

THE PETROLEUM GEOGRAPHY OF THE PORT OF NEW YORK

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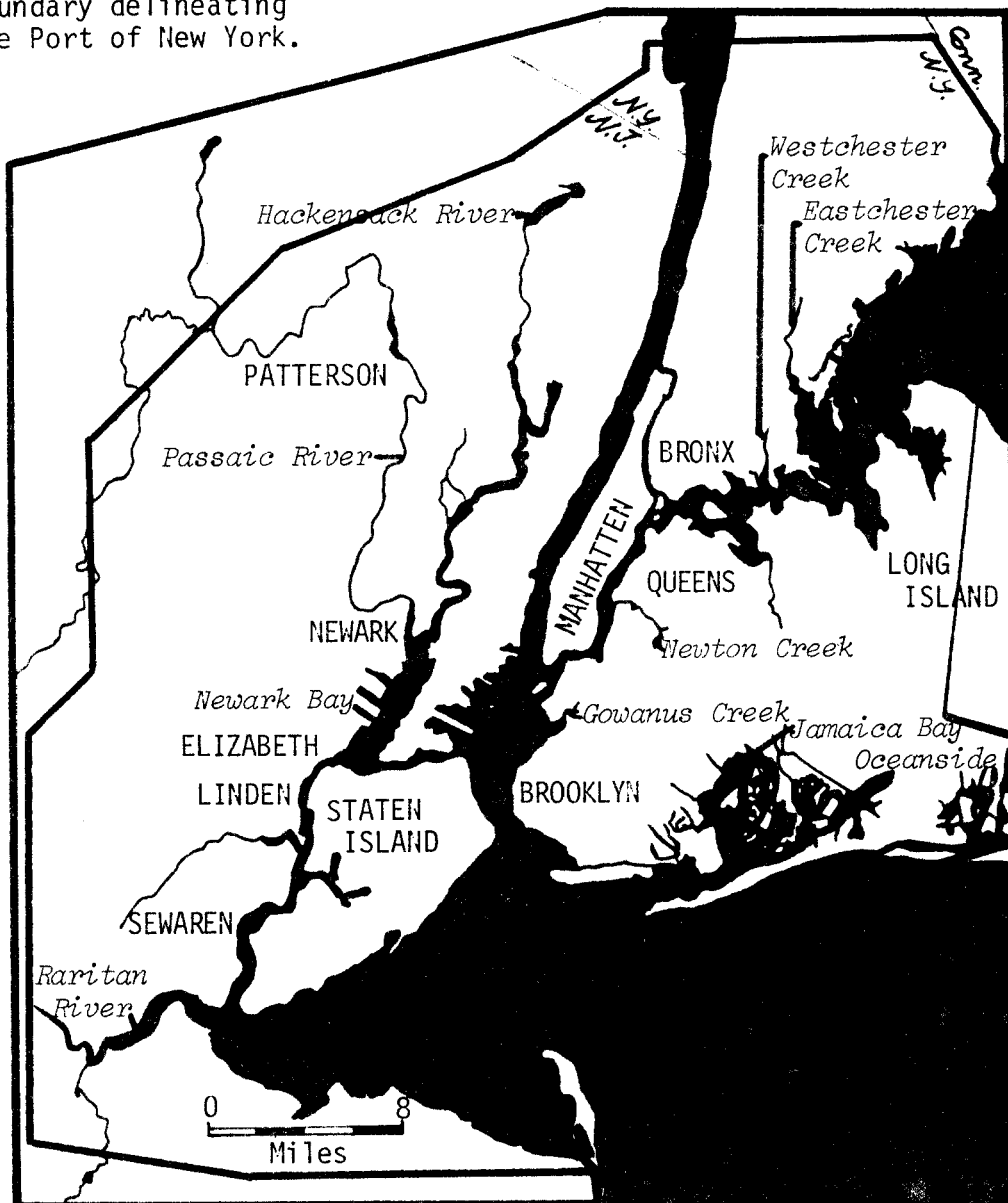
THE PETROLEUM GEOGRAPHY OF THE PORT OF NEW YORK.

The Port of New York is a bi-state geographic region defined according to Schedule D of the Department of Commerce's foreign trade classification of U.S. Customs Districts as the New York Customs District. The Port of New York is situated at the mouth of the Hudson River, lying partly within the territorial jurisdiction of the State of New Jersey and the State of New York. The latitude/longitude coordinates of the port are approximately centered on 40° 42' North, 74° 08' West. The port district embraces the City of New York, Newark, and the numerous contiguous waterfront municipalities. The area of the port is approximately 2,103.3 square miles. For someone approaching the Port of New York for the first time by sea, the United States Coast Guard's guide for mariners on U.S. ports and harbors and their approaches gives a simple but accurate geographic description of how the port will first appear. "The approach to New York Harbor from seaward is generally along the south coast of Long Island or the east coast of New Jersey, although the harbor is easily approached from any direction between east and south. During the approach, the south shore of Long Island will be seen to northward and the low sandy beaches of the New Jersey shore will be observed to westward. The Long Island shore is readily identified by sandy hillocks and thickly settled beach communities, whereas the New Jersey shore is characterized by long sandy stretches and many summer resort settlements. The five most prominent landmarks, which can be seen for a long distance at sea, are the twin towers of the World Trade Center, Fire Island Light and a tower at Jones Beach on the Long Island shore, and Sandy Hook Light and the towers of the abandoned Navesink Lighthouse at the north end of the New Jersey coast. When nearing the Lower Bay of New York Harbor, Ambrose Light will be seen; it marks the entrance to Ambrose Channel which is the principal deepwater passage through the Lower Bay." Benn's Ports of the World gives the following synoptic description of

the port: "A spacious landlocked harbour, entered from the 25.5 km. long Ambrose Channel (609.6 m. wide and 13.71 m. deep at M.L.W.), Sandy Hook Channel (243.8 m. wide and 10.67 m. deep at M.L.W.), and the East River (47.24 m. to 304.8 m. wide and 10.67 m. deep at M.L.W.)¹ from the Long Island Sound. Other channels range in depth from 3.66 to 12.19 m. at M.L.W., mean tidal range 1.43 m." Figure 1 below

Figure 1. The Port of New York

The red line is the boundary delineating the Port of New York.



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¹ - 609.6 meters is equivalent to 1,999.97 feet; 13.71 meters is equivalent to 44.97 feet; 243.8 meters is equivalent to 799.85 feet; 10.67 meters is equivalent to 35 feet; 47.24 meters is equivalent to 154.98 feet; 304.8 meters is equivalent to 999.98 feet; and 25.5 kilometers is equivalent to 15.84 miles.

depicts the actual boundaries of the Port of New York; what is encompassed by the port, as well as the adjacent geography.

The Port of New York is the principal foreign trade center of the United States serving as the gateway for oceanborne exports and imports since the early 19th century. It alone accounts for the largest share² of waterborne commerce in the United States. This is all due to its ideal natural and well-protected harbor; its network of navigable inland waterways; its moderate tidal changes; and its nearness to the seas and markets abroad.

The Port of New York is governed by an organization called the Port Authority that was created under an act called the Port Compact of 1921. The Port Authority was created by the two states for the purposes of fostering development of transportation facilities, promoting commerce, and protecting commerce. A commission of twelve individuals, six appointed by the governor of New Jersey and six appointed by the governor of New York, spearhead the Port Authority.

A three-part Port Commerce Program dealing with the aspects of port promotion, traffic management, and trade development has been instituted to help enhance the port. The Port Promotion Division prepares and distributes literature, maps, films, directories, and exhibits calling attention to the advantages of shipping via the Port of New York. An integral function of the Traffic Management Division is to protect the shipper against discriminatory transportation rates and practices. Nine Trade Development Offices in the United States and abroad have been established to furnish a wide range of services to shippers and others engaged in international trade. These Port of New York Trade Development Offices are located in New York, Chicago, Cleveland, Pittsburgh, Washington, London, Zurich, San Juan, and Tokyo. The World Trade Center, which serves as a clearinghouse for handling, developing, and expanding international commerce was built by the Port Authority in the early nineteenseventies to facilitate access and usage of the port. More will be said later about the World Trade Center. As the scope of this report is to elaborate on the petroleum commerce of the port, all the following information deals only with

2 - *The Port of New York's share of waterborne commerce for 1976 was 13.8% which was the single largest portion. New Orleans was second with a 12% share.*

those facts and figures pertinent to the subject.

A total of 132 petroleum-using facilities rely on marine transportation within the Port of New York. Of the 132 petroleum-using facilities; 5 are refineries, 90 are terminals, 18 are industrial plants, and 19 are power plants. The list that follows names all the facilities under the appropriate heading.

Refineries: CHEVRON (STANDARD OIL of CALIFORNIA), Perth Amboy, New Jersey
AMARADA HESS CORPORATION, Perth Amboy, New Jersey
SHELL OIL COMPANY, Sewaren, New Jersey
AMARADA HESS CORPORATION, Port Reading, New Jersey
EXXON CORPORATION, Bayway, New Jersey

Terminals: ALLIED PETROLEUM STORAGE, Jamaica Bay, New York
AMARADA HESS CORPORATION, Bayonne, New Jersey
AMARADA HESS CORPORATION, Bogoda, New Jersey
AMARADA HESS CORPORATION, Edgewater, New Jersey
AMARADA HESS CORPORATION, Keasby, New Jersey
AMARADA HESS CORPORATION, Little Ferry, New Jersey
AMARADA HESS CORPORATION, Passaic River, New Jersey
AMARADA HESS CORPORATION, Secaucus, New Jersey
AMARADA HESS CORPORATION, Westchester, New York
AMOCO (AMERICAN OIL COMPANY), Carteret, New Jersey
AMOCO (AMERICAN OIL COMPANY), Newton Creek, New York
ARCO (ATLANTIC RICHFIELD COMPANY), Port Newark, New Jersey
ARGUS OIL COMPANY, Jamaica Bay, New York
BAY OIL COMPANY, Gravesend Bay, New York
BELCHER OIL COMPANY, Bayonne, New Jersey
BP (BRITISH PETROLEUM LIMITED), Oceanside, New York
BP (BRITISH PETROLEUM LIMITED), Tremley Point, New Jersey
BTW (BAYONNE TIDEWATER WHAREFUELS), Bayonne, New Jersey
CASTRO OIL COMPANY, Port Newark, New Jersey
CIBRO (CIRRILLO BROTHERS), Port Morris, Bronx, New York
CIBRO (CIRRILLO BROTHERS), Gowanus Creek, Brooklyn, New York
CIBRO (CIRRILLO BROTHERS), Island Park, New York
CITGO (CITIES SERVICE), Tremley Point, New Jersey
CLAREMONT (OLD TANK PORT), Claremont, New Jersey
COASTAL OIL COMPANY, Port Newark, New Jersey
CROWN OIL COMPANY, Linden, New Jersey
EASTERN PETROLEUM COMPANY, Eastchester, New York
EFFRON OIL COMPANY, Jamaica Bay, New York
EXXON CORPORATION, Bayonne, New Jersey
EXXON CORPORATION, Bogoda, New Jersey
EXXON CORPORATION, Constable Hook, New Jersey
EXXON CORPORATION, Eastchester, New York
EXXON CORPORATION, Newton Creek, New York (#1)
EXXON CORPORATION, Newton Creek, New York (#2)
EXXON CORPORATION, Oceanside, New York
EXXON CORPORATION, Passaic River, New Jersey
GATX (GENERAL AMERICAN STORAGE), Carteret, New Jersey
GETTY OIL COMPANY, Newton Creek, New York
GETTY OIL COMPANY, Passaic River, New Jersey
GORDON OIL COMPANY, Bayonne, New Jersey
GREAT EASTERN OIL COMPANY, Newton Creek, New York
GREATER NEW YORK TERMINAL, Queens, New York

GULF OIL COMPANY, Gulfport, Staten Island, New York
GULF OIL COMPANY, Jamaica Bay, New York
GULF OIL COMPANY, Newton Creek, New York
GULF OIL COMPANY, Oceanside, New York
HOWARD-ROSS TERMINAL (HOWARD FUEL), Bayonne, New Jersey
JAMAICA BAY OIL COMPANY, Jamaica Bay, New York
MADISON OIL COMPANY, Jamaica Bay, New York
McCREE/AMOCO (McCREE/AMERICAN OIL COMPANY), Jamaica Bay, New York
METROPOLITAN OIL COMPANY, 138th Street, Bronx, New York
MOBIL OIL CORPORATION, Eastchester, New York
MOBIL OIL CORPORATION, Jamaica Bay, New York
MOBIL OIL CORPORATION, Newton Creek, New York (#1)
MOBIL OIL CORPORATION, Newton Creek, New York (#2)
MOBIL OIL CORPORATION, Port Mobil, Staten Island, New York
NASSAU UTILITIES COMPANY, Oceanside, New York
NORTHEAST PETROLEUM COMPANY, Brooklyn, New York
OUTERBRIDGE TERMINAL, Perth Amboy, New Jersey
PARAGON OIL COMPANY, Barret Point, Bronx, New York
PARAGON OIL COMPANY, Port Newark, New Jersey
PATCHOGUE OIL COMPANY, Gowanus Bay, Brooklyn, New York
PHILLIPS 66 (PHILLIPS PETROLEUM COMPANY), Carteret, New Jersey
PORTSIDE TERMINAL, Morris Canal, New Jersey
PREMIUM OIL COMPANY, Flushing, Queens, New York
PREMIUM OIL COMPANY, Newton Creek, New York (#1)
PREMIUM OIL COMPANY, Newton Creek, New York (#2)
Q OIL COMPANY, Passaic River, New Jersey
RIVER FUEL COMPANY, Harlem River, Bronx, New York
ROSSEVILLE LNG, Rosseville, Staten Island, New York
ROYAL OIL COMPANY, Long Island City, New York
ROYAL OIL COMPANY, Sewaren, New Jersey
SAFEWAY OIL COMPANY, Newton Creek, New York
SHELL OIL COMPANY, Eastchester, New York
SHELL OIL COMPANY, Jamaica Bay, New York
SHELL OIL COMPANY, Newton Creek, Brooklyn, New York
SHELLWACKTER OIL COMPANY, Westchester, New York
STUDUROS OIL COMPANY, Passaic River, New Jersey
SUNOCO (SUN OIL COMPANY), Eastchester, New York
SUNOCO (SUN OIL COMPANY), Jamaica Bay, New York
SUNOCO (SUN OIL COMPANY), Oceanside, New York
SUNOCO (SUN OIL COMPANY), Port Newark, New Jersey
TENNECO (TENNESSE OIL COMPANY), Port Newark, New Jersey
TEXACO INCORPORATED, Bergen Point, Bayonne, New Jersey
TEXACO INCORPORATED, Bushwick Inlet, Brooklyn, New York
TEXACO INCORPORATED, Jamaica Bay, New York
TEXACO INCORPORATED, Passaic River, New Jersey
TOWN FUEL COMPANY, Hackensack, New Jersey
WELSH OIL COMPANY, Great Neck, Long Island, New York
WHEELEN OIL COMPANY, Jersey City, New Jersey

Industrial plants: ALLIED CHEMICAL COMPANY, Elizabeth, New Jersey
ALLIED VEGETABLE OIL COMPANY, Bayonne, New Jersey
BEST FOOD, Bergen Point, Bayonne, New Jersey
COLGATE-PALMOLIVE COMPANY, Jersey City, New Jersey
DUPONT INDUSTRIES, Grasselli, New Jersey
EL DORADO TERMINALS, Bayonne, New Jersey (#1)
EL DORADO TERMINALS, Bayonne, New Jersey (#2)
GAF (GENERAL ALALINE FILM), Chrome, New Jersey
HUDSON TANK COMPANY, Weehawken, New Jersey -
NATIONAL GYPSUM, Port Morris, Bronx, New York

NATIONAL INDUSTRIES, Sayreville, New Jersey
NORTHVILLE INDUSTRIES, Linden, New Jersey
PEERLES CHEMICAL COMPANY, Newton Creek, New York
PHILLIP DODGE, Newton Creek, New York
PROCTER & GAMBLE, Port Ivory, Staten Island, New York
ROLLINS TERMINAL, Bayonne, New Jersey
STANDARD TANK CORPORATION, Bayonne, New Jersey
UNION CARBIDE INDUSTRIES, Tremley Point, New Jersey

Powerhouses: Astoria Powerhouse, Lawrence Point, Queens, New York
Copper's Cove Powerhouse, Kearny Point, New Jersey
Essex Powerhouse, Essex, New Jersey
57th Street Powerhouse, Brooklyn, New York
14th Street Powerhouse, Manhattan, New York
Harrison Powerhouse, Harrison, New Jersey
Hudson Avenue Powerhouse, Brooklyn, New York
Kearny Point Powerhouse, Kearny Point, New Jersey
Long Island Lighting Company, Newton Creek, New York
Long Island Lighting Company, Oceanside, New York
Marion Powerhouse, Jersey City, New Jersey
New Brunswick Powerhouse, New Brunswick, New Jersey
Petroleum Light & Power, Newton Creek, New Jersey
Rikers Island Prison, Rikers Island, New York
Sayreville Powerhouse, Sayreville, New Jersey
70th Street Powerhouse, Manhattan, New York
South Amboy Powerhouse, South Amboy, New Jersey
29th Street Powerhouse, Brooklyn, New York
Travis Powerhouse, Travis, Staten Island, New York

The Port of New York basically serves as a distributory center for imported petroleum products from both foreign and domestic sources. The ratio of foreign imported petroleum products to domestic imported petroleum products is approximately 53/47. Almost all the petroleum products brought in are used in the New England area. The petroleum products are imported in large quantities for temporary storage, processing (refining), and sorting at the refineries and terminals. They are then shipped out in small practical quantities for use in the New England states. The industrial plants and powerhouses are exceptions since they use petroleum directly for chemical processing and energy production respectively. The distributory role of the port explains the tremendous imbalance of tank vessel traffic.

In a year, a minimum³ of 7,574 tank vessels call at the 132 petroleum-using fac-

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3 - *minimum: the word as used here and continually afterwards serves the function of establishing the least possible amount of whatever is being quantified. As will become apparent later, the information collected is incomplete. Due to gaps of information, final conclusive figures are unobtainable. The figures presented are based on all the information obtained and hence qualifiable as "minimums". It is to be noted that even with the gaps of information, the figures overall are representative of what is being quantified; and that the increases they would undergo with the addition of the missing information would not be significant to the point of rendering the figures useless.*

ilities bringing petroleum products. Statistically, this averages out to a minimum of 20.75 vessels per day. The size of vessel varies from a small barge with a cargo capacity of 8,334 barrels to a VLCC (Very Large Crude Carrier) with a cargo capacity of 600,000 barrels. Contrasting the import traffic figure, the export traffic figure is 23,112 tank vessels per year minimum. Statistically, this averages out to a minimum of 63.32 vessels per day. Note however, that only 113 petroleum-using facilities⁴ export petroleum products. With few exceptions, the vessels exporting petroleum products are 30,000 barrels or less in terms of cargo capacity. The problem with the above figures is that they are minimums with no defined maximums; they are overlapping; and vessel size has not been taken into consideration. As will become clear later, a certain portion of the import traffic is simply "cross-port traffic". Calculations based on the figures presented in this report indicate that at minimum 53% (4,072 vessels) of the import traffic is transport of imported petroleum products from the large refineries and terminals in the port to small ones inaccessible by large tank vessels. Therefore, a readjustment of either the import traffic figure or export traffic figure is required. The author has chosen to adjust the export traffic figure. The reasoning used is that export traffic includes cross-port traffic and, in terms of commerce, the petroleum products carried to the smaller terminals are imported cargos. The readjusted export traffic figure is 19,040 tank vessels per year minimum. Statistically, this averages out to 52.16 vessels per day involved in export. As mentioned before, the vessel size of the exporting vessel is considerably less than the vessel size of import traffic. Hence, it takes a greater number of vessels to transport the large quantities of petroleum brought in by large tankers and superbarges. This explanation alone accounts for the majority of export traffic. The reason for the usage of small vessels is simply their favorable advantage of ability to go anywhere necessary throughout the New England area. Most of the petroleum products imported from abroad are carried in foreign ships. All domestic imports are carried in U.S. flag vessels.

4 - *The powerhouses do not export petroleum products. They are therefore excluded automatically from association with export traffic.*

The following section deals individually with each petroleum-using facility. Every facility is first defined by company name and then location. If the company has a parent company of a different name or it is a subsidiary of another company, this information will be noted next to the company name. Under each facility the following information is revealed: the method of import and cargo quantities; the points of origin of the cargos; the types of cargos and quantities of each; the method of export (and where known, the quantities); the total amount of cargo handled annually which is called the T.P.H. (Total Product Handled); and lastly, any ancillary information such as specific information on docking/berthing accommodations or whether receipt of cargo is tide dependent. Where possible and/or appropriate a photograph of the facility has been included to give the reader an idea of its physical structure and dimensions.

A chart of the Port of New York with the location of the 132 petroleum-using facilities is in the Appendix. The circled number listed with each facility (on the following pages) corresponds to the same circled number on the chart. Red circles denote refineries, green circles denote terminals, and blue circles denote industrial plants. The same is true for the triangle encased letter listed with each powerhouse.

As it was impossible to obtain all the information on every facility, there are some facilities for which there is no information or only partial information. In those cases, the information that was unobtainable is listed as no data available. The author begs your indulgence for the gaps of information to be found. Lastly, it will be noted that certain types of cargo use the ton instead of the barrel as the unit of measurement. Wherever such a cargo is listed, it is left in tons as that is the practiced form of measurement.

PETROLEUM-USING FACILITIES IN THE PORT OF NEW YORK

① NATIONAL INDUSTRIES
Sayreville, New Jersey

method of import: no data available
points of origin of cargos: no data available
types of cargos: 100,000 barrels of #2 oil
100,000 barrels of #6 oil
20,000 tons of caustic soda

method of export: incomplete data - 250,000 tons of caustic waste is dumped 110 miles out at sea in the Baltimore Canyon under NOAA (National Oceanic & Atmospheric Administration) supervision.

T.P.H.: 200,000 barrels and 20,000 tons

② AMARADA HESS CORPORATION (Reserve No. 1)
Keasby, New Jersey

method of import: 25 tankers per year @ 250,000 barrels = 6,250,000 barrels
50 giant barges per year @ 100,000 barrels = 5,000,000 barrels
75 small barges per year @ 20,000 barrels = 1,500,000 barrels

points of origin of cargos:

33.3% from St. Croix
33.3% from Venezuela
33.3% from Persian Gulf

types of cargos: 4,000,000 barrels of #2 oil
4,000,000 barrels of #6 oil
1,000,000 barrels of regular unleaded gasoline
1,000,000 barrels of regular gasoline
1,000,000 barrels of premium unleaded gasoline
500,000 barrels of premium gasoline
500,000 barrels of #4 oil
400,000 barrels of kerosene
350,000 barrels of jet fuel

method of export: shipped out on 400 barges and tankers for domestic use.

T.P.H.: 12,750,000 barrels

③ OUTERBRIDGE TERMINAL
Perth Amboy, New Jersey

no data available

④ CHEVRON (STANDARD OIL COMPANY of CALIFORNIA)
Perth Amboy, New Jersey

method of import: 40 tankers per year @ 600,000 barrels carry crude =
24,000,000 barrels
10 tankers per year @ 500,000 barrels carry #2 oil =
5,000,000 barrels
10 tankers per year @ 500,000 barrels carry gasoline =
5,000,000 barrels
15 barges per year @ 2,666.66 tons = 40,000 tons

points of origin of cargos:

33.3% from Algeria
33.3% from Venezuela
33.3% from Persian Gulf

types of cargos: 24,000,000 barrels of crude oil
5,000,000 barrels of #2 oil
1,250,000 barrels of regular unleaded gasoline
1,250,000 barrels of regular gasoline
1,250,000 barrels of premium unleaded gasoline
1,250,000 barrels of premium gasoline
40,000 tons of asphalt

method of export: shipped out on 1,100 barges and tankers for domestic use.

T.P.H.: 34,000,000 barrels and 40,000 tons

ancillary information: The refinery can process approximately 100,000 barrels per day.



The photograph above shows part of the refinery of CHEVRON (STANDARD OIL COMPANY of CALIFORNIA) Perth Amboy. The photograph below shows part of the storage farm of CHEVRON Perth Amboy.



⑤ AMARADA HESS CORPORATION
Perth Amboy, New Jersey

method of import: 20 tankers per year @ 600,000 barrels carry #6 oil =
12,000,000 barrels
5 tankers per year @ 500,000 barrels carry #2 oil =
2,500,000 barrels
5 tankers per year @ 500,000 barrels carry gasoline =
2,500,000 barrels

points of origin of cargos:
33.3% from St. Croix
33.3% from Venezuela
33.3% from Persian Gulf

types of cargos: 12,000,000 barrels of #6 oil
2,500,000 barrels of #2 oil
625,000 barrels of regular unleaded gasoline
625,000 barrels of regular gasoline
625,000 barrels of premium unleaded gasoline
625,000 barrels of premium gasoline
and small quantities of hexene, heptene, and toluene (no data available)

method of export: shipped out on 500 barges and tankers @ 30,000 barrels per vessel.

ancillary information:
The refinery can process approximately 70,000 barrels per day. However, as of date the refinery is shut down. The refinery has a pipeline connection to SHELL Sewaren and its refinery.



The above photograph shows the entrance and some of the storage tanks belonging to AMARADA HESS CORPORATION Perth Amboy.

