (2) and (3) above	(a) 72,360,362	4,468,840	1,379,521	25,939,759	8,737,471	14,757,975	2,455,996	17,804,687	7,766,781	2,771,216	106,278	4,277,936	(a) 162,826,822	19,707,436	(a) 182,534,258
(a) Includes about 1,000,000 barrels of slate pit storage in East Coast district															
RESIDUAL FUEL OIL															
(Deal only with the tankage at the locations of inventories you regularly report to the Bureau of Mines)															
1. Capacity of Tankage at Refineries—Form 6-1300—March 31, 1957	11,102,091	638,699	562,674	7,654,385	734,410	2,579,299	1,143,245	10,468,790	2,141,192	288,451	52,577	1,533,318	38,899,131	26,658,158	65,557,289
2. Capacity of Tankage along Pipe Lines and on Tank Farms (if any)—Form 6-1303	50	-	-	212,327	1,550	-	-	-	-	-	-	-	213,927	16,106,474	16,320,401
3. Capacity of Tankage at Bulk Terminals—Form 6-1302	9,247,200	332,000	140,600	353,673	260,139	-	-	381,203	441,000	56,000	-	-	11,211,815	3,762,134	14,973,949
4. Total Residual Fuel Oil Tankage Capacity—(1), (2) and (3) above	20,349,341	970,699	703,274	8,220,385	996,099	2,579,299	1,143,245	10,849,993	2,582,192	(a) 344,451	52,577	1,533,318	(a) 50,324,873	(b) 46,526,766	(a,b) 96,851,639
(a) Includes about 50,000 barrels of reservoir storage in Arkansas-Louisiana Inland district. (b) Includes about 28,700,000 barrels of reservoir storage in West Coast.															

Questionnaire Form #2 (a)

— Capacity of Crude Oil, Gasoline, Kerosine, Distillate Fuel Oil and Residual Fuel Oil Tankage as of March 31, 1957, Covering East Coast, Indiana, Illinois, Kentucky and Minnesota, Wisconsin, North Dakota and South Dakota, and West Coast Break-Up.

NOTE: Express figures in Barrels of 42 U. S. Gallons by Bureau of Mines refining districts and report all tankage available for storing Crude Oil, Gasoline, Kerosine, Distillate Fuel Oil and Residual Fuel Oil, as shown below, but deal only with the tankage that is located at the points (Refineries, Pipe Lines, Tank Farms and Terminals) included in the stock figures you regularly report to the Bureau of Mines on Forms 6-1311 Crude (except Producers' Lease Stocks), and Product Forms 6-1300, 6-1302 and 6-1303. Do not include tankage at bulk plants, service stations, etc., the inventories in which you do not report to the Bureau.