⑥ SHELL OIL COMPANY
Sewaren, New Jersey

method of import: 25 tankers per year @ 600,000 barrels = 15,000,000 barrels
10 barges per year @ 2,500 tons = 25,000 tons

points of origin of cargos:

50.0% from U.S. gulfcoast
50.0% from Caribbean islands

types of cargos: 2,000,000 barrels of crude oil
2,000,000 barrels of #2 oil
2,000,000 barrels of #6 oil
3,000,000 barrels of regular gasoline
3,000,000 barrels of regular unleaded gasoline
1,000,000 barrels of premium unleaded gasoline
1,000,000 barrels of premium gasoline
500,000 barrels of kerosene
500,000 barrels of jet fuels 1,2,and 3
25,000 tons of asphalt

method of export: shipped out on 1,000 barges and tankers for domestic use.

T.P.H.: 15,000,000 barrels and 25,000 tons

ancillary information:

The refinery is shut down. The refinery has a pipeline connection with both AMARADA HESS CORPORATION Perth Amboy and ROYAL OIL COMPANY Sewaren. SHELL OIL COMPANY works closely with ROYAL OIL COMPANY Sewaren.

⑦ ROYAL OIL COMPANY
Sewaren, New Jersey

method of import: 20 tankers per year @ 600,000 barrels = 12,000,000 barrels

points of origin of cargos:

50.0% from Caribbean islands
25.0% from African ports
25.0% from Persian Gulf

types of cargos: 4,000,000 barrels of #2 oil
2,000,000 barrels of regular unleaded gasoline
2,000,000 barrels of regular gasoline
2,000,000 barrels of premium unleaded gasoline
2,000,000 barrels of premium gasoline

method of export: shipped out on 400 barges and tankers

T.P.H.: 12,000,000 barrels

ancillary information:

ROYAL OIL COMPANY has a pipeline connection with SHELL OIL COMPANY Sewaren and works closely with them. ROYAL OIL COMPANY has 1 dock and 1 big-ship berth.

⑧ AMARADA HESS CORPORATION (Reserve No. 3)
Port Reading, New Jersey

method of import: 170 tankers per year @ 600,000 barrels = 102,000,000 barrels
30 giant barges per year @ 100,000 barrels = 3,000,000 barrels

20 small barges per year @ 20,000 barrels = 400,000 barrels

points of origin of cargos:

33.3% from St. Croix
33.3% from Venezuela
33.3% from Persian Gulf

types of cargos: 40,000,000 barrels of #6 oil
18,400,000 barrels of #2 oil



The photograph above shows the shoreline view of ROYAL OIL COMPANY Sewaren. The hose rack on the left is one of the available hose connections for the large tankers at the big-ship berth. Also on the left, in the background, part of the big-ship berth belonging to SHELL OIL COMPANY Sewaren is visible. Note the two hose racks.

4,000,000 barrels of #4 oil
 15,000,000 barrels of regular gasoline
 10,000,000 barrels of regular unleaded gasoline
 10,000,000 barrels of premium unleaded gasoline
 5,000,000 barrels of premium gasoline
 1,000,000 barrels of kerosene
 1,000,000 barrels of diesel fuel
 1,000,000 barrels of jet fuel

method of export: shipped out on 1,800 barges and tankers per year
 also transported inland by trucks

T.P.H.: 105,400,000 barrels

9 MOBIL OIL CORPORATION
 Port Mobil, Staten Island, New York

method of import: 100 tankers per year @ 400,000 barrels = 40,000,000 barrels
 also by pipeline and truck but no data available

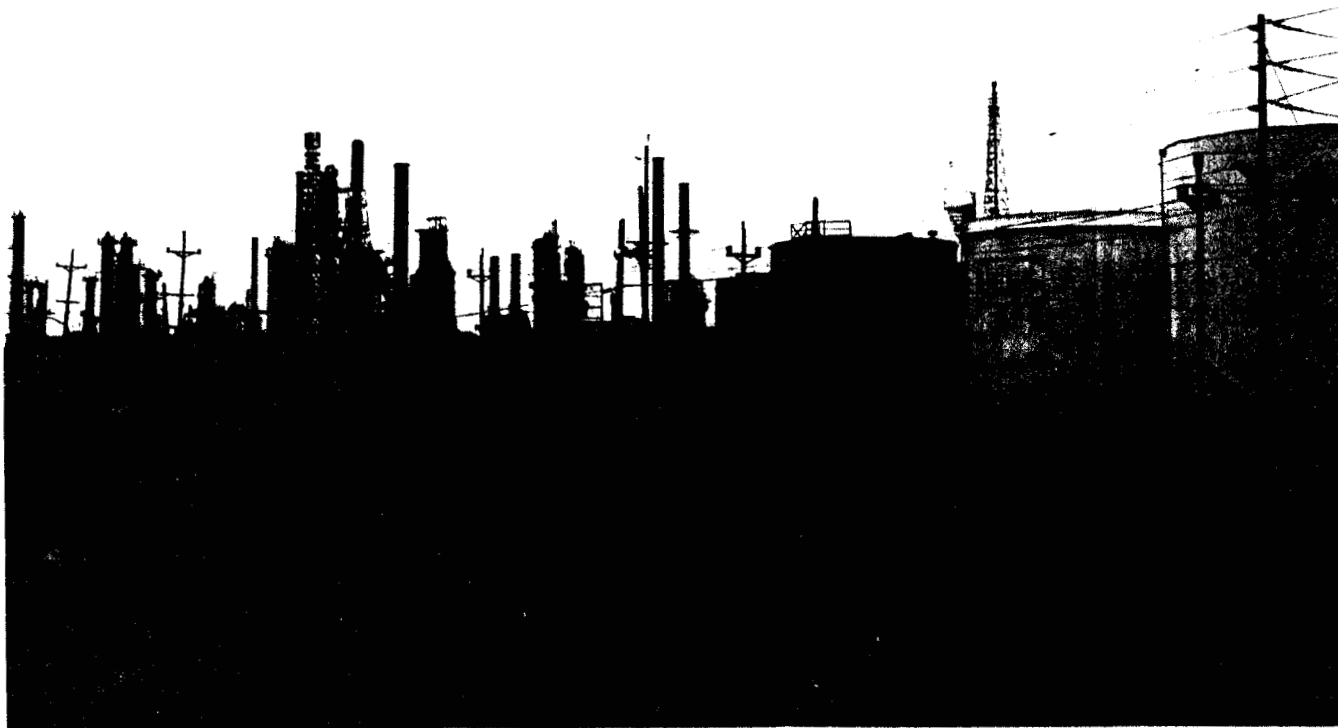
points of origin of cargos:

50.0% from Louisiana, Texas, and New Jersey (Paulsboro)
 50.0% from Trinidad, Venezuela, Algeria, West Africa, and
 Persian Gulf

types of cargos:

#2 oil
 #4 oil
 #6 oil
 diesel fuel

} no breakdown figures available



The above photograph shows part of the refinery of AMARADA HESS CORPORATION Port Reading.

jet fuel	} no breakdown figures available
mineral spirits	
kerosene	
hexene	
heptene	
toluene	

method of export: shipped out on 1,600 barges and tankers per year @ 25,000 barrels per vessel.

T.P.H.: 40,000,000 barrels minimum

- ⑩ ROSSEVILLE LNG STORAGE (LNG - Liquified Natural Gas)
Rosseville, Staten Island, New York

This facility is shut down due to environmental issues raised concerning its operation and local community antipathy.

- ⑪ GAF (GENERAL ALALINE FILM)
Chrome, New Jersey

method of import: no data available

points of origin of cargos: no data available

types of cargos: 100,000 barrels of #6 oil
20,000 barrels of #2 oil

method of export: no data available (but probably not by sea)

T.P.H.: 120,000 barrels



The above photograph shows the liquified natural gas (LNG) storage tanks belonging to ROSSEVILLE LNG STORAGE. At present the tanks are empty due to concern over their possible environmental impact and local community antipathy.

⑫ GATX (GENERAL AMERICAN TANK STORAGE)
Carteret, New Jersey

method of import: 80 tankers per year @ 500,000 barrels = 40,000,000 barrels
600 barges per year @ 30,000 barrels = 18,000,000 barrels

points of origin of cargos:

all over the world as well as domestically.

types of cargos:

#2 oil
#4 oil
#6 oil
diesel fuel
jet fuel
kerosene
hexene
heptene
toluene
xylene
mineral spirits

} no breakdown figures available

method of export: shipped out on 300 barges and tankers.
also transported inland by truck.

T.P.H.: 58,000,000 barrels

ancillary information:

GATX has 3 docks and 2 finger piers.

⑬ AMOCO (AMERICAN OIL COMPANY), true company name is STANDARD OIL COMPANY of INDIANA



The above photograph portrays a busy day at GATX (GENERAL AMERICAN TANK STORAGE). Visible in the foreground, is the tanker Francis S. Bushey discharging heptene imported from IMPERIAL OIL COMPANY, Halifax, Nova Scotia. The white tanks, in the background, are part of GATX's large storage facility.

Carteret, New Jersey

method of import: 200 barges and small tankers per year @ 25,000 barrels =
5,000,000 barrels

points of origin of cargos:

all domestic (U.S. Eastcoast)

types of cargos: 1,000,000 barrels of #2 oil
500,000 barrels of #4 oil
500,000 barrels of #6 oil
500,000 barrels of regular unleaded gasoline
500,000 barrels of regular gasoline
500,000 barrels of premium unleaded gasoline
500,000 barrels of premium gasoline
500,000 barrels of kerosene
500,000 barrels of jet fuel

method of export: shipped out on 200 barges

T.P.H.: 5,000,000 barrels

ancillary information:

AMOCO has 2 berths for small vessels.

①4 PHILLIPS 66 (PHILLIPS PETROLEUM COMPANY)
Carteret, New Jersey

method of import: 50 barges and small tankers per year @ 20,000 barrels =
1,000,000 barrels

points of origin of cargos:

all domestic (U.S. Eastcoast)

types of cargos: 350,000 barrels of #2 oil
150,000 barrels of regular gasoline
150,000 barrels of regular unleaded gasoline
100,000 barrels of premium unleaded gasoline
100,000 barrels of premium gasoline
50,000 barrels of #4 oil
50,000 barrels of #6 oil
50,000 barrels of kerosene

method of export: shipped out on 50 barges.

T.P.H.: 1,000,000 barrels

①5 CITGO (CITIES SERVICE)
Tremley Point, New Jersey

method of import: 20 tankers per year @ 500,000 barrels = 10,000,000 barrels

points of origin of cargos:

100.0% from Texas and Louisiana
types of cargos: 1,500,000 barrels of regular gasoline
1,500,000 barrels of regular unleaded gasoline
1,000,000 barrels of premium unleaded gasoline
1,000,000 barrels of premium gasoline
2,000,000 barrels of #2 oil
500,000 barrels of #4 oil
500,000 barrels of #6 oil
500,000 barrels of kerosene
500,000 barrels of diesel fuel

note: there is a figure discrepancy that can not be reconciled based on present information.

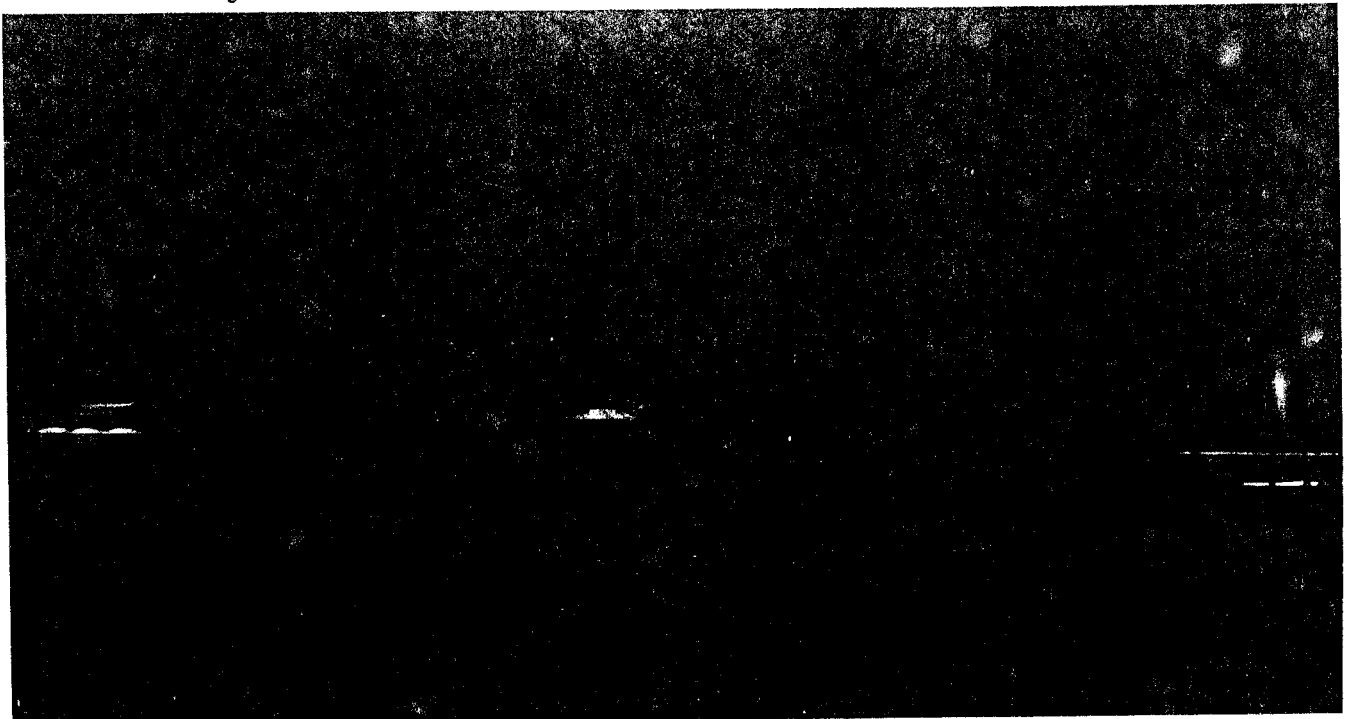
method of export: shipped out on 400 barges per year @ 25,000 barrels per vessel.

T.P.H.: 10,000,000 barrels

ancillary information:

CITGO has 3 berths.

The photograph below shows the dock and some of the storage tanks of CITGO (CITIES SERVICE) Tremley Point.



①⑥ BP (BRITISH PETROLEUM LIMITED), all of BP's U.S. operations are now under the control of SOHIO (STANDARD OIL COMPANY of OHIO)
Tremley Point, New Jersey

method of import: 10 tankers per year @ 400,000 barrels = 4,000,000 barrels
domestic pipeline (per year) = 5,000,000 barrels

points of origin of cargos:

types of cargos: all domestic (U.S. Eastcoast and Gulfcoast)
1,500,000 barrels of regular gasoline
1,500,000 barrels of regular unleaded gasoline
1,000,000 barrels of premium unleaded gasoline
1,000,000 barrels of premium gasoline
1,500,000 barrels of #2 oil
500,000 barrels of #4 oil
500,000 barrels of #6 oil
500,000 barrels of kerosene
500,000 barrels of diesel fuel
500,000 barrels of jet fuel

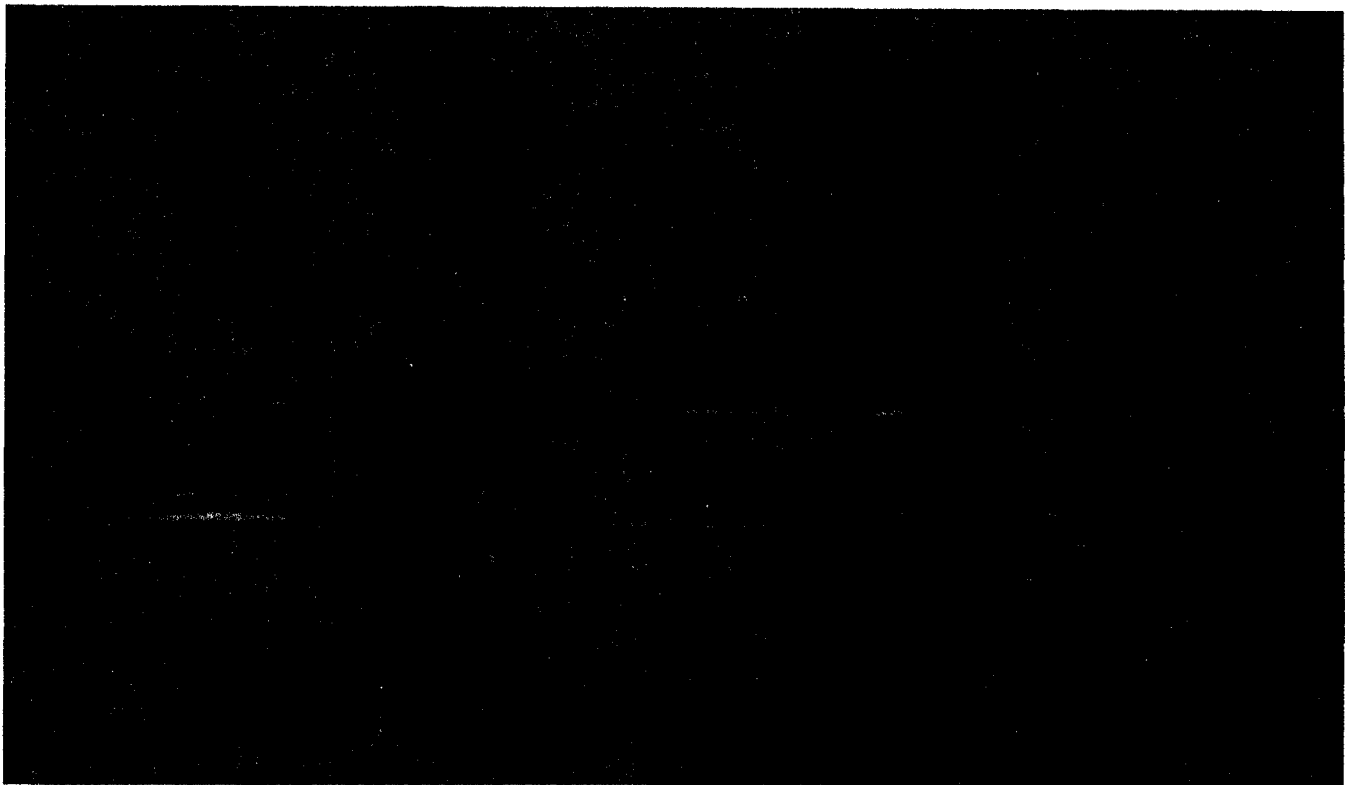
method of export: shipped out on 900 barges @ 10,000 barrels per vessel.

T.P.H.: 9,000,000 barrels

ancillary information:

BP has 1 long dock with 4 berths.

The photograph below shows the storage tanks and dock facilities of BP (BRITISH PETROLEUM LIMITED) Tremley Point.



①⑦ UNION CARBIDE INDUSTRIES
Tremley Point, New Jersey

method of import: no data available

points of origin of cargos: no data available

types of cargos: 100,000 barrels of #6 oil
100,000 tons of sulfuric acid

method of export: incomplete data - 100,000 tons of sulfuric waste is dumped
110 miles out at sea in the Baltimore Canyon under NOAA
(National Oceanic & Atmospheric Administration) supervision.

⑱ NORTHVILLE INDUSTRIES
Linden, New Jersey

method of import: 15 tankers per year @ 300,000 barrels = 4,500,000 barrels
10 barges per year @ 30,000 barrels = 300,000 barrels

points of origin of cargos:

50.0% from Venezuela
25.0% from Caribbean islands
25.0% from Persian Gulf

types of cargos: 2,000,000 barrels of #2 oil
2,000,000 barrels of #6 oil
500,000 barrels of #4 oil
300,000 barrels of kerosene

method of export: shipped out on 200 barges and small tankers per year.

T.P.H.: 4,800,000 barrels

ancillary information:

NORTHVILLE INDUSTRIES has 2 berths.

⑲ DUPONT INDUSTRIES
Graselli, New Jersey

method of import: no data available

points of origin of cargos: no data available

types of cargos: 200,000 tons of caustic soda
100,000 tons of sulfuric acid
60,000 tons of caustic waste

method of export: incomplete data - 60,000 tons of caustic waste is dumped
110 miles out at sea in the Baltimore Canyon under NOAA
(National Oceanic & Atmospheric Administration) supervision.

⑳ EXXON CORPORATION
Bayway, New Jersey

method of import: 100 tankers per year @ 500,000 barrels = 50,000,000 barrels
also domestic pipeline but no data available
4 tankers per year @ 25,000 tons = 100,000 tons

points of origin of cargos: no data available

types of cargos: 40,000,000 barrels of crude oil
5,000,000 barrels of #2 oil
5,000,000 barrels of #6 oil
100,000 tons of asphalt

method of export: no data available on vessel traffic but quantities are
listed below.

8,000,000 barrels of regular gasoline
8,000,000 barrels of regular unleaded gasoline
7,000,000 barrels of premium unleaded gasoline
6,000,000 barrels of premium gasoline
8,000,000 barrels of #2 oil
3,000,000 barrels of #4 oil
6,000,000 barrels of #6 oil
2,000,000 barrels of kerosene
2,000,000 barrels of diesel fuel
and small quantities of benzene (no data available)

T.P.H.: 50,000,000 barrels minimum and 100,000 tons

ancillary information:

EXXON CORPORATION has the largest refinery in the Port of
New York with a refining capability of 300,000 barrels per
day. LNG (Liquified Natural Gas) is also brought into the
facility for temporary storage and then reshipped to the
final destination. EXXON CORPORATION has 2 big-ship berths.



The photograph above shows part of the EXXON CORPORATION Bayway refinery. The photograph below shows the giant cracking furnace at EXXON CORPORATION Bayway used to refine crude oil.



21 GULF OIL COMPANY
Gulfport, Staten Island, New York

method of export: 20 tankers per year @ 400,000 barrels = 8,000,000 barrels

points of origin of cargos:

types of cargos: 100.0% from GULF OIL COMPANY's Louisiana refinery
1,000,000 barrels of regular gasoline
1,000,000 barrels of regular unleaded gasoline
1,000,000 barrels of premium unleaded gasoline
1,000,000 barrels of premium gasoline
1,000,000 barrels of #2 oil
1,000,000 barrels of #4 oil
1,000,000 barrels of #6 oil
500,000 barrels of kerosene
500,000 barrels of diesel fuel

method of export: shipped out on 400 barges and small tankers per year
@ 20,000 barrels per vessel.

ancillary information:

GULF OIL COMPANY has 2 big-ship berths and 4 small vessel berths.

22 CROWN OIL COMPANY
Linden, New Jersey

method of import: 12 tankers per year @ 250,000 barrels = 3,000,000 barrels

points of origin of cargos:

types of cargos: U.S. Gulfcoast and Caribbean islands
500,000 barrels of regular gasoline
250,000 barrels of premium gasoline
250,000 barrels of regular unleaded gasoline
500,000 barrels of premium unleaded gasoline
250,000 barrels of kerosene
150,000 barrels of mineral spirits
50,000 barrels of lubricating oil
50,000 barrels of detergent

note: there is a figure discrepancy that can not be reconciled based on present information.

method of export: shipped out on 100 barges and small tankers per year
@ 30,000 barrels per vessel.

23 TEXACO INCORPORATED
Bergen Point, Bayonne, New Jersey

method of import: 100 tankers per year @ 300,000 barrels = 30,000,000 barrels

points of origin of cargos:

66.6% from Trinidad
33.3% from Texas
types of cargos: 4,000,000 barrels of regular gasoline
4,000,000 barrels of regular unleaded gasoline
4,000,000 barrels of premium unleaded gasoline
4,000,000 barrels of premium gasoline
4,000,000 barrels of #2 oil
4,000,000 barrels of #6 oil
2,000,000 barrels of diesel fuel
1,500,000 barrels of jet fuel
1,500,000 barrels of kerosene
500,000 barrels of #4 oil
250,000 barrels of lubricating oil
250,000 barrels of solvents

method of export: shipped out on 1,000 barges and small tankers per year
@ 30,000 barrels per vessel.

T.P.H.: 30,000,000 barrels

②4 PROCTER & GAMBLE INCORPORATED
Port Ivory, Staten Island, New York

method of import: small barges (no statistical data available)

points of origin of cargos: no data available

types of cargos: 400,000 barrels of #6 oil

75,000 barrels of #2 oil

caustic soda 50%

regular coconut oil

R.B.D. coconut oil

palm oil

glycerine

silicate

} no breakdown figures available

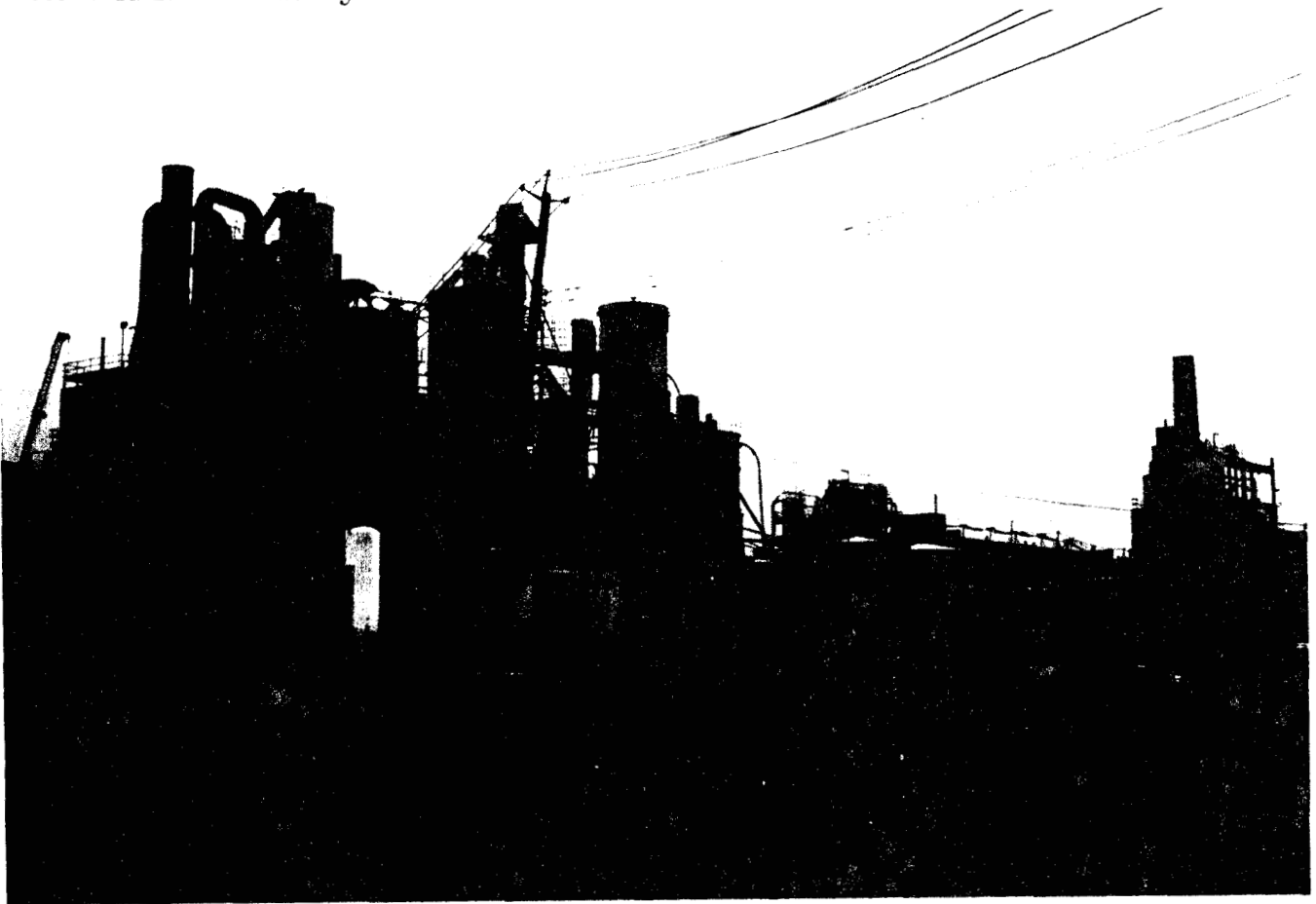
method of export: transported inland by truck.

T.P.H.: 475,000 barrels minimum

ancillary information:

PROCTER & GAMBLE INCORPORATED has 1 dock with 2 barge berths.

The photograph below shows part of the processing plant of PROCTER & GAMBLE INCORPORATED Port Ivory.



②5 ROLLINS TERMINAL
Bayonne, New Jersey

method of import: no data available

points of origin of cargos: no data available

types of cargos: flexol D.O.P. }
paraffin } no breakdown figures available
styrene }
sodium-isethionate }
method of export: no data available
T.P.H.: non-calculatable

②6 STANDARD TANK CORPORATION
Bayonne, New Jersey

This is a tank cleaning facility. It does, however, hold contaminated cargos until something can be done with them - either dumped at sea or re-refined by seperation. Also, the petroleum residual obtained from the tank cleaning process is seperated; and the petroleum obtained is sufficient to operate the plant without outside energy sources.

method of import: tank vessels (no specific data available)

points of origin of cargos: anywhere (mostly domestic)

types of cargos: anything

method of export: tank vessels (no specific data available - petroleum waste is dumped at sea, re-refined fuel oils used to operate the plant, and other petroleum products non-useable by the facility are sold to others or returned to owners.)

T.P.H.: non-calculatable

②7 HOWARD-ROSS TERMINAL (HOWARD FUEL COMPANY)
Bayonne, New Jersey

method of import: 50 tankers per year @ 300,000 barrels = 15,000,000 barrels

points of origin of cargos:

50.0% Venezuela
50.0% Persian Gulf

types of cargos: 4,000,000 barrels of #2 oil
2,000,000 barrels of #4 oil
3,000,000 barrels of #6 oil
3,000,000 barrels of regular gasoline
3,000,000 barrels of premium gasoline

method of export: shipped out on 600 barges and small tankers per year @ 25,000 barrels per vessel.

T.P.H.: 15,000,000 barrels

②8 BTW (BAYONNE TIDEWATER WHAREFUELS)
Bayonne, New Jersey

method of import: 80 tankers per year @ 300,000 barrels = 24,000,000 barrels

points of origin of cargos:

50.0% from U.S. Gulfcoast and Delaware
25.0% from Venezuela
25.0% from Persian Gulf

types of cargos: 5,500,000 barrels of regular gasoline
5,500,000 barrels of premium gasoline
5,500,000 barrels of #2 oil
5,500,000 barrels of #6 oil
1,000,000 barrels of #4 oil
1,000,000 barrels of diesel fuel

method of export: shipped out on 960 barges per year @ 25,000 barrels per vessel.

T.P.H.: 24,000,000 barrels

29 ALLIED VEGETABLE OIL COMPANY
Bayonne, New Jersey

no data available

30 EXXON CORPORATION
Bayonne, New Jersey

method of import: 15 tankers per year @ 300,000 barrels = 4,500,000 barrels
20 barges per year @ 25,000 barrels = 500,000 barrels

points of origin of cargos:

types of cargos: all domestic (U.S. Gulfcoast)
2,000,000 barrels of #2 oil
1,000,000 barrels of #4 oil
2,000,000 barrels of #6 oil

method of export: shipped out on 200 barges per year @ 25,000 barrels per vessel.

T.P.H.: 5,000,000 barrels

31 BELCHER OIL COMPANY
Bayonne, New Jersey

method of import: 50 barges per year @ 20,000 barrels = 1,000,000 barrels

points of origin of cargos: no data available

types of cargos: 500,000 barrels of #2 oil
500,000 barrels of #6 oil

method of export: shipped out on 50 barges per year @ 20,000 barrels per vessel.

T.P.H.: 1,000,000 barrels

32 EL DORADO TERMINALS CORPORATION #2
Bayonne, New Jersey

method of import: tanker, barge, railroad tankcar, and truck (no specific data available)

points of origin of cargos: no data available

types of cargos: Drapex 6.8 (in by railroad tankcar/out by truck)
Morpholine (in by tanker/out by truck)
caustic soda (in by tanker/out by barge, railroad tankcar, and truck)
M-Clene D (no data available)
trichlorethylene (in by railroad tankcar/out by truck)
Lzdcaustic Potash (in by railroad tankcar/out by truck)
perclene (no data available)
methylene chloride (in by tanker/out by truck)
Perclene D (no data available)
acetone (in by tanker and railroad tankcar/out by truck)
aminoethylethanolamine (in by tanker/out by truck)
ethylene diamine (in by tanker/out by truck)
butanediol (in by tanker/out by railroad tankcar and truck)
glycerine (in by tanker/out by railroad tankcar and truck)
isopropyl alcohol (in by tanker/out by truck)
Isopar G (no data available)
dimethyl formamide (in by tanker/out by truck)
Alkyl 215 (in by tanker/out by railroad tankcar and truck)

no breakdown figures available

Alkyl 230 (in by tanker/out by railroad tankcar
 and truck)
 diundecyl phthalate (in by tanker/out by truck)
 recycled paraffin (in by tanker/out by truck)
 Sancticizer 367 (in by truck/out by tanker)
 styrene (in by tanker/out by truck)
 ethyl acetate (in by tanker/out by truck)
 Propylene Glycol IND (in by railroad tankcar/
 out by truck)
 Poly Solv EE (in by railroad tankcar/out by truck)
 Poly Solv EB (in by railroad tankcar/out by truck)
 Poly Solv EM (in by railroad tankcar/out by truck)
 Poly G 32-56 (in by railroad tankcar/out by truck)
 ethylene glycol (in by railroad tankcar/out by
 truck)
 monoethanolamine (in by railroad tankcar/out by
 truck)
 triethanolamine (in by railroad tankcar/out by
 truck)
 diethanolamine (in by railroad tankcar/out by
 truck)
 Polytergent B-300 (in by railroad tankcar/out by
 truck)
 Propylene Glycol USP (no data available)
 phosphoric acid (in by tanker/out by truck)
 perchlorethylene (in by tanker/out by truck)
 vinyl acetate (in by tanker/out by truck)
 diisodecylphthalate (in by railroad tankcar and
 truck/out by tanker)
 DINP (in by railroad tankcar and truck/out by
 tanker)
 isooctyl alcohol (in by railroad tankcar and
 truck/out by tanker)
 nonene (in by railroad tankcar and truck/out by
 tanker)
 decyl alcohol (in by railroad tankcar and truck/
 out by tanker)
 turpentine (in by tanker/out by truck)
 Poly G 32-48 (in by railroad tankcar/out by truck)
 Poly G 400 (in by railroad tankcar/out by truck)
 Poly Solv DB (in by railroad tankcar/out by truck)
 Polytergent SL-62 (in by railroad tankcar/out by
 truck)

no breakdown figures available

method of export: shipped out on tankers, barges, railroad tankcars, and trucks (no specific figures available)

T.P.H.: non-calculatable

33 GORDON OIL COMPANY
 Bayonne, New Jersey

method of import: no data available
points of origin of cargos: no data available
types of cargos: caustic soda

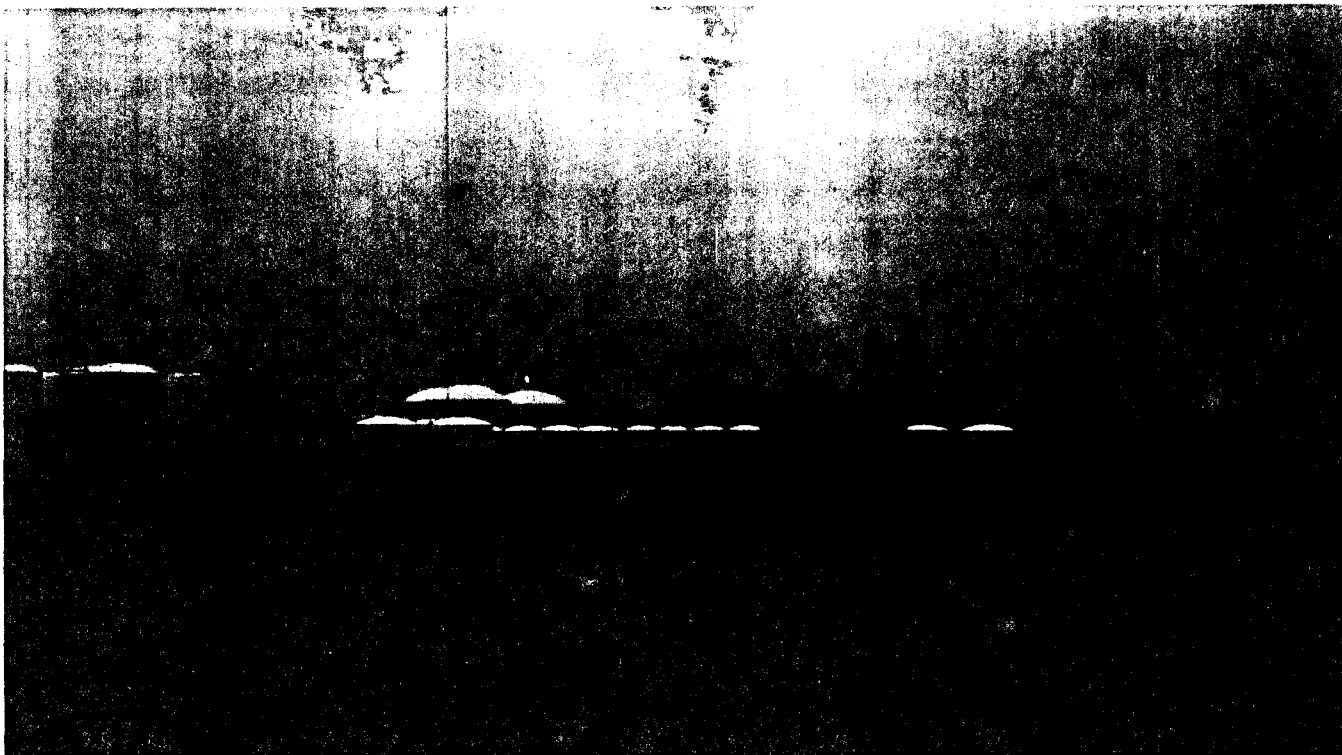
#2 oil
 #6 oil
 regular gasoline
 regular unleaded gasoline
 premium gasoline
 kerosene

no breakdown figures available

method of export: no data available

T.P.H.: non-calculatable

The photograph below shows the GORDON OIL COMPANY Bayonne terminal as seen from the Kill van Kull.



③④ AMARADA HESS CORPORATION
Bayonne, New Jersey

method of import: 40 tankers per year @ 500,000 barrels = 20,000,000 barrels

points of origin of cargos:

50.0% from St. Croix
25.0% from Venezuela
25.0% from Persian Gulf

types of cargos: 10,000,000 barrels of #6 oil
5,000,000 barrels of #2 oil
1,000,000 barrels of regular gasoline
1,000,000 barrels of regular unleaded gasoline
1,000,000 barrels of premium unleaded gasoline
1,000,000 barrels of premium gasoline
1,000,000 barrels of kerosene

method of export: shipped out on 700 barges per year @ 28,571.4 barrels per vessel.

T.P.H.: 20,000,000 barrels

ancillary information:

AMARADA HESS CORPORATION has 2 docks with 1 big-ship berth and 2 barge berths.

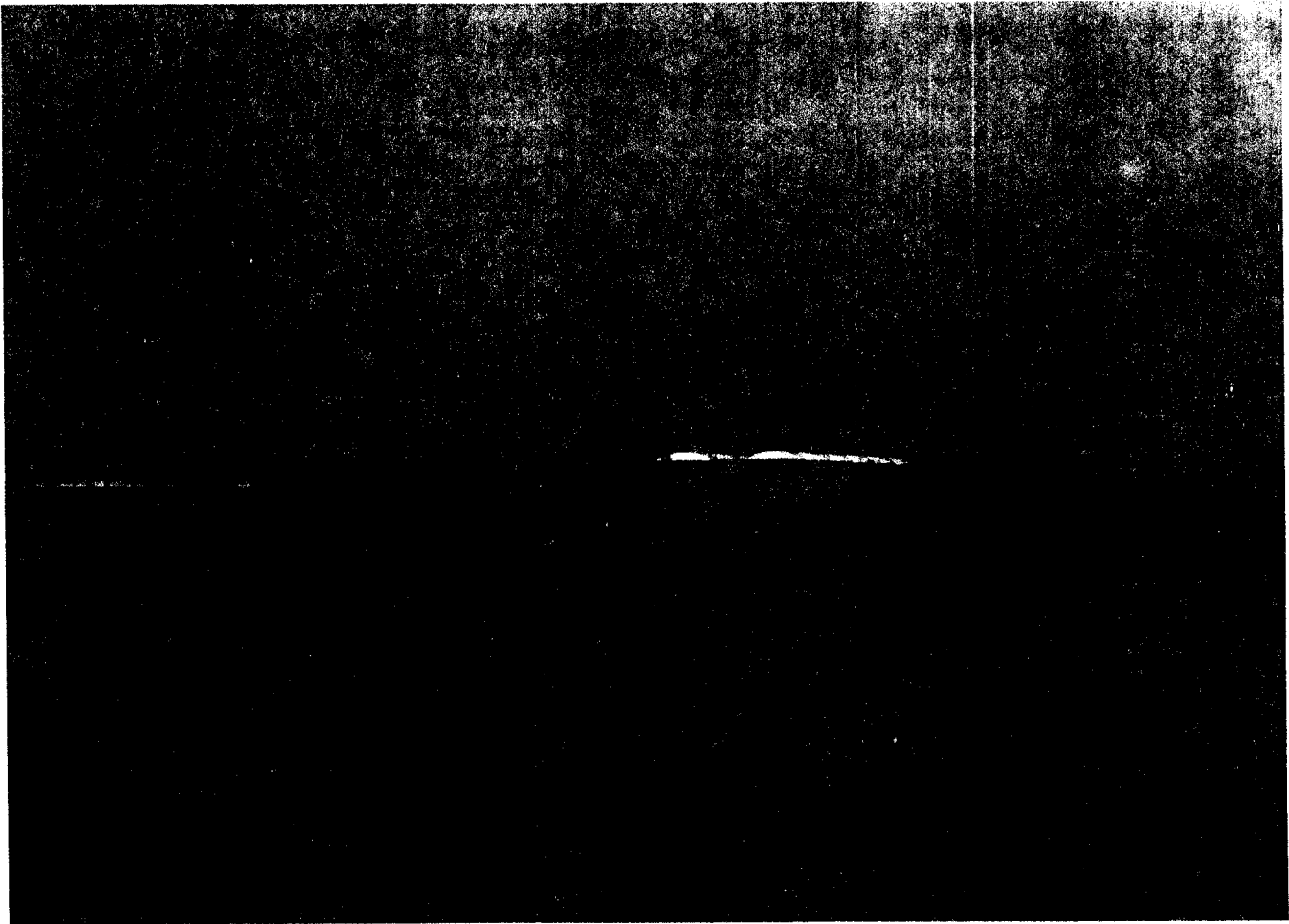
③⑤ EL DORADO TERMINALS CORPORATION #1
Bayonne, New Jersey

method of import: tanker, barge, railroad tankcar, and truck (no specific data available)

points of origin of cargos: no data available

types of cargos: caustic soda (in by tanker/out by barge, railroad tankcar, and truck) } no breakdown figures available
molasses (no data available) }

The photograph below shows the AMARADA HESS CORPORATION Bayonne terminal as seen from the Kill van Kull.



dioctyl phthalate (no data available)
diisodecylphthalate (in by railroad tankcar and truck/out by tanker)
Butanediol 1.4 (in by tanker/out by railroad tankcar and truck)
2 Ethyl Hexanol (no data available)
methylene chloride (in by tanker/out by truck)
TOTM (no data available)
FF-21 (no data available)

no breakdown
figures available

method of export: shipped out on tankers, barges, railroad tankcars, and trucks (no specific figures available)

T.P.H.: non-calculatable

36 EXXON CORPORATION
Constable Hook, New Jersey

method of import: 300 tankers per year @ 500,000 barrels = 150,000,000 barrels
284 barges per year @ 30,000 barrels = 8,520,000 barrels

points of origin of cargos:

50.0% from Louisiana and Texas
50.0% from all over the world

types of cargos: 35,000,000 barrels of #2 oil
30,000,000 barrels of #6 oil
19,000,000 barrels of regular gasoline
10,000,000 barrels of regular unleaded gasoline

10,000,000 barrels of premium unleaded gasoline
 10,000,000 barrels of premium gasoline
 25,000,000 barrels of diesel fuel
 2,000,000 barrels of jet fuel
 5,000,000 barrels of kerosene
 5,000,000 barrels of naphta
 1,000,000 barrels of mineral spirits
 1,000,000 barrels of heptene
 1,000,000 barrels of hexene
 1,000,000 barrels of toluene
 1,000,000 barrels of xylene
 2,400,000 barrels of #4 oil
 120,000 barreels of lubricating oil and benzene

method of export: shipped out on tankers and barges at a rate of 15 vessels per day or 5,475 vessels per year. There is no average cargo load figure due to the great variety of tank vessels used.

T.P.H.: 158,520,000 barrels

ancillary information:

EXXON CORPORATION has 2 docks with 2 big-ship berths and 5 barge and small tanker berths. In terms of total product handled yearly, EXXON CORPORATION Constable Hook is the largest petroleum-using facility in the Port of New York.

③7 CLAREMONT (OLD TANK PORT)
 Claremont, New Jersey

no data available

③8 PORTSIDE TERMINAL
 Morris Canal, New Jersey

This is strictly a bunkering facility.

method of import: 35 barges per year @ 20,000 barrels = 700,000 barrels

points of origin of cargos:

types of cargos: other oil terminals in the port.
 diesel fuel }
 lubricating oil } no breakdown figures available

method of export: shipped out on 2,000 vessels of all varieties per year. Due to their different bunker capacities, no average can be derived.

T.P.H.: 700,000 barrels

ancillary information:

PORTSIDE TERMINAL has 1 dock with 1 berth.

③9 COLGATE-PALMOLIVE COMPANY
 Jersey City, New Jersey

method of import: no data available

points of origin of cargos: no data available

types of cargos: caustic soda }
 alkine } no breakdown figures available

method of export: transported inland by tank trucks

T.P.H.: non-calculatable

④0 HUDSON TANK COMPANY
 Weehawken, New Jersey

method of import: no data available

points of origin of cargos: no data available

types of cargos: dubanol
tallow
coconut oil
R.B.D. coconut oil
palm oil
alkine
benzene

} no breakdown figures available

method of export: no data available

T.P.H.: non-calculatable

④1 AMARADA HESS CORPORATION
Edgewater, New Jersey

method of import: 50 barges per year @ 30,000 barrels = 1,500,000 barrels

points of origin of cargos:

other oil terminals in the port.

types of cargos: 1,500,000 barrels of #2 oil

method of export: no data available

T.P.H.: 1,500,000 barrels

④2 PATCHOGUE OIL COMPANY (subsidiary of AMARADA HESS CORPORATION)
Gowanus Bay, Brooklyn, New York

method of import: 15 tankers per year @ 300,000 barrels = 4,500,000 barrels
150 barges per year @ 30,000 barrels = 4,500,000 barrels

points of origin of cargos:

50.0% from St. Croix

50.0% from Venezuela

types of cargos: 4,500,000 barrels of #2 oil
4,500,000 barrels of #6 oil

method of export: some is used to bunker vessels (approximately 200 vessels per year of all sizes), the rest is transported inland by trucks to be used as heating oil. No specific figures are available.

T.P.H.: 9,000,000 barrels

ancillary information: PATCHOGUE OIL COMPANY has 1 dock with 1 big-ship berth and 2 barge berths.

The photograph below shows part of the storage facilities belonging to PATCHOGUE OIL COMPANY. In the foreground is the tanker Francis S. Bushey.



④3 CIBRO (CIRRILLO BROTHERS)
Gowanus Creek, Brooklyn, New York

no data available except for dock facilities - has 1 small dock with 1 barge berth.

④4 NORTHEAST PETROLEUM COMPANY
Brooklyn, New York

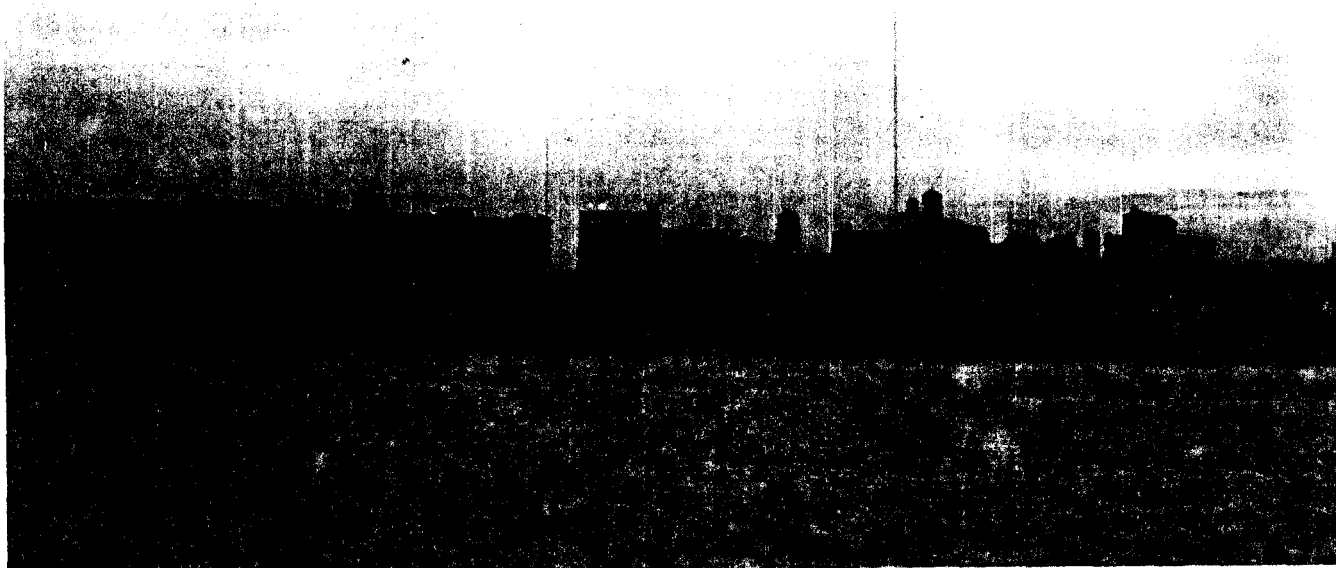
method of import: 15 tankers per year @ 300,000 barrels = 4,500,000 barrels
10 medium sized tankers and barges per year @ 50,000
barrels = 500,000 barrels

points of origin of cargos:

100.0% from Freeport, Bahamas
types of cargos: 2,000,000 barrels of #2 oil
2,000,000 barrels of #6 oil
500,000 barrels of regular gasoline
500,000 barrels of premium gasoline

method of export: shipped out on 167 barges per year @ 30,000 barrels per vessel.

T.P.H.: 5,000,000 barrels



The photograph above shows the NORTHEAST PETROLEUM COMPANY terminal as seen from the East River.