	(a) East Coast Col. 1 (Cols. 2, 3, 4)	New England Col. 2	(b) North Atlantic Col. 3	(c) South Atlantic Col. 4	(a) Ind., Ill., Kentucky, etc. Col. 5 (Cols. 6, 7, 8)	Kentucky- Tennessee Col. 6	(d) Portion of Ohio in District and Michigan Col. 7	Indiana Illinois Col. 8	(a) Minn., Wis., No. Dak. and So. Dak. Col. 9 (Cols. 10, 11, 12)	Wisconsin Col. 10	Minnesota Col. 11	No. Dak. and So. Dak. Col. 12	Total in 5 Pacific Coast States Col. 13 (Col. 14, 15)	Washington and Oregon only Col. 14	Arizona California Nevada Col. 15
CRUDE OIL TANKAGE															
1. Capacity of Tankage at Refineries—Section 1 Form 6-1311—March 31, 1957	27,982,757	1,204,968	25,570,739	1,207,050	14,062,995	1,000,197	3,054,532	10,008,266	1,469,816	20,000	915,518	534,298	21,508,295	1,565,852	19,942,443
2. Capacity of Tankage along Pipe Lines and on Tank Farms—Section 2 Form 6-1311	860,050	-	735,000	125,050	28,078,698	1,831,058	7,346,838	18,900,802	570,423	-	547,923	22,500	43,718,578	-	43,718,578
3. Capacity of Tankage at Bulk Terminals—(Not bulk plants)													1,472,299	-	1,472,299
4. Total Crude Oil Tankage Capacity (1), (2) and (3) above	28,842,807	1,204,968	26,305,739	1,332,100	42,141,693	2,831,255	10,401,370	28,909,068	2,040,239	20,000	1,463,441	556,798	66,699,172	1,565,852	65,133,320
NOTE: Do not report tankage involved in Producers' (Lease) Stocks—Section 3 Form 6-1311.	(a) Figures entered here should check those reported on Form #1; (b) For this survey North Atlantic states are the portions of New York and Pennsylvania that are in the East Coast Refinery District, New Jersey, Delaware, Maryland and District of Columbia; (c) South Atlantic are Virginia, North and South Carolina, Georgia and Florida; (d) Only a portion of the State of Ohio is in the Indiana, Illinois, Kentucky refining district. (e) Includes about 8,900,000 barrels of reservoir storage in West Coast.														
GASOLINE															
(Deal only with the tankage at the locations of inventories you regularly report to the Bureau of Mines)															
1. Capacity of Tankage at Refineries—Form 6-1300—March 31, 1957	22,961,246	608,000	20,777,246	1,576,000	35,823,463	966,916	7,961,719	26,894,828	2,881,257	37,608	1,338,534	1,505,115	33,532,366	1,265,080	32,267,286
2. Capacity of Tankage along Pipe Lines and on Tank Farms (if any)—Form 6-1303	4,589,014	186,900	3,261,714	1,140,400	9,885,178	245,600	2,869,679	6,769,899	1,941,611	390,500	1,103,454	447,657	6,741,542	-	6,741,542
3. Capacity of Tankage at Bulk Terminals—Form 6-1302	44,916,761	8,171,094	18,197,496	18,548,171	14,177,298	3,993,121	6,309,944	3,874,233	7,229,418	3,261,684	3,076,634	891,100	9,308,653	4,922,389	4,386,264
4. Total Gasoline Tankage Capacity—(1), (2) and (3) above	72,467,021	8,965,994	42,236,456	21,264,571	59,885,939	5,205,637	17,141,342	37,538,960	12,052,286	3,689,792	5,518,622	2,843,872	49,582,561	6,187,469	43,395,092
KEROSINE															
(Deal only with the tankage at the locations of inventories you regularly report to the Bureau of Mines)															
1. Capacity of Tankage at Refineries—Form 6-1300—March 31, 1957	3,556,792	83,000	3,366,792	107,000	4,266,865	187,837	1,801,136	2,277,892	443,897	18,000	87,897	338,000	607,904	-	607,904
2. Capacity of Tankage along Pipe Lines and on Tank Farms (if any)—Form 6-1303	978,241	29,200	301,041	648,000	1,613,614	113,200	670,892	829,522	391,897	-	260,312	131,585	-	-	-
3. Capacity of Tankage at Bulk Terminals—Form 6-1302	16,050,197	4,257,002	5,024,454	6,768,741	2,481,123	856,007	946,189	678,927	1,078,266	657,827	415,439	5,000	176,351	111,151	65,200
4. Total Kerosine Tankage Capacity—(1), (2) and (3) above	20,585,230	4,369,202	8,692,287	7,523,741	8,361,602	1,157,044	3,418,217	3,786,341	1,914,060	675,827	763,648	474,585	784,255	111,151	673,104
DISTILLATE FUEL OIL															
(Deal only with the tankage at the locations of inventories you regularly report to the Bureau of Mines)															
1. Capacity of Tankage at Refineries—Form 6-1300—March 31, 1957	22,797,900	362,950	21,238,450	1,196,500	13,485,325	451,755	4,281,246	8,752,324	1,204,990	36,000	769,952	399,038	12,006,965	838,487	11,168,478
2. Capacity of Tankage along Pipe Lines and on Tank Farms (if any)—Form 6-1303	2,717,509	331,800	1,596,259	789,450	4,653,927	135,400	1,080,884	3,437,643	1,311,902	330,000	676,350	305,552	1,788,938	-	1,788,938
3. Capacity of Tankage at Bulk Terminals—Form 6-1302	46,844,953	13,803,006	25,510,852	7,531,095	7,800,507	1,389,873	3,080,633	3,330,001	6,220,579	2,579,930	2,930,449	710,200	5,911,533	4,719,628	1,191,905
4. Total Distillate Fuel Oil Tankage Capacity—(1), (2) and (3) above	72,360,362	14,497,756	48,345,561	9,517,045	25,939,759	1,977,028	8,442,763	15,519,968	8,737,471	2,945,930	4,376,751	1,414,790	19,707,436	5,558,115	14,149,321
	(a) Includes about 1,000,000 barrels of slate pit storage.														
RESIDUAL FUEL OIL															
(Deal only with the tankage at the locations of inventories you regularly report to the Bureau of Mines)															
1. Capacity of Tankage at Refineries—Form 6-1300—March 31, 1957	11,102,091	411,450	10,192,691	497,950	7,654,385	293,080	2,130,796	5,230,509	734,410	185,256	483,600	65,554	26,658,158	525,931	26,132,227
2. Capacity of Tankage along Pipe Lines and on Tank Farms (if any)—Form 6-1303	50	-	-	50	212,327	-	-	212,327	1,550	-	-	1,550	16,106,474	-	16,106,474
3. Capacity of Tankage at Bulk Terminals—Form 6-1302	9,247,200	1,910,888	2,819,415	4,516,897	353,673	277,693	75,980	-	260,139	128,000	132,139	-	3,762,134	2,699,419	1,062,715
4. Total Residual Fuel Oil Tankage Capacity—(1), (2) and (3) above	20,349,341	2,322,338	13,012,106	5,014,897	8,220,385	570,773	2,206,776	5,442,836	996,099	313,256	615,739	67,104	46,526,766	3,225,350	43,301,416
	(a) Includes about 28,700,000 barrels of reservoir storage in West Coast.														