④5 TEXACO INCORPORATED
Bushwick Inlet, Brooklyn, New York

method of import: 100 barges per year @ 25,000 barrels = 2,500,000 barrels

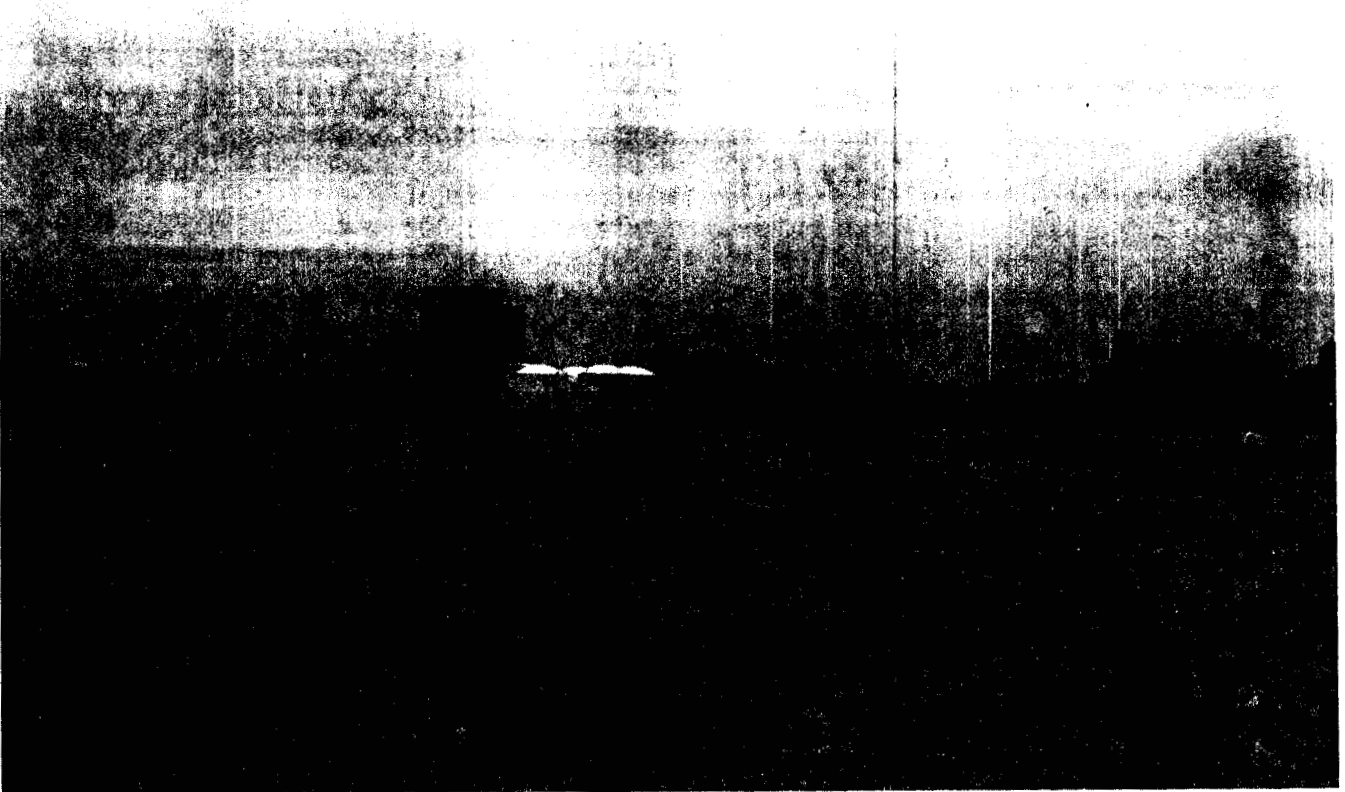
point of origin of cargos:

other oil terminals in the port.
types of cargos: 1,000,000 barrels of #2 oil
500,000 barrels of #6 oil
250,000 barrels of regular gasoline
250,000 barrels of regular unleaded gasoline
250,000 barrels of premium unleaded gasoline
250,000 barrels of premium gasoline

method of export: transported inland

T.P.H.: 2,500,000 barrels

The photograph below shows the TEXACO INCORPORATED Bushwick Inlet terminal as seen from the East River.



④6 SHELL OIL COMPANY
Newton Creek, Brooklyn, New York
method of import: 150 barges and small tankers per year @ 20,000 barrels =
3,000,000 barrels
points of origin of cargos:
other oil terminals in the port.
types of cargos: 1,000,000 barrels of regular gasoline
1,000,000 barrels of premium gasoline
1,000,000 barrels of unleaded gasoline
method of export: transported inland
T.P.H.: 3,000,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

④7 EXXON CORPORATION #1
Newton Creek, Brooklyn, New York
method of import: 100 barges and small tankers per year @ 20,000 barrels =
2,000,000 barrels
points of origin of cargos:
other oil terminals in the port.
types of cargos: 500,000 barrels of regular gasoline
500,000 barrels of regular unleaded gasoline
500,000 barrels of premium unleaded gasoline
500,000 barrels of premium gasoline
method of export: transported inland
T.P.H.: 2,000,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

④8 MOBIL OIL CORPORATION #1
Newton Creek, Brooklyn, New York
method of import: 75 barges and small tankers per year @ 20,000 barrels =
1,500,000 barrels
points of origin of cargos:
types of cargos: other oil terminals in the port.
500,000 barrels of #2 oil
500,000 barrels of regular gasoline
500,000 barrels of premium gasoline
method of export: transported inland
T.P.H.: 1,500,000 barrels
ancillary information: Bringing in cargo is tide dependent.

④9 SAFEWAY OIL COMPANY
Newton Creek, Brooklyn, New York
method of import: 75 barges and small tankers per year @ 20,000 barrels =
1,500,000 barrels
points of origin of cargos:
types of cargos: other oil terminals in the port.
500,000 barrels of regular gasoline
500,000 barrels of premium gasoline
500,000 barrels of unleaded gasoline
method of export: transported inland
T.P.H.: 1,500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

④0 GETTY OIL COMPANY
Newton Creek, Brooklyn, New York
method of import: 25 barges and small tankers per year @ 20,000 barrels =
500,000 barrels
points of origin of cargos:
types of cargos: other oil terminals in the port.
200,000 barrels of regular gasoline
200,000 barrels of premium gasoline
100,000 barrels of unleaded gasoline
method of export: transported inland
T.P.H.: 500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

④1 MOBIL OIL CORPORATION #2
Newton Creek, Brooklyn, New York
method of import: 75 barges and small tankers per year @ 20,000 barrels =
1,500,000 barrels
points of origin of cargos:
types of cargos: other oil terminals in the port.
500,000 barrels of #2 oil
300,000 barrels of regular gasoline
300,000 barrels of premium gasoline
300,000 barrels of unleaded gasoline
100,000 barrels of lubricating oil
method of export: transported inland
T.P.H.: 1,500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

- 52 AMOCO (AMERICAN OIL COMPANY), true company name is STANDARD OIL COMPANY of INDIANA
 Newton Creek, Brooklyn, New York
method of import: 35 barges and small tankers per year @ 20,000 barrels = 750,000 barrels
points of origin of cargos: other oil terminals in the port.
types of cargos: 250,000 barrels of regular gasoline
 250,000 barrels of premium gasoline
 250,000 barrels of unleaded gasoline
method of export: transported inland by truck
T.P.H.: 750,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.
- 53 PEERLES CHEMICAL COMPANY
 Newton Creek, Brooklyn, New York
method of import: 50 barges per year @ 5,000 barrels = 250,000 barrels
points of origin of cargos: domestic and foreign (no specific data available)
types of cargos: 50,000 barrels of benzene
 50,000 barrels of heptene
 50,000 barrels of hexene
 50,000 barrels of tallow
 50,000 barrels of soybean oil
method of export: no data available (but probably transported inland)
T.P.H.: 250,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.
- 54 PHILLIP DODGE
 Newton Creek, Brooklyn, New York
method of import: no data available
points of origin of cargos: no data available
types of cargos: 85,000 barrels of #6 oil
method of export: no data available (but probably transported inland)
T.P.H.: 85,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.
- 55 GULF OIL COMPANY
 Newton Creek, Brooklyn, New York
method of import: 25 barges and small tankers per year @ 20,000 barrels = 500,000 barrels
points of origin of cargos: other oil terminals in the port.
types of cargos: 200,000 barrels of regular gasoline
 100,000 barrels of regular unleaded gasoline
 100,000 barrels of premium unleaded gasoline
 100,000 barrels of premium gasoline
method of export: transported inland by truck
T.P.H.: 500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.
- 56 EXXON CORPORATION #2
 Newton Creek, Brooklyn, New York
method of import: 50 barges and small tankers per year @ 20,000 barrels = 1,000,000 barrels
points of origin of cargos: other oil terminals in the port.

types of cargos: 500,000 barrels of #2 oil
250,000 barrels of regular gasoline
250,000 barrels of premium gasoline
method of export: transported inland by truck
T.P.H.: 1,000,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

57 PREMIUM OIL COMPANY #1
Newton Creek, Brooklyn, New York

method of import: 50 barges per year @ 15,000 barrels = 750,000 barrels
points of origin of cargos:

other oil terminals in the port.
types of cargos: 750,000 barrels of #2 oil
method of export: transported inland by truck
T.P.H.: 750,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

58 GREAT EASTERN OIL COMPANY
Newton Creek, Brooklyn, New York

method of import: 50 barges per year @ 15,000 barrels = 750,000 barrels
points of origin of cargos:

other oil terminals in the port.
types of cargos: 400,000 barrels of #2 oil
350,000 barrels of #4 oil
method of export: transported inland by truck
T.P.H.: 750,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

59 PREMIUM OIL COMPANY #2
Newton Creek, Brooklyn, New York

method of import: 30 barges per year @ 16,666.66 barrels = 500,000 barrels
points of origin of cargos:

other oil terminals in the port.
types of cargos: 500,000 barrels of #2 oil
method of export: transported inland by truck
T.P.H.: 500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

60 ROYAL OIL COMPANY
Long Island City, New York

method of import: 50 barges per year @ 15,000 barrels = 750,000 barrels
points of origin of cargos:

other oil terminals in the port.
types of cargos: 350,000 barrels of #2 oil
100,000 barrels of regular gasoline
100,000 barrels of regular unleaded gasoline
100,000 barrels of premium unleaded gasoline
100,000 barrels of premium gasoline
method of export: transported inland by truck
T.P.H.: 750,000 barrels

- (61) METROPOLITAN OIL COMPANY
 138th Street, Bronx, New York
method of import: 30 tankers per year @ 300,000 barrels = 9,000,000 barrels
 50 barges and small tankers per year @ 30,000 barrels =
 1,500,000 barrels
points of origin of cargos: from all over the world (no specific data available)
types of cargos: 3,000,000 barrels of #2 oil
 3,000,000 barrels of #6 oil
 1,250,000 barrels of regular gasoline
 1,250,000 barrels of regular unleaded gasoline
 1,250,000 barrels of premium unleaded gasoline
 1,250,000 barrels of premium gasoline
 500,000 barrels of diesel fuel
method of export: transported inland by truck
T.P.H.: 10,500,000 barrels
- (62) CIBRO (CIRRILLO BROTHERS)
 Port Morris, Bronx, New York
method of import: 30 tankers per year @ 300,000 barrels = 9,000,000 barrels
 60 barges and small tankers per year @ 30,000 barrels =
 1,800,000 barrels
points of origin of cargos:
 50.0% from Venezuela
 50.0% from Persian Gulf
types of cargos: 2,800,000 barrels of #2 oil
 1,000,000 barrels of #4 oil
 3,000,000 barrels of #6 oil
 1,000,000 barrels of regular gasoline
 1,000,000 barrels of regular unleaded gasoline
 1,000,000 barrels of premium unleaded gasoline
 1,000,000 barrels of premium gasoline
method of export: shipped out on 360 barges and small tankers per year
 @ 30,000 barrels per vessel
T.P.H.: 10,800,000 barrels
- (63) NATIONAL GYPSUM
 Port Morris, Bronx, New York
method of import: no data available
points of origin of cargos: no data available
types of cargos: 80,000 barrels of #6 oil
method of export: no data available (but probably used for gypsum processing)
T.P.H.: 80,000 barrels
- (64) RIVER FUEL COMPANY
 Harlem River, Bronx, New York
 no data available
- (65) PARAGON OIL COMPANY (subsidiary of TEXACO INCORPORATED)
 Barret Point, Bronx, New York
method of import: 50 barges and small tankers per year @ 30,000 barrels =
 1,500,000 barrels
points of origin of cargos: all domestic (no specific data available)
types of cargos: 600,000 barrels of #2 oil
 500,000 barrels of #6 oil

100,000 barrels of regular gasoline
100,000 barrels of regular unleaded gasoline
100,000 barrels of premium unleaded gasoline
100,000 barrels of premium gasoline
method of export: shipped out on 50 barges and small tankers per year
@ 30,000 barrels per vessel
T.P.H.: 1,500,000 barrels

66 GREATER NEW YORK TERMINAL
Queens, New York

method of import: 40 tankers per year @ 300,000 barrels = 12,000,000 barrels
80 barges and small tankers per year @ 30,000 barrels =
2,400,000 barrels

points of origin of cargos:

25.0% from Caribbean islands
25.0% from Persian Gulf
25.0% from West Africa
25.0% from domestic sources

types pf cargos: 3,000,000 barrels of #2 oil
2,400,000 barrels of #4 oil
5,000,000 barrels of #6 oil
1,000,000 barrels of regular gasoline
1,000,000 barrels of regular unleaded gasoline
1,000,000 barrels of premium unleaded gasoline
1,000,000 barrels of premium gasoline

method of export: shipped out on 480 barges and small tankers per year
@ 30,000 barrels per vessel

T.P.H.: 14,400,000 barrels

67 PREMIUM OIL COMPANY
Flushing, Queens, New York

method of import: 80 barges per year @ 20,000 barrels = 1,600,000 barrels

points of origin of cargos:

other oil terminals in the port.

types of cargos: 1,600,000 barrels of #2 oil

method of export: transported inland by truck

T.P.H.: 1,600,000 barrels

68 WELSH OIL COMPANY
Great Neck, Long Island, New York

method of import: 60 barges per year @ 12,500 barrels = 750,000 barrels

points of origin of cargos:

other oil terminals in the port.

types of cargos: 750,000 barrels of #2 oil

method of export: transported inland by truck

T.P.H.: 750,000 barrels

69 SHELLWACKTER OIL COMPANY
Westchester, New York

method of import: 120 barges per year @ 12,500 barrels = 1,500,000 barrels

points of origin of cargos:

other oil terminals in the port.

types of cargos: 1,500,000 barrels of #2 oil

method of export: transported inland by truck

T.P.H.: 1,500,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

70 AMARADA HESS CORPORATION
Westchester, New York

method of import: 120 barges per year @ 12,500 barrels = 1,500,000 barrels

points of origin of cargos:

types of cargos: other oil terminals in the port.
500,000 barrels of regular gasoline
500,000 barrels of premium gasoline
500,000 barrels of unleaded gasoline

method of export: transported inland by truck

T.P.H.: 1,500,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

71 SUNOCO (SUN OIL COMPANY)
Eastchester, New York

method of import: 80 barges per year @ 12,500 barrels = 1,000,000 barrels

points of origin of cargos:

types of cargos: other oil terminals in the port.
750,000 barrels of #2 oil
83,333 barrels of regular gasoline
83,333 barrels of premium gasoline
83,333 barrels of unleaded gasoline

method of export: transported inland by truck

T.P.H.: 1,000,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

72 EXXON CORPORATION
Eastchester, New York

method of import: 80 barges per year @ 12,500 barrels = 1,000,000 barrels

points of origin of cargos:

types of cargos: other oil terminals in the port.
333,333 barrels of regular gasoline
333,333 barrels of premium gasoline
333,333 barrels of unleaded gasoline

method of export: transported inland by truck

T.P.H.: 1,000,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

73 EASTERN PETROLEUM COMPANY
Eastchester, New York

method of import: 40 barges per year @ 12,500 barrels = 500,000 barrels

points of origin of cargos:

types of cargos: other oil terminals in the port.
250,000 barrels of #2 oil
250,000 barrels of #4 oil

method of export: transported inland by truck

T.P.H.: 500,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

74 SHELL OIL COMPANY
Eastchester, New York

method of import: 80 barges per year @ 12,500 barrels = 1,000,000 barrels

points of origin of cargos:

types of cargos: other oil terminals in the port.
300,000 barrels of #2 oil
233,333 barrels of regular gasoline

233,333 barrels of premium gasoline
233,333 barrels of unleaded gasoline
method of export: transported inland by truck
T.P.H.: 1,000,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

75 MOBIL OIL CORPORATION
Eastchester, New York

method of import: 80 barges per year @ 12,500 barrels = 1,000,000 barrels
points of origin of cargos:

types of cargos: other oil terminals in the port.
300,000 barrels of #2 oil
233,333 barrels of regular gasoline
233,333 barrels of premium gasoline
233,333 barrels of unleaded gasoline

method of export: transported inland by truck
T.P.H.: 1,000,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

76 BEST FOOD
Bergen Point, Bayonne, New Jersey
no data available

77 ALLIED CHEMICAL COMPANY
Elizabeth, New Jersey

method of import: no data available
points of origin of cargos: no data available
types of cargos: 100,000 tons of caustic soda
50,000 tons of sulfuric acid
method of export: no data available
T.P.H.: 150,000 tons

78 COASTAL OIL COMPANY
Port Newark, New Jersey

method of import: 12 tankers per year @ 300,000 barrels = 3,600,000 barrels
points of origin of cargos: Caribbean islands and Venezuela (no specific data available)
types of cargos: 2,000,000 barrels of #2 oil
1,600,000 barrels of #6 oil
method of export: shipped out on 100 barges and small tankers per year
@ 36,000 barrels per vessel
T.P.H.: 3,600,000 barrels

79 ARCO (ATLANTIC RICHFIELD COMPANY)
Port Newark, New Jersey

The dock facilities are presently inoperable due to deterioration. ARCO instead has a large pipeline connection to Corpus Christi, Texas through which oil and other petroleum products are sent up. No data is available on its pipeline commerce.

80 PARAGON OIL COMPANY (subsidiary of TEXACO INCORPORATED)
Port Newark, New York

method of import: 10 tankers per year @ 200,000 barrels = 2,000,000 barrels
40 barges and small tankers per year @ 25,000 barrels =
1,000,000 barrels

points of origin of cargos:

100.0% Trinidad
types of cargos: 800,000 barrels of #2 oil
200,000 barrels of #6 oil
500,000 barrels of regular unleaded gasoline
500,000 barrels of regular gasoline
500,000 barrels of premium unleaded gasoline
500,000 barrels of premium gasoline
method of export: shipped out on 120 barges and small tankers per year
@ 25,000 barrels per vessel
T.P.H.: 3,000,000 barrels

81 TENNECO (TENNESSEE OIL COMPANY)
Port Newark, New Jersey

method of import: 10 tankers per year @ 200,000 barrels = 2,000,000 barrels

points of origin of cargos:

100.0% from Texas
types of cargos: 600,000 barrels of #2 oil
200,000 barrels of #6 oil
500,000 barrels of regular gasoline
500,000 barrels of premium gasoline
200,000 barrels of kerosene
method of export: shipped out on 100 barges and small tankers per year
@ 20,000 barrels per vessel
T.P.H.: 2,000,000 barrels

82 SUNOCO (SUN OIL COMPANY)
Port Newark, New Jersey

method of import: via pipeline - 36,000,000 barrels per year minimum

points of origin of cargos:

100.0% from Texas (pipeline connection)
types of cargos: #2 oil
regular gasoline
regular unleaded gasoline
premium unleaded gasoline
premium gasoline
diesel fuel } no breakdown figures available

method of export: shipped out on 1,200 barges and small tankers per year
@ 30,000 barrels per vessel

T.P.H.: 36,000,000 barrels minimum

83 CASTRO OIL COMPANY
Port Newark, New Jersey

method of import: 2 tankers per year @ 15,000 barrels = 30,000 barrels

points of origin of cargos:

100.0% from domestic sources
types of cargos: 30,000 barrels of lubricating oil
method of export: by pipeline to other plants in other states
T.P.H.: 30,000 barrels

84 AMARADA HESS CORPORATION
Passaic River, New Jersey

method of import: 50 barges and small tankers per year @ 20,000 barrels =
1,000,000 barrels

points of origin of cargos:
other oil terminals in the port.

types of cargos: 500,000 barrels of #2 oil
500,000 barrels of #6 oil
method of export: transported inland by truck
T.P.H.: 1,000,000 barrels

85 GETTY OIL COMPANY
Passaic River, New Jersey

method of import: 50 barges and small tankers per year @ 30,000 barrels =
1,500,000 barrels

points of origin of cargos:
other oil terminals in the port.

types of cargos: 500,000 barrels of #2 oil
250,000 barrels of regular gasoline
250,000 barrels of regular unleaded gasoline
250,000 barrels of premium unleaded gasoline
250,000 barrels of premium gasoline

method of export: transported inland by truck
T.P.H.: 1,500,000 barrels

86 EXXON CORPORATION
Passaic River, New Jersey

method of import: 140 barges per year @ 14,285.7 barrels = 2,000,000 barrels
points of origin of cargos:

other oil terminals in the port.
types of cargos: 500,000 barrels of #2 oil
500,000 barrels of regular gasoline
500,000 barrels of premium gasoline
500,000 barrels of unleaded gasoline

method of export: transported inland by truck
T.P.H.: 2,000,000 barrels

87 Q OIL COMPANY
Passaic River, New Jersey

method of import: 50 barges per year @ 15,000 barrels = 750,000 barrels
points of origin of cargos:

other oil terminals in the port.
types of cargos: 250,000 barrels of #2 oil
250,000 barrels of regular gasoline
250,000 barrels of premium gasoline

method of export: transported inland by truck
T.P.H.: 750,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

88 STUDUROS OIL COMPANY
Passaic River, New Jersey

method of import: 100 barges per year @ 15,000 barrels = 1,500,000 barrels
points of origin of cargos:

other oil terminals in the port.
types of cargos: 1,500,000 barrels of #2 oil

method of export: transported inland by truck
T.P.H.: 1,500,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

89 TEXACO INCORPORATED
Passaic River, New Jersey

method of import: 140 barges per year @ 14,285.7 barrels = 2,000,000 barrels

points of origin of cargos:

other oil terminals in the port.

types of cargos: 500,000 barrels of #2 oil
500,000 barrels of regular gasoline
500,000 barrels of premium gasoline
500,000 barrels of unleaded gasoline

method of export: transported inland by truck

T.P.H.: 2,000,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

90 WHEELER OIL COMPANY
Jersey City, New Jersey

method of import: 10 barges per year @ 15,000 barrels = 150,000 barrels

points of origin of cargos:

other oil terminals in the port.

types of cargos: 150,000 barrels of #2 oil

method of export: transported inland by truck

T.P.H.: 150,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

91 AMARADA HESS CORPORATION
Secaucus, New Jersey

method of import: 90 barges per year @ 15,000 barrels = 1,350,000 barrels

points of origin of cargos:

other oil terminals in the port.

types of cargos: 675,000 barrels of #2 oil

675,000 barrels of #6 oil

method of export: transported inland by truck

T.P.H.: 1,350,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

92 AMARADA HESS CORPORATION
Little Ferry, New Jersey

method of import: 25 barges per year @ 10,000 barrels = 250,000 barrels

points of origin of cargos:

other oil terminals in the port.

types of cargos: 150,000 barrels of #2 oil

100,000 barrels of all gasolines

method of export: transported inland by truck

T.P.H.: 250,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

93 TOWN FUEL COMPANY
Hackensack, New Jersey

method of import: 100 barges and small tankers per year @ 20,000 barrels =
2,000,000 barrels

points of origin of cargos:

other oil terminals in the port.

types of cargos: 800,000 barrels of #2 oil

800,000 barrels of #4 oil

400,000 barrels of all gasolines

method of export: transported inland by truck

T.P.H.: 2,000,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

94 AMARADA HESS CORPORATION
Bogoda, New Jersey

method of import: 100 barges and small tankers per year @ 20,000 barrels =
2,000,000 barrels
points of origin of cargos:
other oil terminals in the port.
types of cargos: 1,000,000 barrels of #2 oil
1,000,000 barrels of #6 oil
method of export: transported inland by truck
T.P.H.: 2,000,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

95 EXXON CORPORATION
Bogoda, New Jersey

method of import: 120 barges and small tankers per year @ 20,000 barrels =
2,400,000 barrels
points of origin of cargos:
other oil terminals in the port.
types of cargos: 800,000 barrels of #2 oil
800,000 barrels of #6 oil
800,000 barrels of all gasolines
method of export: transported inland by truck
T.P.H.: 2,400,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

96 BAY OIL COMPANY
Gravesend Bay, New York

method of import: 100 barges per year @ 15,000 barrels = 1,500,000 barrels
points of origin of cargos:
100.0% from domestic sources
types of cargos: 500,000 barrels of #2 oil
250,000 barrels of regular gasoline
250,000 barrels of regular unleaded gasoline
250,000 barrels of premium unleaded gasoline
250,000 barrels of premium gasoline
method of export: transported inland by truck
T.P.H.: 1,500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

97 SUNOCO (SUN OIL COMPANY)
Jamaica Bay, New York

method of import: 120 barges per year @ 16,666.6 barrels = 2,000,000 barrels
points of origin of cargos:
100.0% from domestic sources
types of cargos: 400,000 barrels of #2 oil
400,000 barrels of regular unleaded gasoline
400,000 barrels of regular gasoline
400,000 barrels of premium unleaded gasoline
400,000 barrels of premium gasoline
method of export: transported inland by truck
T.P.H.: 2,000,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

98 MADISON OIL COMPANY
Jamaica Bay, New York

method of import: 30 barges per year @ 16,666.6 barrels = 500,000 barrels
points of origin of cargos:
100.0% from domestic sources

types of cargos: 500,000 barrels of #2 oil
method of export: transported inland by truck
T.P.H.: 500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

99 GULF OIL COMPANY
Jamaica Bay, New York

method of import: 30 barges per year @ 16,666.6 barrels = 500,000 barrels
points of origin of cargos:
100.0% from domestic sources
types of cargos: 250,000 barrels of regular gasoline
250,000 barrels of premium gasoline
method of export: transported inland by truck
T.P.H.: 500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

100 ARGUS OIL COMPANY
Jamaica Bay, New York

method of import: 40 barges per year @ 12,500 barrels = 500,000 barrels
points of origin of cargos:
100.0% from domestic sources
types of cargos: 500,000 barrels of #2 oil
method of export: transported inland by truck
T.P.H.: 500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

101 JAMAICA BAY OIL COMPANY
Jamaica Bay, New York

method of import: 50 barges per year @ 15,000 barrels = 750,000 barrels
points of origin of cargos:
100.0% from domestic sources
types of cargos: 400,000 barrels of #2 oil
350,000 barrels of #4 oil
method of export: transported inland by truck
T.P.H.: 750,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

102 ALLIED PETROLEUM STORAGE
Kennedy Airport, Jamaica Bay, New York

method of import: 115 barges per year @ 17,391.3 barrels = 2,000,000 barrels
also by pipeline (no specific data available)
points of origin of cargos:
50.0% from domestic sources
50.0% from foreign sources (in bond for foreign airlines)
types of cargos: 2,000,000 barrels of jet fuel
method of export: used to fuel aircraft
T.P.H.: 2,000,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

Note: The pipelines are gradually taking over as the method of importation of jet fuel to Kennedy Airport and marine traffic is decreasing.

103 McCREE/AMOCO (McCREE/AMERICAN OIL COMPANY), the true company name for AMOCO is STANDARD OIL COMPANY of INDIANA
Jamaica Bay, New York

method of import: 55 barges per year @ 18,181.8 barrels = 1,000,000 barrels

points of origin of cargos:

100.0% from domestic sources
types of cargos: 250,000 barrels of #2 oil
250,000 barrels of regular gasoline
250,000 barrels of premium gasoline
250,000 barrels of unleaded gasoline

method of export: transported inland by truck

T.P.H.: 1,000,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

104

SHELL OIL COMPANY
Jamaica Bay, New York

method of import: 130 barges per year @ 19,230.7 barrels = 2,500,000 barrels

points of origin of cargos:

100.0% from domestic sources
types of cargos: 1,000,000 barrels of regular gasoline
500,000 barrels of premium gasoline
500,000 barrels of unleaded gasoline
500,000 barrels of #2 oil

method of export: transported inland by truck

T.P.H.: 2,500,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

105

EFFRON OIL COMPANY
Jamaica Bay, New York

method of import: 30 barges per year @ 16,666.6 barrels = 500,000 barrels

points of origin of cargos:

100.0% from domestic sources
types of cargos: 500,000 barrels of #2 oil

method of export: transported inland by truck

T.P.H.: 500,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

106

MOBIL OIL CORPORATION
Jamaica Bay, New York

method of import: 300 barges per year @ 8,333.3 barrels = 2,500,000 barrels

points of origin of cargos:

100.0% from domestic sources
types of cargos: 500,000 barrels of #2 oil
500,000 barrels of regular unleaded gasoline
500,000 barrels of regular gasoline
500,000 barrels of premium unleaded gasoline
500,000 barrels of premium gasoline

method of export: transported inland by truck

T.P.H.: 2,500,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

107

TEXACO INCORPORATED
Jamaica Bay, New York

method of import: 130 barges per year @ 15,384.6 barrels = 2,500,000 barrels

points of origin of cargos:

100.0% from domestic sources
types of cargos: 500,000 barrels of #2 oil
500,000 barrels of regular unleaded gasoline
500,000 barrels of regular gasoline
500,000 barrels of premium unleaded gasoline
500,000 barrels of premium gasoline

method of export: transported inland by truck
T.P.H.: 2,500,000 barrels
ancillary information: Bringing in cargo is dependent on high tide.

108 CIBRO (CIRRILLO BROTHERS)
Island Park, New York

method of import: 40 barges and small tankers per year @ 20,000 barrels =
800,000 barrels

points of origin of cargos:

other oil terminals in the port.
types of cargos: 400,000 barrels of #2 oil
100,000 barrels of regular unleaded gasoline
100,000 barrels of regular gasoline
100,000 barrels of premium unleaded gasoline
100,000 barrels of premium gasoline

method of export: transported inland by truck

T.P.H.: 800,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

109 GULF OIL COMPANY
Oceanside, New York

method of import: 100 barges per year @ 15,000 barrels = 1,500,000 barrels

points of origin of cargos:

other oil terminals in the port.
types of cargos: 500,000 barrels of #2 oil
250,000 barrels of regular unleaded gasoline
250,000 barrels of regular gasoline
250,000 barrels of premium unleaded gasoline
250,000 barrels of premium gasoline

method of export: transported inland by truck

T.P.H.: 1,500,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

110 EXXON CORPORATION
Oceanside, New York

method of import: 60 barges per year @ 15,000 barrels = 900,000 barrels

points of origin of cargos:

other oil terminals in the port.
types of cargos: 350,000 barrels of #2 oil
150,000 barrels of diesel fuel
100,000 barrels of regular unleaded gasoline
100,000 barrels of regular gasoline
100,000 barrels of premium unleaded gasoline
100,000 barrels of premium gasoline

method of export: transported inland by truck

T.P.H.: 900,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

111 NASSAU UTILITIES COMPANY (subsidiary of SUN OIL COMPANY)
Oceanside, New York

method of import: 10 barges per year @ 15,000 barrels = 150,000 barrels

points of origin of cargos:

other oil terminals in the port.
types of cargos: 150,000 barrels of #2 oil

method of export: transported inland by truck

T.P.H.: 150,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

112

BP (BRITISH PETROLEUM LIMITED), all of BP's U.S. operations are now under the control of SOHIO (STANDARD OIL COMPANY of OHIO)
Oceanside, New York

method of import: 150 barges per year @ 15,000 barrels = 2,225,000 barrels
points of origin of cargos:

types of cargos: other oil terminals in the port.
1,000,000 barrels of regular gasoline
500,000 barrels of regular unleaded gasoline
500,000 barrels of premium gasoline
225,000 barrels of #2 oil

method of export: transported inland by truck

T.P.H.: 2,225,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

113

SUNOCO (SUN OIL COMPANY)
Oceanside, New York

method of import: 50 barges per year @ 15,000 barrels = 750,000 barrels
points of origin of cargos:

types of cargos: other oil terminals in the port.
350,000 barrels of #2 oil
400,000 barrels of gasolines of different octane blends

method of export: transported inland by truck

T.P.H.: 750,000 barrels

ancillary information: Bringing in cargo is dependent on high tide.

POWER PLANTS CONSUMING OIL OR PETROLEUM-BASED
PRODUCTS IN THE PORT OF NEW YORK THAT RELY ON
MARITIME COMMERCE



NEW BRUNSWICK POWERHOUSE
New Brunswick, New Jersey

uses: 100,000 barrels of #6 oil per year



SAYREVILLE POWERHOUSE
Sayreville, New Jersey

uses: 1,000,000 barrels of #6 oil per year
100,000 barrels of kerosene and jet fuel per year



SOUTH AMBOY POWERHOUSE
South Amboy, New Jersey

uses: 400,000 barrels of #6 oil per year
100,000 barrels of #2 oil per year
100,000 barrels of kerosene and jet fuel per year



TRAVIS POWERHOUSE
Travis, Staten Island, New York

uses: 1,500,000 barrels of #6 oil per year
200,000 barrels of #2 oil per year



ESSEX POWERHOUSE
Essex, New Jersey

uses: 1,000,000 barrels of #6 oil per year



HARRISON POWERHOUSE
Harrison, New Jersey

uses: 900,000 barrels of #6 oil per year
50,000 barrels of kerosene per year



KEARNY POINT POWERHOUSE
Kearny Point, New Jersey

uses: 1,200,000 barrels of #6 oil per year
150,000 barrels of #2 oil per year
300,000 barrels of kerosene and jet fuel per year



COPPER'S COVE POWERHOUSE
Copper's Cove, Kearny Point, New Jersey

uses: 800,000 barrels of #6 oil per year
100,000 barrels of #2 oil per year



MARION POWERHOUSE
Jersey City, New Jersey

uses: 1,000,000 barrels of #6 oil per year
100,000 barrels of #2 oil per year



57th STREET POWERHOUSE
Brooklyn, New York

uses: 1,000,000 barrels of naphta per year
400,000 barrels of #2 oil per year



29th STREET POWERHOUSE
Brooklyn, New York

uses: 500,000 barrels of #2 oil per year
500,000 barrels of #6 oil per year
500,000 barrels of naphta per year



HUDSON AVENUE POWERHOUSE
Brooklyn, New York

uses: 1,500,000 barrels of #6 oil per year
700,000 barrels of #2 oil per year



14th STREET POWERHOUSE
Manhattan, New York

uses: 1,000,000 barrels of #2 oil per year
1,000,000 barrels of #6 oil per year



70th STREET POWERHOUSE
Manhattan, New York

uses: 500,000 barrels of #2 oil per year
500,000 barrels of #6 oil per year



PETROLEUM LIGHT & POWER
Newton Creek, Brooklyn, New York

uses: 500,000 barrels of #2 oil per year
500,000 barrels of #4 oil per year



LONG ISLAND LIGHTING COMPANY
Newton Creek, Brooklyn, New York

uses: 750,000 barrels of #6 oil per year
250,000 barrels of various chemicals per year



ASTORIA POWERHOUSE
Lawrence Point, Queens, New York

uses: 800,000 barrels of #6 oil per year
500,000 barrels of #2 oil per year



RIKERS ISLAND PRISON
Rikers Island, New York

uses: 40,000 barrels of #2 oil per year
80,000 barrels of #6 oil per year



LONG ISLAND LIGHTING COMPANY
Oceanside, New York

uses: 400,000 barrels of #6 oil per year
40,000 barrels of #2 oil per year

The following is a listing of all the petroleum-using facilities in the Port of New York in chronological order from largest to smallest in terms of total product handled annually. Wherever there is two or more facilities of equivalent T.P.H., alphabetical chronology dominates.

<u>Facility.</u>	<u>T.P.H. (yearly)</u>
EXXON CORPORATION Constable Hook.....	158,520,000 barrels
AMARADA HESS CORPORATION Port Reading.....	105,400,000 barrels
GATX.....	58,000,000 barrels
EXXON CORPORATION Bayway.....	50,000,000 barrels, 100,000 tons (min.)
MOBIL OIL CORPORATION Port Mobil.....	40,000,000 barrels
SUNOCO Port Newark.....	36,000,000 barrels (min.)
CHEVRON Perth Amboy.....	34,000,000 barrels, 40,000 tons
TEXACO INCORPORATED Bergen Point.....	30,000,000 barrels
BTW.....	24,000,000 barrels
AMARADA HESS CORPORATION Bayonne.....	20,000,000 barrels
AMARADA HESS CORPORATION Perth Amboy.....	17,000,000 barrels
SHELL OIL COMPANY Sewaren.....	15,000,000 barrels, 25,000 tons
HOWARD-ROSS TERMINAL.....	15,000,000 barrels
GREATER NEW YORK TERMINAL.....	14,400,000 barrels
AMARADA HESS CORPORATION Keadby.....	12,750,000 barrels
ROYAL OIL COMPANY Sewaren.....	12,000,000 barrels
CIBRO Port Morris.....	10,800,000 barrels
METROPOLITAN OIL COMPANY Bronx.....	10,500,000 barrels
CITGO Tremley Point.....	10,000,000 barrels
BP Tremley Point.....	9,000,000 barrels
PATCHOGUE OIL COMPANY.....	9,000,000 barrels
GULF OIL COMPANY Gulfport.....	8,000,000 barrels
AMOCO Carteret.....	5,000,000 barrels
EXXON CORPORATION Bayonne.....	5,000,000 barrels
NORTHEAST PETROLEUM COMPANY.....	5,000,000 barrels
NORTHVILLE INDUSTRIES.....	4,800,000 barrels
COASTAL OIL COMPANY.....	3,600,000 barrels
CROWN OIL COMPANY.....	3,000,000 barrels
PARAGON OIL COMPANY Port Newark.....	3,000,000 barrels
SHELL OIL COMPANY Newton Creek.....	3,000,000 barrels
MOBIL OIL CORPORATION Jamaica Bay.....	2,500,000 barrels
SHELL OIL COMPANY Jamaica Bay.....	2,500,000 barrels

TEXACO INCORPORATED Bushwick Inlet.....	2,500,000	barrels
TEXACO INCORPORATED Jamaica Bay.....	2,500,000	barrels
EXXON CORPORATION Bogoda.....	2,400,000	barrels
BP Oceanside.....	2,225,000	barrels
HUDSON AVENUE POWERHOUSE.....	2,200,000	barrels
ALLIED PETROLEUM STORAGE.....	2,000,000	barrels
AMARADA HESS CORPORATION Bogoda.....	2,000,000	barrels
EXXON CORPORATION Newton Creek.....	2,000,000	barrels
EXXON CORPORATION Passaic River.....	2,000,000	barrels
14th STREET POWERHOUSE.....	2,000,000	barrels
SUNOCO Jamaica Bay.....	2,000,000	barrels
TENNECO.....	2,000,000	barrels
TEXACO INCORPORATED Passaic River.....	2,000,000	barrels
TOWN FUEL COMPANY.....	2,000,000	barrels
TRAVIS POWERHOUSE.....	1,700,000	barrels
KEARNY POINT POWERHOUSE.....	1,650,000	barrels
PREMIUM OIL COMPANY Flushing.....	1,600,000	barrels
AMARADA HESS CORPORATION Edgewater.....	1,500,000	barrels
AMARADA HESS CORPORATION Westchester.....	1,500,000	barrels
BAY OIL COMPANY.....	1,500,000	barrels
GETTY OIL COMPANY Passaic River.....	1,500,000	barrels
GULF OIL COMPANY Oceanside.....	1,500,000	barrels
MOBIL OIL CORPORATION #1 Newton Creek.....	1,500,000	barrels
MOBIL OIL CORPORATION #2 Newton Creek.....	1,500,000	barrels
PARAGON OIL COMPANY Barret Point.....	1,500,000	barrels
SAFWAY OIL COMPANY.....	1,500,000	barrels
SHELLWACKTER OIL COMPANY.....	1,500,000	barrels
STUDUROS OIL COMPANY.....	1,500,000	barrels
29th STREET POWERHOUSE.....	1,500,000	barrels
57th STREET POWERHOUSE.....	1,400,000	barrels
AMARADA HESS CORPORATION Secaucus.....	1,350,000	barrels
ASTORIA POWERHOUSE.....	1,300,000	barrels
MARION POWERHOUSE.....	1,100,000	barrels
AMARADA HESS CORPORATION Passaic River.....	1,000,000	barrels
BELCHER OIL COMPANY.....	1,000,000	barrels
ESSEX POWERHOUSE.....	1,000,000	barrels
EXXON CORPORATION Eastchester.....	1,000,000	barrels
EXXON CORPORATION Newton Creek.....	1,000,000	barrels
LONG ISLAND LIGHTING COMPANY Newton Creek.....	1,000,000	barrels
McCREE/AMOCO.....	1,000,000	barrels
MOBIL OIL CORPORATION Eastchester.....	1,000,000	barrels
PETROLEUM LIGHT & POWER.....	1,000,000	barrels
PHILLIPS 66.....	1,000,000	barrels
SAYREVILLE POWERHOUSE.....	1,000,000	barrels
70th STREET POWERHOUSE.....	1,000,000	barrels
SHELL OIL COMPANY Eastchester.....	1,000,000	barrels
SUNOCO Eastchester.....	1,000,000	barrels
HARRISON POWERHOUSE.....	950,000	barrels
COPPERS COVE POWERHOUSE.....	900,000	barrels
EXXON CORPORATION Oceanside.....	900,000	barrels
CIBRO Island Park.....	800,000	barrels
AMOCO Newton Creek.....	750,000	barrels
GREAT EASTERN OIL COMPANY.....	750,000	barrels
JAMAICA BAY OIL COMPANY.....	750,000	barrels
PREMIUM OIL COMPANY #1 Newton Creek.....	750,000	barrels
Q OIL COMPANY.....	750,000	barrels
ROYAL OIL COMPANY Long Island City.....	750,000	barrels
SUNOCO Oceanside.....	750,000	barrels

WELSH OIL COMPANY.....	750,000	barrels
PORTSIDE TERMINAL.....	700,000	barrels
SOUTH AMBOY POWERHOUSE.....	600,000	barrels
ARGUS OIL COMPANY.....	500,000	barrels
EASTERN PETROLEUM COMPANY.....	500,000	barrels
EFFRON OIL COMPANY.....	500,000	barrels
GETTY OIL COMPANY Newton Creek.....	500,000	barrels
GULF OIL COMPANY Jamaica Bay.....	500,000	barrels
GULF OIL COMPANY Newton Creek.....	500,000	barrels
MADISON OIL COMPANY.....	500,000	barrels
PREMIUM OIL COMPANY #2 Newton Creek.....	500,000	barrels
PROCTER & GAMBLE INCORPORATED.....	475,000	barrels (min.)
LONG ISLAND LIGHTING COMPANY Oceanside.....	440,000	barrels
DUPONT INDUSTRIES.....	360,000	tons
AMARADA HESS CORPORATION Little Ferry.....	250,000	barrels
PEERLES CHEMICAL.....	250,000	barrels
NATIONAL INDUSTRIES.....	200,000	barrels, 20,000 tons
NASSAU UTILITIES.....	150,000	barrels
WHEELEN OIL COMPANY.....	150,000	barrels
ALLIED CHEMICAL COMPANY.....	150,000	tons
GAF.....	120,000	barrels
RIKERS ISLAND PRISON.....	120,000	barrels
UNION CARBIDE INDUSTRIES.....	100,000	barrels, 100,000 tons
NEW BRUNSWICK POWERHOUSE.....	100,000	barrels
PHILLIP DODGE.....	85,000	barrels
NATIONAL GYPSUM.....	80,000	barrels
CASTRO OIL COMPANY.....	30,000	barrels
ALLIED VEGETABLE OIL COMPANY.....	no data	available
ARCO.....	no data	available
BEST FOOD.....	no data	available
CIBRO Gowanus Creek.....	no data	available
CLAREMOINT.....	no data	available
COLGATE-PALMOLIVE COMPANY.....	no data	available
EL DORADO TERMINALS #1.....	no data	available
EL DORADO TERMINALS #2.....	no data	available
GORDON OIL COMPANY.....	no data	available
HUDSON TANK COMPANY.....	no data	available
OUTERBRIDGE TERMINAL.....	no data	available
RIVER FUEL COMPANY.....	no data	available
ROLLINS TERMINAL.....	no data	available
ROSSEVILLE LNG STORAGE.....	no data	available
STANDARD TANK CORPORATION.....	no data	available

Total annual T.P.H. for all petroleum-
using facilities in the Port of New York. = 826,095,000 barrels and 795,000 tons
(at minimum)

Accepting the base figure of \$33.52 per crude barrel⁵, the minimum⁶ dollar value of
the petroleum product flow through the Port of New York yearly is \$27,690,740,400.00

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5 - The Saudi Arabian wholesale crude price for their highest quality crude called Arab Berri is used to establish the minimum base value of petroleum products. The Saudi price is used as it is the cheapest market price. Naturally, petroleum imported from other petroleum exporting countries with higher crude prices (i.e. Kuwait - \$35.50/barrel for Kuwait Crude, Nigeria - \$36.00/barrel for Brass River Crude, Venezuela - \$38.06/barrel for Ofcina Crude) will raise the total dollar value given if incorporated into the calculation. The idea here is to simply give the reader a minimum ballpark figure. The prices are current as of 9/21/81.

6 - See Pg. 6, footnote 3 for a refresher on what the word minimum is intended to mean.

Saudi wholesale crude. Translated into a more common measuring unit, the dollar value is \$00.798 per gallon Saudi wholesale crude. It should be noted that the dollar value in actuality is nearly double (approximately 84% greater; multiply by 1.8)⁷ the above figure when one adds the costs for refining, processing, sorting, and storage. The price variations between petroleum exporting countries must also be considered in the above statement.

The following is a listing of all the companies responsible for the marine petroleum commerce of the Port of New York. They are listed in chronology from biggest to smallest based on their annual T.P.H.. As will be seen, the number of companies is considerably less than the number of petroleum-using facilities. The companies that are subsidiaries of other larger companies operating in the port are calculated as contributing to the parent company's revenues and T.P.H.. Also listed, according to company, is the percent of the petroleum commerce that each company has in the Port of New York. Lastly, the dollar value in Saudi wholesale crude dollars is listed for each company. The share of commerce that each company has and the dollar value are based on the T.P.H.. Due to the method of chronological listing, the percent values and dollar figures will naturally follow suit decreasing as one continues down the list. Whenever there are two or more companies with an equal T.P.H., they are listed alphabetically unless it is specifically known that one company is bigger than another due to outside operations.

<u>Company name.</u>	<u>T.P.H. (all).</u>	<u>% share.</u>	<u>total dollar value.</u>
EXXON CORPORATION.....	222,820,000	26.97%	\$ 7,468,926,400.00
AMARADA HESS CORPORATION.....	171,750,000	20.79%	\$ 5,757,060,000.00
GATX.....	58,000,000	7.02%	\$ 1,944,160,000.00
MOBIL OIL CORPORATION.....	46,500,000	5.62%	\$ 1,558,680,000.00
TEXACO INCORPORATED.....	41,500,000	5.02%	\$ 1,391,080,000.00
SUNOCO.....	39,900,000	4.82%	\$ 1,337,448,000.00
CHEVRON.....	34,000,000	4.11%	\$ 1,139,680,000.00
BTW.....	24,000,000	2.90%	\$ 804,480,000.00

7 - The calculation is based on the difference between the Saudi wholesale crude price and U.S. retail price paid for a gallon of regular gasoline at the pump (approximated to be \$1.47/gallon). This is an arbitrary figure; whether you give or take a few cents will not alter the point being made. It is realized that many of the higher refined petroleum products (i.e. olefins) and chemicals cost more to manufacture; but, at the same token, it must be realized that many of the oils and other low grade refined products cost less to manufacture.

SHELL OIL COMPANY.....	21,500,000	2.60%	\$	720,680,000.00
HOWARD-ROSS TERMINAL.....	15,000,000	1.81%	\$	502,800,000.00
GREATER NEW YORK TERMINAL.....	14,400,000	1.74%	\$	482,688,000.00
ROYAL OIL COMPANY.....	12,750,000	1.54%	\$	427,380,000.00
CIBRO.....	11,600,000	1.40%	\$	388,832,000.00
BP.....	11,225,000	1.35%	\$	376,262,000.00
GULF OIL COMPANY.....	10,500,000	1.27%	\$	351,960,000.00
METROPOLITAN OIL COMPANY.....	10,500,000	1.27%	\$	351,960,000.00
CITGO.....	10,000,000	1.21%	\$	335,200,000.00
AMOCO.....	6,750,000	0.81%	\$	226,260,000.00
NORTHEAST PETROLEUM COMPANY.....	5,000,000	0.60%	\$	167,600,000.00
NORTHVILLE INDUSTRIES.....	4,800,000	0.58%	\$	160,896,000.00
COASTAL OIL COMPANY.....	3,600,000	0.43%	\$	120,672,000.00
CROWN OIL COMPANY.....	3,000,000	0.36%	\$	100,560,000.00
PREMIUM OIL COMPANY.....	2,850,000	0.34%	\$	95,532,000.00
HUDSON AVENUE POWERHOUSE.....	2,200,000	0.26%	\$	73,744,000.00
GETTY OIL COMPANY.....	2,000,000	0.24%	\$	67,040,000.00
TENNECO.....	2,000,000	0.24%	\$	67,040,000.00
ALLIED PETROLEUM STORAGE.....	2,000,000	0.24%	\$	67,040,000.00
14th STREET POWERHOUSE.....	2,000,000	0.24%	\$	67,040,000.00
TOWN FUEL COMPANY.....	2,000,000	0.24%	\$	67,040,000.00
TRAVIS POWERHOUSE.....	1,700,000	0.20%	\$	56,984,000.00
KEARNY POINT POWERHOUSE.....	1,650,000	0.19%	\$	55,308,000.00
BAY OIL COMPANY.....	1,500,000	0.18%	\$	50,280,000.00
SAFEWAY OIL COMPANY.....	1,500,000	0.18%	\$	50,280,000.00
SHELLWACKTER OIL COMPANY.....	1,500,000	0.18%	\$	50,280,000.00
STUDUROS OIL COMPANY.....	1,500,000	0.18%	\$	50,280,000.00
29th STREET POWERHOUSE.....	1,500,000	0.18%	\$	50,280,000.00
LONG ISLAND LIGHTING COMPANY.....	1,440,000	0.17%	\$	48,268,000.00
57th STREET POWERHOUSE.....	1,400,000	0.16%	\$	46,928,000.00
ASTORIA POWERHOUSE.....	1,300,000	0.15%	\$	43,576,000.00
MARION POWERHOUSE.....	1,100,000	0.13%	\$	36,872,000.00
PHILLIPS 66.....	1,000,000	0.12%	\$	33,520,000.00
BELCHER OIL COMPANY.....	1,000,000	0.12%	\$	33,520,000.00
ESSEX POWERHOUSE.....	1,000,000	0.12%	\$	33,520,000.00
PETROLEUM LIGHT & POWER.....	1,000,000	0.12%	\$	33,520,000.00
SAYREVILLE POWERHOUSE.....	1,000,000	0.12%	\$	33,520,000.00
70th STREET POWERHOUSE.....	1,000,000	0.12%	\$	33,520,000.00
HARRISON POWERHOUSE.....	950,000	0.11%	\$	31,844,000.00
COPPER'S COVE POWERHOUSE.....	900,000	0.10%	\$	30,168,000.00
GREAT EASTERN OIL COMPANY.....	750,000	0.09%	\$	25,140,000.00
JAMAICA BAY OIL COMPANY.....	750,000	0.09%	\$	25,140,000.00
Q OIL COMPANY.....	750,000	0.09%	\$	25,140,000.00
WELSH OIL COMPANY.....	750,000	0.09%	\$	25,140,000.00
PORTSIDE TERMINAL.....	700,000	0.08%	\$	23,464,000.00
SOUTH AMBOY POWERHOUSE.....	600,000	0.07%	\$	20,112,000.00
ARGUS OIL COMPANY.....	500,000	0.06%	\$	16,760,000.00
EASTERN PETROLEUM COMPANY.....	500,000	0.06%	\$	16,760,000.00
EFFRON OIL COMPANY.....	500,000	0.06%	\$	16,760,000.00
MADISON OIL COMPANY.....	500,000	0.06%	\$	16,760,000.00
PROCTER & GAMBLE INCORPORATED.....	475,000	0.05%	\$	15,922,000.00
PEERLES CHEMICAL.....	250,000	0.03%	\$	8,380,000.00
NATIONAL INDUSTRIES.....	200,000	0.02%	\$	6,704,000.00
WHEELER OIL COMPANY.....	150,000	0.01%	\$	5,028,000.00
GAF.....	120,000	0.01%	\$	4,022,400.00
RIKERS ISLAND PRISON.....	120,000	0.01%	\$	4,022,400.00
UNION CARBIDE INDUSTRIES.....	100,000	0.01%	\$	3,352,000.00
NEW BRUNSWICK POWERHOUSE.....	100,000	0.01%	\$	3,352,000.00

PHILLIP DODGE.....	85,000	0.01%	\$ 2,849,200.00
NATIONAL GYPSUM.....	80,000	0.009%	\$ 2,681,600.00
CASTRO OIL COMPANY.....	30,000	0.003%	\$ 1,005,600.00
<hr/>			
69 companies total	826,095,000	100.00%	\$27,690,740,400.00

Those companies for which there are no figures are not included and are not calculated in the percentages. Also, those companies with tonnage figures strictly are not included. For those companies with both barrel and tonnage figures, only the barrels were counted. While it is admitted that there is some error in the percentage values due to the above, overall the percentage statistics are significant since almost all the companies excluded are small local companies. The upper range percentage values (2.0 - 27.0) and mid-range percentage values (0.6 - 1.99) in the percent spectrum are quite accurate while the low range percent values (below 0.599) are questionably - in light of all the small companies excluded from the calculation.

The largest general petroleum product imported is oil, followed by gasoline, and then other refined and processed products. Oil imports totalled 432,845,000 barrels minimum or 52.4% of total imported petroleum products. The oil imports may be further broken down by grade to four individual sets of figures and percentages: #2 oil - 184,864,000 barrels (22.4%), #4 oil - 31,304,000 barrels (3.8%), #6 oil - 186,687,000 barrels (22.6%), and crude oil - 29,990,000 barrels (3.6%). Gasoline imports totalled 270,449,993 barrels minimum or 32.7% of total imported petroleum products. The gasoline imports may also be further broken down by grade to four individual sets of figures and percentages: regular gasoline - 91,105,832 barrels (11.0%), regular unleaded gasoline - 60,269,165 barrels (7.3%), premium unleaded gasoline - 55,671,664 barrels (6.7%), and premium gasoline - 63,403,332 barrels (7.7%). The remaining imported petroleum -based products totalled 122,800,007 barrels minimum and accounted for 14.9% of total imported products. No specific breakdown figures will be offered due to the diversity of products. Examples of products in this category are jet fuel, kerosene, and xylene, et cetera. In attempting to assign an average daily import figure, statistical averaging is used which produces a figure of 2,263,273.97 barrels minimum per day. This is based on the T.P.H. for the year divided by the number of

days in the year. In terms of vessel traffic, every importing tank vessel is carrying an average 109,073.44 barrels minimum. Trying to assign a specific export figure is difficult due to lack of information concerning many of the smaller terminal's sources of imports. While it is known that their import sources are domestic in origin, the knowledge of whether the sources are outside the port or simply cross-port trade is unknown. The lack of information on pipeline, railroad tankcar, and truck imports additionally complicates the establishment of a base export figure. Hence, no daily export figure is offered.

Until now, nothing has been said about the uses of the petroleum products. Below is a partial list of the major imported petroleum products and their uses. The uses

<u>Product.</u>	<u>Major uses.</u>
#2 oil.....	heating and energy production
#4 oil.....	heating and energy production
#6 oil.....	heating and energy production
crude oil.....	refined to produce higher petroleum derivatives such as listed here
regular gasoline.....	automobile fuel
regular unleaded gas....	automobile fuel
premium unleaded gas....	automobile fuel
premium gasoline.....	automobile fuel
diesel fuel.....	diesel engine fuel
jet fuel.....	aviation fuel
toluene.....	chemical synthesis
benzene.....	chemical synthesis
heptene.....	plastics manufacturing
xylene.....	chemical synthesis
naphta.....	olefin production, chemical synthesis, heating

given for the various petroleum products are major uses but not absolute.

To accomodate such a large petroleum commerce not to mention dry-cargo commerce, the port has to have a very strong commerce-supporting industry. The commerce-supporting industry is divided into two categories: the private sector, and the government sector. The private sector consists of shipyards, bunkering facilities, tank cleaning facilities, ship chandleries, electronic equipment and repair services, local cargo transports, docking and towing assistance, grub services, water, shipping agents, marine insurance underwriters, customs brokers, freight forwarders, and a good hinterland connectivity network. The government sector consists of piloting services, traffic control, channel dredging and obstruction clearing, emergency assistance, communi-

cations, quarantine and hospital services, U.S. Customs services, consular services, vessel inspections, and port maintenance. Each of the the above listed services is found in the Port of New York in abundance. Hence the Port of New York is well prepared to support the tremendous commerce it has. In the following pages, each of the commerce-supporting industries will be examined individually for better insight of their role in the total commerce infrastructure.

There are twenty shipyards in the Port of New York. Each is examined below. The square-encased double letters listed with each shipyard corresponds to the same square-encased double letters on the chart in the Appendix.

AA IRA S. BUSHEY & SONS INCORPORATED (subsidiary of AMARADA HESS CORPORATION)
Gowanus Bay, Brooklyn, New York

- 4 floating drydocks with tonnage displacement range of 12,000 - 75,000 tons and maximum tonnage lifting capability of 7,500 tons.

BB TODD SHIPYARDS CORPORATION
Erie Basin, Brooklyn, New York

- 1 floating drydock with maximum tonnage lifting capability of 22,000 tons.
- 1 graving dock capable of drydocking vessels with the following maximum dimensions: Length - 715.8', Beam - 87', Draft - 113'.

CC COASTAL DRYDOCK & REPAIR COMPANY (formerly BROOKLYN NAVY YARD)
Brooklyn, New York

- 3 graving docks.
- 2 piers for dockside repairs.
- 4 berths for dockside repairs.

DD BETHLEHEM STEEL CORPORATION
Hoboken, New Jersey

This is the largest ship repair installation in the Port of New York.

- 4 floating drydocks with maximum tonnage lifting capability of 25,000 tons.
- can handle VLCC's.

EE ROTDERMOND YARD
Morris Canal, New Jersey

- 1 floating drydock with maximum tonnage lifting capability of 10,000 tons.

FF BAYONNE MILITARY OCEAN TERMINAL (subsidiary of BETHLEHEM STEEL CORPORATION)
Bayonne, New Jersey

- 1 graving dock capable of drydocking vessels with the following maximum dimensions: Length - 1,079.4', Beam - 137.8', Draft - any.
- can handle VLCC's.

GG BROWN/RHEINHOLD SHIPYARD
Rosebank, Staten Island, New York

- 2 floating drydocks with maximum tonnage lifting capability of 2,000 tons.

- 26 STANDARD TANK CORPORATION
Bayonne, New Jersey
- 1 pier for dockside repairs.
 - 3 berths for dockside repairs.
 - maximum vessel dimensions that can be accommodated: Length - 300', Beam - 50', Draft - 20'.
- HH JACKSON ENGINEERING SHIPYARD (formerly BREWERS SHIPYARD)
Port Richmond, Staten Island, New York
- 4 floating drydocks with maximum tonnage lifting capability of 10,500 tons.
 - maximum vessel dimensions that can be accommodated: Length - 500', Beam - 87', Draft - 22'.
- II MORAN REPAIR SHIPYARD
Port Richmond, Staten Island, New York
- dockside repairs only (vessels under 300' in length).
- JJ REINAUER SHIPYARD
Port Richmond, Staten Island, New York
- dockside repairs only (vessels under 400' in length).
- KK BOUCHARD SHIPYARD
Port Richmond, Staten Island, New York
- dockside repairs only (vessels under 300' in length).
- LL EKLOFF MARINE CORPORATION
Port Richmond, Staten Island, New York
- dockside repairs only (vessels under 400' in length).
- MM CADDELL SHIPYARD
Port Richmond, Staten Island, New York
- 3 floating drydocks with maximum tonnage lifting capability of 2,000 tons.
- NN MORANIA SHIPYARDS
Port Richmond, Staten Island, New York
- dockside repairs only (vessels under 300' in length)
- OO POLING BROTHERS SHIPYARD
Port Richmond, Staten Island, New York
- dockside repairs only (vessels under 400' in length)
- PP COASTAL SHIPYARD (subsidiary of CADDELL SHIPYARD)
Port Richmond, Staten Island, New York
- 2 floating drydocks with maximum tonnage lifting capability of 2,000 tons.
- QQ WHITTY JUNKYARD
Smoking Point, Staten Island, New York
- vessels scrapped (under 350' in length), good for used parts and minor repairs.
- RR PERTH AMBOY SHIPYARD
Perth Amboy, New Jersey
- 1 floating drydock with maximum tonnage lifting capability of 2,300 tons.
 - maximum accommodative vessel dimensions: Length - 240', Beam - 50', Draft - 17'.

SS

UNION DRYDOCK
North Bergen, New Jersey

- 1 floating drydock with maximum tonnage lifting capability of 2,000 tons.

Bunkering is performed by small tankers and barges (usually under 15,000 barrels capacity) as this permits better recordkeeping. Chief engineers of all vessels are suspicious of bunker quality and delivery quantity. They know from experience that the captain will be quite perturbed if vessel speed and bunker consumption do not coincide - particularly with today's bunker prices. The reason for the bunkering problem is that many bunker carriers have dirty and poorly calibrated compartments. A government attempt to counteract the problem is the U.S. Customs requirement that meters be used for gauging bonded bunker deliveries. Vessels going foreign are duty-exempt and domestic vessels are state-tax exempt.

Foreign vessel operators are suspicious of American oil companies and on the whole use Shell Oil Company as their supplier of bunker. This is because Shell Oil Company was originally Anglo-Saxon/Dutch. Ships on time charter get their bunker from the respective oil companies for which they are on charter to. The oil companies generally have their own barges specially outfitted with longer-than-average discharge booms performing the bunkering service. Companies like EXXON CORPORATION, SUNOCO, MOBIL OIL CORPORATION, and TEXACO INCORPORATED specifically have their own vessels for their exclusive use. The oil companies also provide bunker service for dry-cargo shipping companies and 90% of the anchorage bunkering requests. The major bunkering service (aside from the oil companies who take care of their own) is Ekloff Marine Corporation. An interesting side note demonstrating how politics can have a powerful influence on commerce and big-business is the history of Ekloff Marine Corporation. Until the Nixon Administration, Ekloff Marine Corporation was a small, almost non-existent, oil transporter. Ekloff Marine Corporation had three vessels (all small). During the Nixon Administration, President Nixon initiated detente with many of the foreign fishing nations which prior to then were prohibited from entering U.S. ports to re-supply. Undoubtedly, the philosophy for prohibiting them from entering U.S. ports was that by doing so it would make it logistically tough on them and discourage them

from fishing off the U.S. coast. Hence more fish were left for the American fishermen. In reality, the philosophy did not work. Due to Nixon's detente, many foreign fishing nation's vessels were permitted to enter U.S. ports to resupply themselves. Russian, Polish, and Japanese vessels took immediate advantage of the change in American policy and used the Port of New York to resupply. When it came to fuel, they wanted Shell Oil Company. Shell Oil Company did not provide bunkering services though it provided bunker. It was Ekloff Marine Corporation that had the Shell Oil Company bunkering contract. Since Ekloff Marine Corporation had the Shell Oil Company bunkering contract, he virtually had an almost total monopoly on fishing vessel bunker service. This turned Ekloff Marine Corporation into a multi-million dollar operation literally overnight.

Aside from Ekloff Marine Corporation, bunkering facilities for small vessels and non-oil company vessels are listed below. A vessel operator can either send the vessel to one of these facilities for bunker or hire a local barge operator to go to the bunker facility, and pick-up the bunker load, and then bring it to the vessel wherever the vessel may be. To know the location of the bunkering facilities, refer to the

Bunker facilities in the port.

CHEVRON, Perth Amboy, New Jersey
MOBIL OIL CORPORATION, Port Mobil, Staten Island, New York
BP, Tremley Point, New Jersey
GULF OIL COMPANY, Gulfport, Staten Island, New York
EXXON CORPORATION, Constable Hook, New Jersey
PORTSIDE TERMINAL, Morris Canal, New Jersey
PATCHOGUE OIL COMPANY, Gowanus Bay, Brooklyn, New York

earlier section dealing with each petroleum-using facility individually for the symbol it is denoted on the chart with and then look up on the chart in the Appendix. Ekloff Marine Corporation is denoted by the symbol LL .

There are three tank cleaning facilities in the Port of New York. Each is examined individually below. To know location, follow above instructions.

MOBIL OIL CORPORATION
Port Mobil, Staten Island, New York

- has an excellent steam, hot water, butterworth, and vacuuming system. All discharge and cleaning residual is pumped into shore holding tanks for processing and disposal.
- 2 tank vessels up to 500' in length can be accommodated at one time.

STANDARD TANK CORPORATION
Bayonne, New Jersey

- not as modern as above facility (MOBIL OIL CORPORATION). All residual from cleaning is pumped by the individual vessels being cleaned into shore holding tanks. After a period of time of sitting in the tanks, the residual and water separates. The oil residual is then drained into another holding tank and the water is pumped into the bay. The plant gets enough oil from the tank cleaning process to fire its boilers which produce the steam and hot water for the butterworth machine, as well as run the vacuuming unit (though it doesn't work well). However, as stated, it is not as good as MOBIL OIL CORPORATION Port Mobil. This plant is notorious for its environment violations. The cleaning services of this plant are always in great demand and at any moment, there are 2 - 5 tank vessels being serviced depending on their size.
- maximum accommodative vessel size: Length - 400', Beam - 60', Draft - 35'.

CADDELL SHIPYARD
Port Richmond, Staten Island, New York

- a small modern facility just opened. Not much is known about it.

The ship chandleries and electronic equipment and repair shops are too numerous to mention here. Suffice it to say that there are enough of them that all vessels calling at the Port of New York can have their needs fulfilled.

To support the tremendous import/export petroleum commerce of the port, a certain number of local petroleum carriers are needed. These local petroleum transporters provide services such as offloading of large tankers at anchor or offloading them sufficiently to decrease draft to the point that they can dock, onloading them at anchor or topping them off, transporting cargo up rivers and into areas inaccessible by large tankers, conducting cross-port trade, and exporting cargo to other ports in the New England region. Naturally, these vessels tend to be small (maximum cargo capacity being 95,000 barrels but average maximum cargo capacity is 20,000 barrels). A majority of these small tank vessels are barges though there is a considerable but diminishing fleet of tankers. As it would be too cumbersome to individually list each vessel of the local fleet, no attempt is made. The list below is simply a listing of those local companies engaged in local petroleum commerce. It is not complete⁸.

Local petroleum transportation companies.

A. F. A. TANKER CORPORATION
AMARADA HESS CORPORATION
BOUCHARD TRANSPORTATION CORPORATION

8 - Due to the multitude of companies as well as smallness, it was difficult to ascertain precisely how many companies there are much less the size of their fleet.

CIBRO PETROLEUM PRODUCTS INCORPORATED
 DIESEL VESSEL OPERATORS INCORPORATED (subsidiary of AMARADA HESS CORPORATION)
 EKLOFF MARINE CORPORATION
 EASTERN TANKER CORPORATION
 EXXON CORPORATION
 GULF OIL COMPANY
 INTERSTATE TOWING CORPORATION (non-local outfit but operates locally)
 LIQUID CARRIERS INCORPORATED
 MANHATTEN OIL TRANSPORT of NEW YORK INCORPORATED
 MOBIL OIL CORPORATION
 MORANIA OIL TANKER/TRANSPORT CORPORATION
 POLING TRANSPORTATION CORPORATION
 REINAUER TRANSPORTATION COMPANIES INCORPORATED
 SPENTONBUSH FUEL TRANSPORT (subsidiary of AMARADA HESS CORPORATION)
 STANDARD TANK CORPORATION
 SUNOCO (SUN OIL COMPANY)
 TURECAMO TANKERS INCORPORATED

Docking and towing services are abundant in the Port of New York. There are about 100 modern and powerful tugs of up to 4300 horsepower capable of handling any size vessel. The rest are mostly old and not too powerful. Some are specialized for canal and river work. The list below names both companies that are strictly towing outfits and companies that have towboats in addition to other vessels. It is not complete⁹.

Local towing and docking outfits.

EKLOFF MARINE CORPORATION
 EXXON CORPORATION
 GOWANUS TOWING COMPANY INCORPORATED
 HUDSON RIVER TOWING COMPANY INCORPORATED
 INTERSTATE TOWING CORPORATION (non-local outfit but operates locally)
 KEHOE TOWING & TRANSPORTATION COMPANIES
 McALLISTER BROTHERS INCORPORATED
 MOBIL OIL CORPORATION
 MORAN TOWING & TRANSPORTATION COMPANY INCORPORATED
 REDSTAR TOWING & TRANSPORTATION COMPANY (subsidiary of AMARADA HESS CORPORATION)
 REINAUER TRANSPORTATION COMPANIES INCORPORATED
 RIVER TOWING & TRANSPORTATION INCORPORATED
 STANDARD TANK CORPORATION
 THOMAS J. BROWN & SONS INCORPORATED
 TURECAMO COASTAL & HARBOR TOWING CORPORATION

Grub services are available throughout the port. The vessel can either have a grub service company purchase and deliver the food to the vessel or send the cook

ashore to a foodstore - which is usually cheaper and provides better quality. Almost all foreign vessels use the former method of obtaining food while many American vessels use the latter method.

Water is found throughout the port at almost every petroleum-using facility mentioned as well as the shipyards, bunkering facilities, tank cleaning facilities, and a few public water connections (these are usually fire hydrants belonging to the City of New York). Use of the public water connections, however, are reserved for the local carriers. It should also be understood that though every facility has water, it does not mean any vessel can come for water. Many companies reserve water for their vessels only or vessels on charter with them.

There is such a multitude of shipping agents, marine insurance underwriters, customs brokers, and freight forwarders in the port that naming them all would be senseless. Suffice it to say, every vessel operator can find plenty of assistance in those areas. The Port of New York has an excellent hinterland connectivity network. There are thirteen railroads serving the port. Eight are long-haul lines and five are terminal lines. There is also an excellent highway network both within the port and connecting to the outside. Trucking companies are found in abundance.

Pilotage, which is mandatory for all foreign vessels and all American vessels departing for and coming from foreign ports, is provided by the State of New York¹⁰. Charges for pilotage vary from vessel to vessel depending on draft, length, and width (beam) of vessel. Destination in the port is also a factor. In addition, there are all sorts of surcharges and additional fees depending on the time of day, weather conditions, and requested special services.

Traffic control is regulated by the United States Coast Guard. According to the Coast Guard, New York Harbor is one of the five most busiest harbors in the world. The Vessel Traffic Service (VTS) is the most sophisticated of its kind in the country. The VTS is defined as a "combination of equipment, people, and regulations designed

10 - *The pilots are trained and licensed by the State of New York and hence are state pilots. The Federal government has nothing to do with the pilot operations except in the event of an accident.*

to prevent collisions, rammings, and grounding of vessels in the New York Harbor area". The basic mode of operation is through radar monitoring, radio communications, television monitoring, and regulations. However, as nice as the system might sound it has faced a lot of criticism - particularly from the local vessel operators.

Channel dredging and obstruction clearing is conducted by the United States Army Corps of Engineers. They have their own fleet of specially designed and outfitted vessels to carry out those tasks. In addition, they have patrol boats; which if one looks for can be seen moving about the harbor.

Emergency assistance is provided by many different agencies depending on the emergency. The United States Coast Guard provides emergency evacuation service either by air or by sea, handles spill mop-up operations, provides firefighting equipment, and anything else that may be needed. Spill mop-up operations and containment equipment are also handled by the Environmental Protection Agency along with the state level environmental protection agencies. The U.S. Army Corps of Engineers will step in if needed. Specific firefighting vessels are maintained by the City of New York and the New York Police Department has three small patrol craft that monitor harbor activities.

Communications is handled by the Federal Communications Commission which licenses radio operators and transmission facilities. Monitoring of marine communications is handled by the U.S. Coast Guard and ship-to-shore communications is handled by private stations under government control.

Quarantine and hospital services are provided by the Port Quarantine Station, the Marine Medical Division of Doctors, and the United States Public Health Service. Agricultural quarantines and cargo quarantines are handled by the U.S. Department of Agriculture and the U.S. Customs Service respectively. In addition, the U.S. Customs Service provides customs inspection, collection of duty, and merchandise appraisal. Customs inspection is mandatory on all foreign imported cargos.

Practically every nation maintains either an embassy, consulate, or foreign office in New York. Hence, almost every foreign vessel calling at the port can find a representative of their country for handling internal matters of importance.

Vessel inspection is provided by the United States Coast Guard. Port maintenance

is split between four government organizations. Maintenance of the physical harbor itself is handled by the U.S. Army Corps of Engineers. Maintenance of the environmental aspects of the port are the responsibility of the Environmental Protection Agency and its state level counterparts. Maintenance of the navigation aids is the responsibility of the U.S. Coast Guard and maintenance of the port facilities is the responsibility of the Port Authority. Two other government agencies that provide needed services are the National Oceanic & Atmospheric Administration (NOAA) and the United States Immigration & Naturalization Service (USINS). NOAA provides information on weather and sea conditions and USINS prevents illegal alien entries.

Many of the commerce-supporting businesses and agencies have their offices in the World Trade Center. The idea behind building the World Trade Center was that by having such a complex, many if not all the commerce related industries and services could be housed under one roof thereby facilitating access to shippers, vessel operators, and other trade-related outfits. Today, if one visits the World Trade Center, one finds the offices of the U.S. Customs Service, Port Authority, shipping agents, customs brokers, marine insurance underwriters, freight forwarders, shipping companies, et cetera. To a reasonable degree, the idea behind the World Trade Center has worked.

The final portion of the report will compare the Mahanian and Craven principles of port development to the actual development of the Port of New York and speculate on the future of the port. Alfred Thayer Mahan¹¹ put forth four principles which he said governed the development of ports. However, due to the passage of time and changes in technology, it was questioned whether the principles still had validity. Believing that they still were valid today but needed adjustment, John P. Craven¹² added two more principles to serve as qualifying statements. In the author's opinion, the six principles are indeed valid today. Listed on the following page are the six

11 - Alfred Thayer Mahan was an American naval officer of the late 19th century who strongly urged American Expansionism and development of naval seapower.

12 - John P. Craven is a former naval officer and ocean engineer who designed the Polaris missile system. He is currently a professor of ocean engineering at the University of Hawaii, the Marine Affairs Coordinator of the State of Hawaii, and the Director of the Law of the Sea Institute.

principles.

- 1) The shape of the landmass (configuration) with respect to the sea determines a large amount of both the perceptual and functional processes of the landmass.
- 2) The capacity of the landmass to be a port and/or harbor due to the coastal geography determines the relationship.
- 3) The number of people in the vicinity having knowledge of the technology of the sea is a determining factor of the relationship.
- 4) The ability of the society and nation to function effectively in their utilization of the sea is a function of the character of the people and the government.
- 5) All the above (first four principles) are a function of the scale of technology and the scale of society.
- 6) The sea by its physical nature is an operant conditioner. If an individual engages in behavior that is associative and conducive to the sea, the individual will be rewarded. If the individual engages in behavior that is disharmonious and disruptive to the sea, the individual will be punished. It is, however, possible to adapt behavior so that the rewards are maximized and the punishments are minimized.

The first three principles are certainly valid as is documented by the long association the Port of New York has had with maritime commerce. The fact that the port has the largest share of U.S. maritime commerce demonstrates the validity of the principles. The number of marine facilities found in the port, both industrial and business in nature, further demonstrates the validity of the principles. The fourth principle is the explanation for the suppressed maritime commerce and industry of the United States. The character of the people and government is not conducive to maintaining a strong maritime commerce. The attitude of the people and government is not sea-oriented. Hence, the U.S. merchant fleet carries so little of its own trade as well as world trade. The subsidy program in effect "to enhance the U.S. merchant fleet and U.S. participation in trade" is a malignant outgrowth of naivety on our part of the true land/sea relationship. Contrasting the national problem, is the fact the local governments are trying to enhance commerce through the Port Authority of New York and New Jersey. The Port Authority of New York and New Jersey is an expression of character by the local government on behalf of the people saying that they do want to have a strong commerce and land/sea relationship. The fifth principle is certainly true. It

maintains the validity of the first four principles through time. The Port of New York is an example where drastic changes in the scale of technology and society have occurred since its founding. Yet, the port has maintained an effective role in modern day commerce. The sixth principle is abstract in the sense that it is practiced all the time without conscious thought. It is certainly true but we don't think about it. The ships we build, the structures we construct to facilitate land/sea exchanges, and the other sea-related operations we conduct are all examples of the inherent consideration given the sixth principle. The things we build and operate successfully on the sea are constructed with regard to the ocean's fluid structure, it's dynamic forces, and it's variable behavior. Those things that are not - do not last long!

The future of the port in terms of petroleum commerce is ambiguous. The reasons are several. One is that the port is shallow. Giant tankers (draft over 65') can not enter at all unless empty or near-empty and intermediate-sized tankers (draft over 40') can only go as far as the Upper Bay Anchorage. They then have to lighten up before continuing. While it may be argued that there are no other ports on the eastcoast that accommodate large tankers or supertankers, the counter-argument is what is to prevent these vessels from anchoring outside those ports and the cargos removed by lighters. Particularly since the other ports may be the final destinations of the cargos.

A second reason is the increasing role of pipeline transportation. The future could very well be one where tankers bring their loads to Gulf Coast ports and from there their cargos are transported via pipeline to the New England area. The only problems pipeline transportation faces are environmental attitudes and routing.

A third reason is that the port is pricing itself out of business. The wages received by dock personnel, terminal operators, seamen onboard local carriers, and other affiliated personnel are extremely high relative to many other ports in the United States. The charges for transport service by local carriers, the rates for towing and docking services, and pilot fees are also quite high compared to other U.S. ports. Basically, you have a situation in the Port of New York where "everyone wants to have their cake and eat it too." In other words, there are big salaries but low productivity. Examples of how this is leading to a decrease in petroleum commerce is the response of

the companies over the last ten years to rising costs. There has been a tremendous reduction of tonnage in the local fleet, a large reduction in number of personnel per unit (both land and sea units) by automation, and infiltration of outside operators that have lower rates due to lower operating costs.

A fourth reason is simply bureaucracy and government interference. To put it simply "there is so much regulation by so many agencies that to keep track of it all is becoming more and more difficult". Naturally, slip-ups occur and the minute they do somebody is in trouble - usually the carrier or company. This, of course, is not a problem unique to New York only but due to the magnitude of scale of operations in the port, it becomes more vivid. The author has personally witnessed many exclamations of frustration by people in shipping of the government redtape and regulations.

A fifth reason is public attitude towards petroleum commerce operations. Everyone wants to preserve the environment - so they claim - yet they still consume the large quantities of petroleum products. They can not do without their automobiles, motorcycles, air conditioners, stereos, televisions, blow-dryers, bug lamps, electric toys, et cetera. The list is endless. Naturally, to maintain such a high level of energy consumption, a large petroleum commerce is required, but nobody wants it in their neighborhood or "backyard". Taking the liberty of being cynical and stereotypic here, the following rhetoric is an example of public attitude: "Why can't they bring those ugly filthy things (refers to the tankers) somewhere else instead of here (refers to the port)? I mean I can't imagine why we should have to put up with it!" Offhand, this might sound like some southern woman that only knows how to gab and complain - and probably drives her husband crazy. Yet subtly, it is an example of public distaste for the petroleum trade. In context with the above remarks, the environmentalists and conservationists must also be counted among the opposition. In the Port of New York, the environmental protection laws are numerous and enforced to the detriment of petroleum commerce.

A sixth reason has to do with the small but discernible change in commodity traffic to and from the Port of New York. Just from general observation over a period of years, dry-cargo transport, particularly by container mode, is growing. The reasons are not

clear but probably the port's natural assets combined with its proximity to other ports and hinterland cities make it an excellent land/sea exchange point. Coupled with the above fact is that most container ships and freighters do not have the deep draft that many tankers have. Hence, they are better suited for entry and exit from the port. The dry-cargo operators can also absorb the higher prices for services in the port due to the higher values of the commodities they carry. In conclusion, they are probably growing at the expense of the petroleum trade.

What then is the future of petroleum commerce in the Port of New York? I would say that it will continue to exist but probably at a more limited scale. Most of the companies will stay due to the tremendous capital investments they have made in refineries, terminals, and other adjunct facilities. They can not afford to pull out. But, how they operate will be different!

APPENDIX

The appendix contains synoptic information of each of the major oil companies operating in the Port of New York. Included in the summaries are brief histories of each company; present production and marketing operations of each; and legal problems facing each company. All the information is current to 1975, but in some cases where more recent information was available it was added.

EXXON CORPORATION (STANDARD OIL COMPANY of NEW JERSEY)

Largest U.S. oil company
Incorporated in New Jersey
Address: 1251 Avenue of the Americas, New York, N.Y. 10020

HISTORICAL SKETCH

- 1882 Standard Oil Company (N.J.) incorporated.
- 1899 Standard Oil Company becomes central holding company for Standard Oil Trust.
- 1911 Standard Trust broken into 34 companies by Supreme Court. Standard Oil Company (N.J.) becomes a separate company.
- 1933 Standard Oil Company of New Jersey and Socony-Vacuum form Standard-Vacuum Oil Company.
- 1960 Standard Oil Company of New Jersey and Socony-Vacuum divided following anti-trust action.
- 1973 Standard Oil Company of New Jersey changes name to EXXON CORPORATION.

TRANSPORTATION

EXXON's U.S. pipelines transport 7,575 barrels of crude and refined products per day. EXXON's ocean-going tanker fleet has a gross capacity of 26,420,000 deadweight tons. Thirteen new tankers were delivered in 1974, and 24 more are now under construction. In addition, EXXON has a 20% interest in the TransAlaska Pipeline system.

FOREIGN OPERATIONS

EXXON has a major exploratory or production operations in Canada, Venezuela, Chile, Ivory Coast, Senegal, Morocco, France, Iran, Saudi Arabia, Qatar, Abu Dhabi, Libya, Indonesia, Malaysia, Gabon, the Malagasy Republic, and the North Sea. Refineries are located in Norway, Sweden, Great Britain, West Germany, Switzerland, Italy, Venezuela, Japan, France, Spain, Argentina, and other countries. EXXON's Venezuelan interests faced nationalization in 1975.

INVOLVEMENT IN OTHER ENERGY FIELDS

Coal, natural gas, oil, shale, uranium, processed nuclear fuels, and solar power.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Kansas, Florida, and Connecticut.
- anti-trust action by the Federal Trade Commission.
- three air quality standards violations, 45 environmental protection regulation violations, and 53 petroleum discharge violations.
- a suit by EXXON, API, and eight other companies against the Environmental Protection Agency against restrictive regulations and standards of performance and unrealistic state implementation plans.

REFINERIES IN UNITED STATES

Benicia, California.....	87,000 barrels per day
Baton Rouge, Louisiana.....	445,000 barrels per day
Billings, Montana.....	45,000 barrels per day
Bayway, New Jersey.....	300,000 barrels per day
Baytown, Texas.....	400,000 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	7.38%
Gasoline sales:	7,432,326,000 gallons
Number of EXXON stations:	26,000 (estimate)
Secondary brands:	Alert

TEXACO INCORPORATED

Second largest U.S. oil company
Incorporated in Delaware
Address: 135 E. 42nd Street, New York, N.Y. 10017

HISTORICAL SKETCH

- 1902 The Texas Company begins.
- 1928 Expands marketing to all states with acquisition of California Petroleum Company.
- 1936 Forms CALTEX with Standard Oil Company of California.
- 1958 Acquires Seaboard Oil Company.
- 1959 Changes name to TEXACO.
- 1962 Acquires TXL OIL.

TRANSPORTATION

At the end of 1974 TEXACO wholly owned worldwide 5,836 miles of pipeline (crude) and 1,470 miles of refined product lines. It held part interest in another 17,973 miles of crude lines and 11,928 miles of refined product lines. Two deepwater off-shore tanker terminals, threatened by the state of Texas' contention that all such facilities should be state owned and operated, are still under development. If completed, they will receive crude oil from supertankers and transport it by under-water pipeline for onshore processing.

TEXACO owns or charters 205 tankers, including 48 "mammoth" tankers. The total capacity of the fleet is 19,516,552 deadweight tons. Three very large crude carriers (over 200,000 D.W.T.) are now under construction.

FOREIGN OPERATIONS

TEXACO has foreign operations in 84 countries. Major exploratory and production operations are located in Saudi Arabia, Iran, Colombia, Venezuela, Ecuador, Zaire, Paraguay, Canada, Bolivia, Indonesia, Ethiopia, and the North Sea. TEXACO has a refinery interests in Colombia, Panama, Belgium, Sweden, Spain, Bahrain, Iran, France, Switzerland, West Germany, Ecuador, Ireland, and other countries.

INVOLVEMENT IN OTHER ENERGY FIELDS

Natural gas, coal, oil shale, and solar energy.

LEGAL ACTION AS OF DECEMBER 31, 1974

- 34 violations of water quality control standards.
- five service stations in violation of New York Air Pollution Control Code.
- criminal suit in Nassau, New York for violation of fire prevention regulations.
- seven suits by the state of Texas for violation of Texas Clean Air Act.
- air pollution violations in the Puget Sound area in Washington state.
- anti-trust suits by the states of Kansas, Florida, and Connecticut.
- anti-trust action by the Federal Trade Commission.
- two suits by the Environmental Protection Agency charging that TEXACO sold leaded gasoline to owners of cars marked "for unleaded gasoline only".
- a suit by TEXACO, API, and eight other companies against the Environmental Protection Agency against restrictive regulations and standards of performance and unrealistic state implementation plans.

REFINERIES IN UNITED STATES

Wilmington, California.....	50,000 barrels per day
Lawrenceville, Illinois.....	84,000 barrels per day
Lockport, Illinois.....	72,000 barrels per day
Westville, New Jersey.....	88,000 barrels per day
Tulsa, Oklahoma.....	50,000 barrels per day
Amarillo, Texas.....	20,000 barrels per day

Convent, Louisiana.....	140,000	barrels per day
Port Arthur, Texas.....	406,000	barrels per day
Port Neches, Texas.....	47,000	barrels per day
El Paso, Texas.....	17,000	barrels per day
Anacortes, Washington.....	63,000	barrels per day
Casper, Wyoming.....	21,000	barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	8.07%
Gasoline sales:	8,130,907,000 gallons
Number of TEXACO stations:	32,191
Secondary brands:	not known to use any.

MOBIL OIL CORPORATION

Third largest U.S. oil company
Incorporated in New York
Address: 150 E. 42nd Street, New York, N.Y. 10017

HISTORICAL SKETCH

1866 Vacuum Oil Company begins.
1879 Standard Oil Company acquires majority interest in Vacuum Oil Company.
1882 Standard Oil Company of New York established.
1911 Supreme Court breaks Standard Trust and makes Standard Oil Company of New York and Vacuum Oil Company separate companies.
1931 Standard Oil Company of New York and Vacuum Oil Company merge to form Socony-Vacuum Oil Company.
1955 Name changed to Socony-Mobil.
1966 Name changes to Mobil Oil Corporation.
1973 MOBIL OIL CORPORATION plans to close 575 service stations.

TRANSPORTATION

MOBIL OIL CORPORATION has a 5% interest in the TransAlaska Pipeline system and recently acquired an interest in the Texoma Pipeline. The company has an ownership in various domestic crude and product lines.

MOBIL OIL CORPORATION's fleet of 132 tankers have a capacity of 11,300,000 deadweight tons. Twelve new vessels are on order including three very large crude carriers (VLCC's).

FOREIGN OPERATIONS

MOBIL OIL CORPORATION has exploratory operations in Ecuador, Egypt, Phillipines, Norway, Zaire, Tunisia, Indonesia, Peru, Chile, Gabon, Iran, Iraq, Kuwait, Libya, Lebanon, Tanzania, Thailand, Venezuela, the North Sea, and other locations.
MOBIL OIL CORPORATION has refineries in West Germany and Japan.

INVOLVEMENT IN OTHER ENERGY FIELDS

Shale oil, natural gas, coal, and solar power.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Kansas, Florida, and Connecticut.
- anti-trust action by the Federal Trade Commission.
- multiple violations of environmental protection and water quality standards.

REFINERIES IN UNITED STATES

Torrance, California	123,500 barrels per day
Joliet, Illinois	175,000 barrels per day
Beaumont, Texas	335,000 barrels per day
Ferndale, Washington	71,500 barrels per day
Augusta, Kansas	50,000 barrels per day
Paulsboro, New Jersey	98,000 barrels per day
Buffalo, New York	42,800 barrels per day
East Providence, Rhode Island	7,500 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	6.54%
Gasoline sales:	6,594,898,000 gallons
Number of MOBIL OIL CORP. stations:	22,386
Secondary brands:	Sello

GULF OIL CORPORATION

Fourth largest U.S. oil company
Incorporated in Pennsylvania
Address: Gulf Building, Pittsburgh, Pennsylvania 15230

HISTORICAL SKETCH

- 1901 Gulf Refining Company formed.
- 1930 Gulf Refining Company purchases Paragon Refining Company.
- 1933 Acquires a chain of European marketing companies.
- 1936 Changes name to GULF OIL Company.
- 1956 Acquires Warren Petroleum Company, largest independent producer of natural gas and liquified petroleum gasoline. Also gets major interest in British American Oil Company.
- 1960 Buys Wilshire Oil Company.
- 1963 Acquires Pittsburgh & Midway Coal Mining Company (13th largest producer). Begins development program with Holiday Inns Incorporated.
- 1966 Buys 2,300 retail outlets from CITIES SERVICE COMPANY.

TRANSPORTATION

GULF OIL CORPORATION owns and operates more than 9,000 miles of crude and refined product lines in the United States and has an interest in another 12,600 miles of crude and product lines.

GULF OIL CORPORATION's fleet is comprised of 88 vessels, 45 of which are wholly owned by the company. Total capacity is 8,183,000 deadweight tons. Included in GULF OIL CORPORATION's fleet are 22 very large crude carriers (VLCC's). Sixteen ships totalling 3,000,000 deadweight tons are currently on order. GULF OIL CORPORATION operates three receiving terminals capable of handling these super-tankers. They are located in Bantry Bay, Ireland; Point Tupper, Nova Scotia; and Okinawa.

FOREIGN OPERATIONS

GULF OIL CORPORATION has foreign exploratory operations in Canada, Ecuador, Iran, Venezuela, Kuwait, Egypt, Saudi Arabia, Nigeria, Gabon, Angola, Zaire, the North Sea, and other areas. The company has refinery interests in the Netherlands, Italy, Wales, and Canada. GULF OIL CORPORATION's Venezuelan operations faced nationalization in 1975.

INVOLVEMENT IN OTHER ENERGY FIELDS

Shale oil, coal, processed nuclear fuels, operation of nuclear generators, uranium, tar sands, geothermal energy, and solar energy.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Kansas, Florida, and Connecticut.
- anti-trust action by the Federal Trade Commission.
- a suit by GULF OIL CORPORATION, API, and eight other companies against the Environmental Protection Agency against restrictive regulations and standards of performance and unrealistic state implementation plans.
- multiple violations of environmental protection regulations.

REFINERIES IN UNITED STATES

Port Arthur, Texas	312,100 barrels per day
Philadelphia, Pennsylvania	168,500 barrels per day
Belle Chasse, Louisiana	180,400 barrels per day
Sante Fe Springs, California	51,500 barrels per day
Venice, Louisiana	28,700 barrels per day
Cleves, Ohio	42,100 barrels per day
Toledo, Ohio	50,300 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	6.55%
Gasoline sales:	6,604,347,000 gallons
Number of GULF OIL CORP. stations:	19,462
Secondary brands:	EZ-Go

STANDARD OIL COMPANY of CALIFORNIA (CHEVRON)

Fifth largest U.S. oil company
Incorporated in Delaware
Address: 225 Bush Street, San Francisco, California 94104

HISTORICAL SKETCH

1879 Pacific Coast Oil Company (PCOC) formed.
1890 Standard Oil Company of New Jersey acquires Pacific Coast Oil Company.
1906 PCOC becomes Standard Oil Company of California and then acquires Standard Oil Company of Iowa.
1911 Standard Trust is broken by anti-trust action and Standard Oil Company of California becomes an independent company.
1936 Forms CALTEX under joint ownership with TEXACO INCORPORATED.
1961 Acquires Standard Oil Company of Kentucky.
1973 Supreme Court says Standard Oil Company of California is guilty of monopoly in American Samoa.

TRANSPORTATION

Standard Oil Company of California owns or leases 3,648 miles of crude pipelines in the U.S. and 5,009 miles worldwide. The company owns or leases 3,333 miles of refined product lines, including 3,068 miles in the U.S..
Standard Oil Company of California owns or leases 111 ocean-going tankers, including 30 very large crude carriers (VLCC's). These vessels have a total capacity of 11,919,000 deadweight tons and transported 672,369,000 barrels of oil in 1974. Thirteen new tankers are scheduled for delivery in the next three years.

FOREIGN OPERATIONS

Standard Oil Company of California has exploratory operations in 35 foreign countries including Saudi Arabia, Iran, Denmark, Spain, Australia, Ethiopia, Chad, Nigeria, Gabon, Sudan, Portugal, Morocco, Egypt, Canada, the Malagasy Republic, and the North Sea.

INVOLVEMENT IN OTHER ENERGY FIELDS

Geothermal, uranium, natural gas, and shale oil.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of California, Florida, and Connecticut.
- anti-trust action by the Federal Trade Commission.
- a suit by Standard Oil Company of California, API, and eight other companies against the Environmental Protection Agency against restrictive regulations and standards of performance and unrealistic state implementation plans.

REFINERIES IN THE UNITED STATES

Pascagoula, Mississippi	240,000 barrels per day
El Segundo, California	230,000 barrels per day
Richmond, California	190,000 barrels per day
Kenai, Alaska	22,000 barrels per day
Bakersfield, California	26,000 barrels per day
Honolulu, Hawaii	40,000 barrels per day
Baltimore, Maryland	14,000 barrels per day
Perth Amboy, New Jersey	88,000 barrels per day
Willbridge, Oregon	18,000 barrels per day
El Paso, Texas	71,000 barrels per day
Salt Lake City, Utah	45,000 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	4.90%
Gasoline sales:	4,941,066,000 gallons
Number of CHEVRON stations:	16,548
Secondary brands:	RPM and Kyso

STANDARD OIL COMPANY of INDIANA (AMOCO - AMERICAN OIL COMPANY)

Sixth largest U.S. oil company
Incorporated in Indiana
Address: 200 East Randolph Drive, Chicago, Illinois 60601

HISTORICAL SKETCH

- 1889 Standard Oil Company of Indiana incorporated.
- 1911 Supreme Court action breaks Standard Trust and makes Standard Oil Company of Indiana an independent company.
- 1919 Buys Dixie Oil Company.
- 1932 Buys Standard Oil Company of Nebraska.
- 1956 Acquires Utah Oil Company.
- 1957 Standard Oil Company of Indiana becomes a non-operating parent company and forms AMOCO to refine and market products.
- 1961 Acquires Honolulu Oil Company.
- 1964 Acquires Midwest Oil Company.

TRANSPORTATION

Standard Oil Company of Indiana owns and leases 11,143 miles of crude and 2,349 miles of refined product pipeline. The company owns and charters 40 tankers with a gross capacity of 2,642,000 deadweight tons.

FOREIGN OPERATIONS

Standard Oil Company of Indiana has foreign operations in Argentina, Egypt, Zaire, Australia, Algeria, India, Indonesia, Iran, Italy, Japan, Libya, Netherlands, Norway, Pakistan, Peru, Tanzania, Tunisia, Venezuela, and other countries. The Venezuelan interests faced nationalization in 1975.

INVOLVEMENT IN OTHER ENERGY FIELDS

Natural gas and shale oil.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Kansas, Florida, and Connecticut.
- anti-trust action by the Federal Trade Commission.
- several class actions by unspecified persons or groups seeking substantial monetary damages.
- multiple violations of Federal, state, and local air and water pollution control regulations.

REFINERIES IN UNITED STATES

Wood River, Illinois	107,000 barrels per day
Sugar Creek, Missouri	105,000 barrels per day
Whiting, Indiana	315,000 barrels per day
Texas City, Texas	333,000 barrels per day
Savannah, Georgia	12,000 barrels per day
Baltimore, Maryland	10,000 barrels per day
Mandan, North Dakota	48,000 barrels per day
Salt Lake City, Utah	39,000 barrels per day
Yorktown, Virginia	53,000 barrels per day
Casper, Wyoming	43,000 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	6.99%
Gasoline sales:	7,041,301,000 gallons
Number of AMOCO stations:	27,545
Secondary brands:	Whale and Super-D

ATLANTIC RICHFIELD COMPANY (ARCO)

Seventh largest U.S. oil company

Incorporated in Pennsylvania

Address: 515 South Flower Street, Los Angeles, California 90071

HISTORICAL SKETCH

- 1865 Atlantic Petroleum Storage Company forms.
- 1870 Atlantic Refining Company is incorporated.
- 1874 Atlantic Refining Company becomes part of Standard Trust.
- 1911 The Supreme Court restores Atlantic Refining Company as an independent company.
- 1956 Atlantic Refining Company acquires Houston Oil Company.
- 1966 Atlantic Refining Company (14th largest) merges with Richfield Oil Company (23rd largest) to become ATLANTIC RICHFIELD COMPANY.
- 1968 ATLANTIC RICHFIELD COMPANY discovers oil in Prudhoe Bay, Alaska.
- 1969 Sinclair Oil Company merges into ATLANTIC RICHFIELD COMPANY but Justice Department rules that ATLANTIC RICHFIELD COMPANY divest Sinclair Oil Company's U.S. properties - they are sold to BRITISH PETROLEUM LIMITED.
- 1970 U.S. District Court rules that ATLANTIC RICHFIELD COMPANY must sell midwest Sinclair Oil Company properties which the company had held onto.

TRANSPORTATION

Because of its extensive interests in the Prudhoe Bay field in Alaska, ATLANTIC RICHFIELD COMPANY is a 21% owner of the TransAlaska Pipeline system. ATLANTIC RICHFIELD COMPANY currently owns 8,430 miles of U.S. pipeline and has an interest in or owns another 16,400 miles.

ATLANTIC RICHFIELD COMPANY owns or charters 18 tankers with an aggregate capacity of 1,080,000 deadweight tons. Two new 120,000 ton tankers were delivered in 1974.

FOREIGN OPERATIONS

ATLANTIC RICHFIELD COMPANY has foreign operations in Qatar, Oman, Canada, Kuwait, Iran, Iraq, Saudi Arabia, Ecuador, Venezuela, the Artic Islands, the North Sea, and other locations. ATLANTIC RICHFIELD COMPANY's Venezuelan interests faced nationalization in 1975.

INVOLVEMENT IN OTHER ENERGY FIELDS

Shale oil, coal, and natural gas.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Kansas, Florida, and Connecticut.
- anti-trust complaint by the Federal Trade Commission.
- suit by six private citizens charging ATLANTIC RICHFIELD COMPANY, the American Petroleum Institute, and seven other oil companies with using the American Petroleum Institute to conspire in violation of state and federal anti-trust laws.
- suit by nine Arkansas farmers charging ATLANTIC RICHFIELD COMPANY and nine others with false advertising about the future availability and price of diesel fuel.
- suit by the Washington Gas Light Company for breach of contract for failure to deliver.
- anti-trust suit by private citizens in New York for anti-trust violations involving fuel oil.
- multiple administrative civil procedures for violation of environmental protection laws.

REFINERIES IN UNITED STATES

Carson, California	165,000 barrels per day
East Chicago, Indiana	126,000 barrels per day
Philadelphia, Pennsylvania	185,000 barrels per day

Houston, Texas
Ferndale, Washington

213,000 barrels per day
96,000 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:
Gasoline sales:
Number of ARCO stations:
Secondary brands:

3.98%
4,013, 589,000 gallons
15,165
Award

SHELL OIL COMPANY

Eighth largest U.S. oil company
Incorporated in Delaware
Address: 1 Shell Plaza, Houston, Texas 77002

HISTORICAL SKETCH

- 1912 Royal Dutch/Shell Oil Company forms American Gasoline Company and Roxanna Petroleum Company.
- 1922 Shell Union Oil Company forms as a holding company for Royal Dutch/Shell Oil Company's American assets.
- 1928 Shell Union Oil Company buys New England Oil Refining Company.
- 1949 SHELL OIL COMPANY organized by consolidating Royal Dutch/Shell Oil Company's American companies.
- 1964 SHELL OIL COMPANY acquires a portion of El Paso Natural Gas Company.
- 1971 SHELL OIL COMPANY moves its corporate headquarters from New York City to Houston, Texas.

TRANSPORTATION

SHELL OIL COMPANY owns and leases over 15,000 miles of pipelines in the United States, including interest in the newly expanded Capline Pipeline System. SHELL OIL COMPANY is planning to charter two ultra large crude carriers (ULCC's) to transport their foreign oil. To handle these vessels they are participating in the development of SEADOCK, a deepwater receiving facility off the Gulf coast for supertankers.

FOREIGN OPERATIONS

SHELL OIL COMPANY is a member of the Royal Dutch/Shell group and has not had extensive foreign operations of its own in the past. It is beginning to operate its own foreign production and exploration sites in Canada, Malaysia, Cameroon, and Peru.

INVOLVEMENT IN OTHER ENERGY FIELDS

Natural gas, coal, shale oil, tar sands, uranium, geothermal energy, and solar power.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Kansas, Florida, Connecticut, and New York.
- anti-trust action by the Federal Trade Commission.
- multiple violations of Federal, state, and local environmental protection regulations.
- suits by citizens in New York and Delaware charging, in essence, unfair domination of SHELL OIL COMPANY by Royal Dutch/Shell Oil Company for the latter's interests.

REFINERIES IN UNITED STATES

Deer Park, Texas	294,000 barrels per day
Wood River, Illinois	260,000 barrels per day
Norco, Louisiana	240,000 barrels per day
Martinez, California	100,000 barrels per day
Wilmington, California	90,000 barrels per day
Ciniza, New Mexico	20,000 barrels per day
Odessa, Texas	32,000 barrels per day
Anacortes, Washington	91,000 barrels per day
Sewaren, New Jersey	no data available

MARKETING INFORMATION FOR 1974

Share of U.S. market:	7.39%
Gasoline sales:	7,451,573,000 gallons
Number of SHELL OIL COMPANY stations:	19,800
Secondary brands:	Super

SUN OIL COMPANY (SUNOCO)

Tenth largest U.S. oil company
Incorporated in Pennsylvania
Address: 240 Radnor-Chester Road, St. Davids, Pennsylvania 19087

HISTORICAL SKETCH

1886 Keystone Gas Company and Peoples Natural Gas Company begin.
1920 Opening of the first service station.
1922 Name changes to SUN OIL COMPANY.
1968 SUN OIL COMPANY (13th largest) and SUNRAY DX (17th largest) merge.
1971 SUN OIL COMPANY incorporates in Pennsylvania and succeeds SUN OIL COMPANY of NEW JERSEY.

TRANSPORTATION

SUN OIL COMPANY owns and leases 7,338 miles of crude pipeline and 4,551 miles of product lines. SUN OIL COMPANY owns or leases tankers having a total capacity of 922,000 deadweight tons.

FOREIGN OPERATIONS

SUN OIL COMPANY has foreign operations in 22 countries including Angola, Burma, Bolivia, Iran, Morocco, Phillipines, Thailand, and Venezuela.

INVOLVEMENT IN OTHER ENERGY FIELDS

Tar sands, shale oil, natural gas, coal, and geothermal energy.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Kansas, Florida, and Connecticut.
- a suit by SUN OIL COMPANY, API, and eight other companies against the Environmental Protection Agency against restrictive regulations and standards of performance and unrealistic state implementation plans.
- suit by the State of New York charging SUN OIL COMPANY and seven other companies with limiting price competition and using discriminatory rebates in areas where independent oil companies were strong.
- suit by SUN OIL COMPANY against the U.S. Government asking for \$200,000,000.00 worth of damages because the government denied SUN OIL COMPANY the right to drill on their lease in the Santa Barbara Channel.
- violations of Federal, state, and local environmental protection regulations.

REFINERIES IN UNITED STATES

Marcus Hook, Pennsylvania	165,000 barrels per day
Toledo, Ohio	125,000 barrels per day
Duncan, Oklahoma	48,500 barrels per day
Tulsa, Oklahoma	88,500 barrels per day
Corpus Christi, Texas	57,000 barrels per day
Yabucoa, Puerto Rico	85,000 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	3.72%
Gasoline sales:	3,744,305,000 gallons
Number of SUNOCO stations:	13,253
Secondary brands:	DX

PHILLIPS PETROLEUM COMPANY (PHILLIPS 66)

Eleventh largest U.S. oil company
Incorporated in Delaware
Address: Phillips Building, Bartlesville, Oklahoma 74004

HISTORICAL SKETCH

- 1917 Phillips Petroleum Company forms.
- 1927 Phillips Petroleum Company buys Alamo Refinery Company and enters refining industry.
- 1930 Phillips Petroleum Company acquires Independent Oil and Gas Company and gets production acreage, transportation lines, two refineries, and retail outlets.
- 1966 Phillips Petroleum Company acquires portion of Tidewater Oil Company.

TRANSPORTATION

Phillips Petroleum Company has two shipping subsidiaries located in Liberia and a domestic subsidiary pipeline company. Phillips Petroleum Company also has a 1.66% interest in the TransAlaska Pipeline system.

FOREIGN OPERATIONS

PHILLIPS 66 has operations in sixteen countries and markets its products in eighty countries. The company has major exploratory operations in Indonesia, Nigeria, Venezuela, Australia, Peru, Iran, Abu Dhabi, Ghana, Ecuador, Bolivia, Norway, Thailand, Canada, and the North Sea.

INVOLVEMENT IN OTHER ENERGY FIELDS

Natural gas, shale oil, geothermal, and coal.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Kansas and Connecticut.
- a suit by PHILLIPS 66, API, and eight other companies against the Environmental Protection Agency against restrictive regulations and standards of performance and unrealistic state implementation plans.
- eight proceedings by the Bay Area Pollution Control District alleging 48 violations of smoke emission regulations.
- three violations of the Federal Water Pollution Control Act.
- indictment by a California grand jury in March of 1975 that PHILLIPS 66, Douglas Oil Company, and several other independents conspired to raise and fix prices in California, Oregon, Washington, Nevada, and Arizona.

REFINERIES IN UNITED STATES

Martinez, California	110,000 barrels per day
Kansas City, Kansas	85,000 barrels per day
Great Falls, Montana	5,700 barrels per day
Borger, Texas	95,000 barrels per day
Sweeny, Texas	85,000 barrels per day
Woods Cross, Utah	23,000 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	3.81%
Gasoline sales:	3,839,216,000 gallons
Number of PHILLIPS 66 stations:	17,844
Secondary brands:	Unique

GETTY OIL COMPANY/SKELLY OIL COMPANY

(GETTY OIL COMPANY has a controlling 65% interest in SKELLY OIL COMPANY through Mission Corporation, a holding company.)

Thirteenth largest U.S. oil company

Incorporated in Delaware

Address: 3810 Wilshire Boulevard, Los Angeles, California 90010

HISTORICAL SKETCH

1919 SKELLY OIL COMPANY is incorporated.

1928 Pacific Western Oil Corporation is incorporated.

1934 Standard Oil Company of New Jersey gains control of SKELLY OIL COMPANY and puts its stock in Mission Corporation as a holding corporation.

1935 Getty (family) interests acquire controlling holdings in SKELLY OIL COMPANY.

1936 The Getty Companies consolidate into George F. Getty, Incorporated.

1956 Pacific Western Oil Corporation becomes GETTY OIL COMPANY.

1961 GETTY OIL COMPANY acquires a major portion of Tidewater Oil Company.

1972 GETTY OIL COMPANY now holds a 64.64% of SKELLY OIL COMPANY.

TRANSPORTATION

GETTY OIL COMPANY owns and operates a fleet of 21 tankers totalling 1,552,485 deadweight tons. Getty Oil Eastern operates an additional five tankers. SKELLY OIL COMPANY's two crude oil pipeline systems in Kansas and Oklahoma delivered 42,400,000 barrels of crude oil in 1974. Six jointly and wholly owned pipelines transported 15,000,000 barrels of refined products. SKELLY OIL COMPANY has a 10% interest in the Texoma Pipeline, a 472 mile pipeline from the Texas Gulf Coast to Oklahoma which is now under construction.

FOREIGN OPERATIONS

GETTY OIL COMPANY has extensive Canadian operations and large exploration and production interests in offshore wells in the British North Sea, Saudi Arabia, Spain, and Indonesia. Some of GETTY OIL COMPANY's other production sites are in Iran, Peru, and Algeria. In addition, GETTY OIL COMPANY owns 48% of Mitsubishi, a Japanese refining and marketing corporation.

INVOLVEMENT IN OTHER ENERGY FIELDS

Natural gas, uranium, processed nuclear fuels, shale oil, and coal.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suit by the State of Connecticut.
- multiple violations of environmental protection regulations.
- GETTY OIL COMPANY and several other major companies are contesting the legality of a New York City law which regulates the lead content in gasoline.
- GETTY OIL COMPANY is under order by the State of Delaware to comply with sulfur content laws in fulfilling a fuel contract with a Delaware power company.

REFINERIES IN UNITED STATES

Delaware City, Delaware	140,000 barrels per day
El Dorado, Kansas (SKELLY OIL CO.)	73,664 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	1.30%
Gasoline sales:	1,313,816,000 gallons
Number of GETTY OIL CO. stations:	2,382
Number of SKELLY OIL CO. stations:	3,801
Secondary brands:	Keotane

CITIES SERVICE COMPANY (CITGO)

Fourteenth largest U.S. oil company
Incorporated in Delaware
Address: Box 300, Tulsa, Oklahoma 74102

HISTORICAL SKETCH

- 1910 CITIES SERVICE COMPANY is formed.
- 1962 CITIES SERVICE COMPANY acquires Columbian Carbon Company.
- 1966 CITIES SERVICE COMPANY sells midwest refinery and 2,300 retail outlets to GULF OIL CORPORATION.
- 1972 CITIES SERVICE COMPANY disposes of its ATLANTIC RICHFIELD COMPANY stock holdings.

TRANSPORTATION

CITIES SERVICE COMPANY owns or charters 19,000 miles of crude and refined product lines in the United States. It is participating in the development of SEADOCK, a proposed deepwater supertanker terminal offshore in the Gulf of Mexico.

FOREIGN OPERATIONS

CITIES SERVICE COMPANY is a participant in the Athabasca Tar Sand Project in northern Alberta, Canada. The company is producing or exploring for oil in Iran, Argentina, Colombia, Indonesia, Angola, Bolivia, Burma, Phillipines, the North Sea, and off the coast of Holland. It has smaller operations in many other countries.

INVOLVEMENT IN OTHER ENERGY FIELDS

Coal, tar sands, and natural gas.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Kansas and Connecticut.
- under suit for violation of quality and water quality standards and discharge of petroleum effluents.

REFINERIES IN UNITED STATES

Lake Charles, Louisiana 440,000 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	1.70%
Gasoline sales:	1,710,660,000 gallons
Number of CITGO stations:	6,724
Secondary brands:	Quik Mart

STANDARD OIL COMPANY of OHIO (SOHIO)/BRITISH PETROLEUM LIMITED (BP)

(STANDARD OIL COMPANY of OHIO now owns BRITISH PETROLEUM LIMITED's U.S. properties, so the companies are listed together. In return, BRITISH PETROLEUM LIMITED received 25% of STANDARD OIL COMPANY of OHIO's common stock for the property. In the eastern United States, many of STANDARD OIL COMPANY of OHIO's service stations still use the BRITISH PETROLEUM LIMITED name.)

Fifteenth largest U.S. oil company
Incorporated in Ohio
Address: Midland Building, Cleveland, Ohio 44115

HISTORICAL SKETCH

- 1870 STANDARD OIL COMPANY of OHIO is formed.
- 1911 Supreme Court breaks Standard Trust and establishes STANDARD OIL COMPANY of OHIO as an independent company.
- 1937 STANDARD OIL COMPANY of OHIO expands its operations into the production of crude oil.
- 1962 Boron Oil Company, a STANDARD OIL COMPANY of OHIO marketing arm, expands into Pennsylvania.
- 1968 STANDARD OIL COMPANY of OHIO acquires Old Ben Coal Company, the tenth largest coal producer.
- 1970 STANDARD OIL COMPANY of OHIO acquires most of BRITISH PETROLEUM LIMITED's U.S. property. By consent decree, the Justice Department requires STANDARD OIL COMPANY of OHIO to divest some Ohio and Pennsylvania marketing outlets.

TRANSPORTATION

STANDARD OIL COMPANY of OHIO is concentrating on its large Prudhoe Bay leases as its major future source of oil and consequently has acquired a 33.34% interest in the TransAlaska Pipeline system. STANDARD OIL COMPANY of OHIO has ordered the charter of tankers totalling 1,200,000 deadweight tons to transport oil from Valdez on the southern coast of Alaska to California. The company is looking into the possibility of a major pipeline from the Westcoast to its Midwest refineries. STANDARD OIL COMPANY of OHIO currently owns and operates 2,750 miles of crude and refined pipeline in the United States and has an interest in several other pipelines. STANDARD OIL COMPANY of OHIO currently charters fourteen tankers of between 50,000 and 80,000 deadweight tons.

FOREIGN OPERATIONS

STANDARD OIL COMPANY of OHIO has operations in Iran, Liberia, and Venezuela. It has a very close association with BRITISH PETROLEUM LIMITED.

INVOLVEMENT IN OTHER ENERGY FIELDS

Coal, uranium, natural gas, and shale oil.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suit by the State of Connecticut.
- a suit by STANDARD OIL COMPANY of OHIO, API, and eight other companies against the Environmental Protection Agency against restrictive regulations and standards of performance and unrealistic state implementation plans.
- subject to a consent decree requiring divestiture of certain marketing facilities because of acquisition of BRITISH PETROLEUM LIMITED's U.S. interests.
- Federal Trade Commission complaint filed against STANDARD OIL COMPANY of OHIO in February, 1973 alleging violations of section 5 of the Federal Trade Commission Act with regard to retail price supports, terms of leases, and propriety of STANDARD OIL COMPANY of OHIO operating stations in competition with its dealer stations.
- multiple violations of environmental protection and water quality standards.

REFINERIES IN UNITED STATES

Lima, Ohio	168,000 barrels per day
Toledo, Ohio	120,000 barrels per day
Marcus Hook, Pennsylvania	100,000 barrels per day
Port Arthur, Texas	84,000 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	2.06%
Gasoline sales:	2,070,907,000 gallons
Number of SOHIO, BP, Boron stations:	5,193
Secondary brands:	William Penn

AMARADA HESS CORPORATION

Sixteenth largest U.S. oil company
Incorporated in Delaware
Address: 1185 Avenue of the Americas, New York, N.Y. 10036

HISTORICAL SKETCH

- 1958 Hess Oil and Chemical Company enters refining with the acquisition of its Port Reading refinery.
- 1960 Hess Oil and Chemical Company gets crude oil pipeline system in Alabama and Mississippi.
- 1962 Hess Oil and Chemical Company becomes a fully integrated company and merges with Cletrac Corporation.
- 1963 Hess Oil and Chemical Company acquires Delhi Taylor Oil Company, Air Pilot Oil Company, and Central Fuel Oil Company.
- 1969 Hess Oil and Chemical Company merges with Amarada Petroleum Company to form AMARADA HESS CORPORATION.
- 1971 AMARADA HESS CORPORATION buys Purvis refinery from GULF OIL CORPORATION.
- 1977 AMARADA HESS CORPORATION buys Diesel Vessel Operators Incorporated, Redstar Towing & Transportation Company, Spentonbush Fuel Transport, Ira S. Bushey & Sons Incorporated, Patchogue Oil Company, and an interest in El Dorado Terminals.
- 1981 The government of St. Croix, Virgin Islands attempts take-over of AMARADA HESS CORPORATION's St. Croix refinery. AMARADA HESS CORPORATION threatens total shutdown of operations forcing St. Croix government to back off.

TRANSPORTATION

AMARADA HESS CORPORATION owns or charters a fleet of 46 vessels (not counting the vessels acquired in the 1977 purchases of three shipping companies) with an aggregate capacity of 4,337,000 deadweight tons. AMARADA HESS CORPORATION does not currently use pipelines as a major form of transportation, but because the company holds Prudhoe Bay leases it has acquired a 1.5% interest in the TransAlaska Pipeline system.

FOREIGN OPERATIONS

AMARADA HESS CORPORATION has major operations in Canada and is doing extensive off-shore drilling in the North Sea off England and Norway. It recently terminated its formerly heavy operations in Libya because of increased price demands from the government, but the company still has major offshore wells in Abu Dhabi. Some of AMARADA HESS CORPORATION's other exploration and production sites are located in Angola, Bolivia, and Portugal.

INVOLVEMENT IN OTHER ENERGY FIELDS

Heating oil, natural gas, and various mining operations.

LEGAL ACTION AS OF DECEMBER 31, 1974

- anti-trust suits by the states of Florida and Connecticut.
- five suits by seventeen AMARADA HESS CORPORATION franchise dealers charging the company with violations of sections 4 and 16 of the Clayton Act and sections 1 and 2 of the Sherman Act; the dealers seek to recover double and treble damages.
- Federal Trade Commission action charging violations of the F.T.C. Act and Clayton Act in the attempted monopolizing of Eastern Mississippi petroleum distribution through monopoly of transportation, unlawful control of prices, and anti-competitive acquisitions; as a result of this action AMARADA HESS CORPORATION was ordered to divest itself of Clarco, a Mississippi subsidiary.
- suit by private citizen in Texas charging AMARADA HESS CORPORATION and sixteen others with conspiracy to monopolize and restrain trade.
- action which seeks to void Hess Oil and Chemical Company's 1969 merger with Amarada Petroleum Company on the basis of violations of the Securities and Exchange Commission Act of 1934.

- multiple violations of environmental protection regulations.

REFINERIES IN UNITED STATES

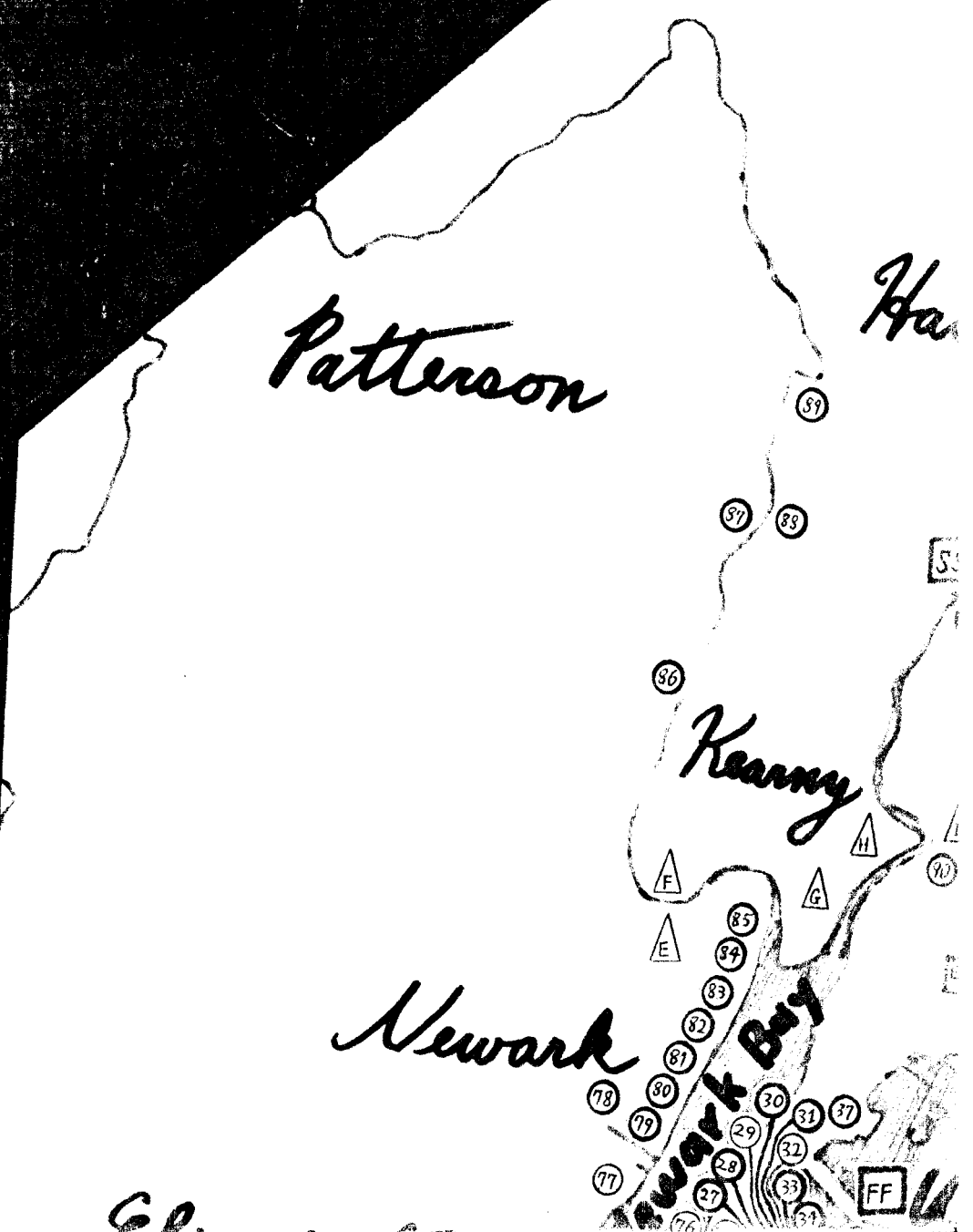
St. Croix, Virgin Islands	700,000 barrels per day
Purvis, Mississippi	28,500 barrels per day
Port Reading, New Jersey	70,000 barrels per day
Perth Amboy, New Jersey	70,000 barrels per day

MARKETING INFORMATION FOR 1974

Share of U.S. market:	.92%
Gasoline sales:	927,121,000 gallons
Number of AMARADA HESS CORP. stations:	no data available
Secondary brands:	not known to use any.

In those reports that are copies, the map depicting the location of the petroleum-using facilities is in four sections. This was done to facilitate copying of the report. My apologies for the manner of handling of the map in the copies. It was easiest.

For Sale



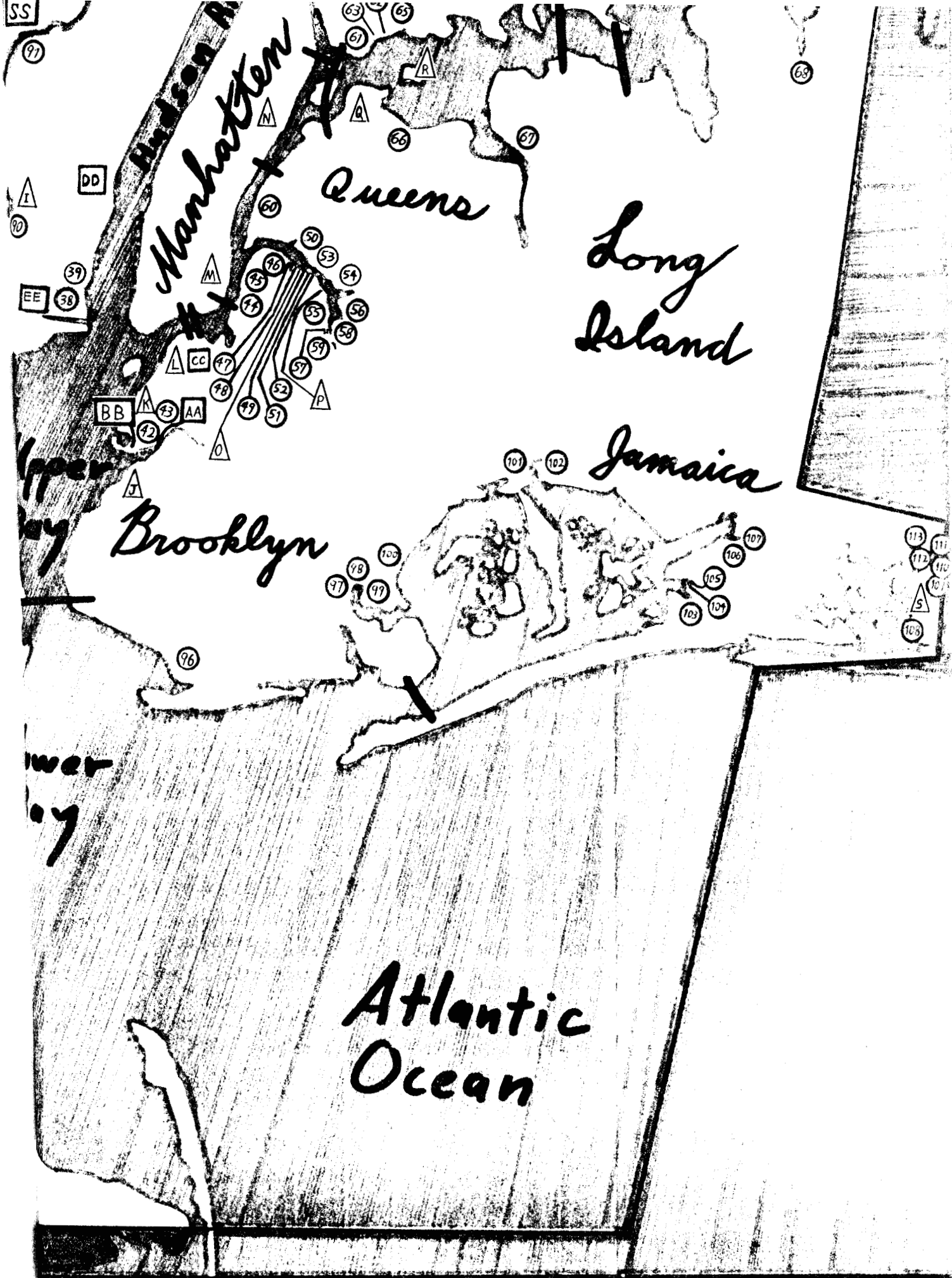
G.D.

New York.

N.Y.







Manhattan

Queens

Long Island

Brooklyn

Jamaica

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Upper Bay
Lower Bay

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STATEMENT ON VALIDITY OF REPORT

Some of the information in this report was obtained through methods which are otherwise unavailable, unusable, and unknown to the public. To that extent, some of the information is "undocumentable and non-existent." Hence, some of the references in the bibliography, while mentioned, are "undocumentable and non-existent." Should any attempt be made to validate the information, the references will deny knowledge of this report and admission of information contained herein. It is also noted that some of the references are unaware of what the information was used for.