Petroleum Supply Monthly

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Monthly Energy Review, updated the last week of the month

Short Term Energy Outlook, updated 60 days after the end of the quarter

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Preface

The *Petroleum Supply Monthly* (PSM) is one of a family of four publications produced by the Petroleum Supply Division within the Energy Information Administration (EIA) reflecting different levels of data timeliness and completeness. The other publications are the *Weekly Petroleum Status Report* (WPSR), the *Winter Fuels Report*, and the *Petroleum Supply Annual* (PSA).

Data presented in the *PSM* describe the supply and disposition of petroleum products in the United States and major U.S. geographic regions. The data series describe production, imports and exports, inter-Petroleum Administration for Defense (PAD) District movements, and inventories by the primary suppliers of petroleum products in the United States (50 States and the District of Columbia). The reporting universe includes those petroleum sectors in primary supply. Included are: petroleum refiners, motor gasoline blenders, operators of natural gas processing plants and fractionators, inter-PAD transporters, importers, and major inventory holders of petroleum products and crude oil. When aggregated, the data reported by these sectors approximately represent the consumption of petroleum products in the United States.

Data presented in the *PSM* are divided into two sections: Summary Statistics and Detailed Statistics.

Summary Statistics

The tables and figures in the Summary Statistics section of the *PSM* present a time series of selected petroleum data on a U.S. level. Most time series include preliminary estimates for one month based on the Weekly Petroleum Supply Reporting System; statistics based on the most recent data from the Monthly Petroleum Supply Reporting System (MPSRS); and statistics published in prior issues of the *PSM* and *PSA*.

Detailed Statistics

The Detailed Statistics tables of the *PSM* present statistics for the most current month available as well as year-to-date. In most cases, the statistics are presented for several geographic areas - the United States (50 States and the District of Columbia), five PAD Districts, and 12 Refining Districts. At the U.S. and PAD District level, the total volume and the daily rate of activities are presented. The statistics are developed from monthly survey forms submitted by respondents to the EIA and from data provided from other sources.

Appendices

Four appendices are provided to assist in understanding and interpreting the data presented in this publication. They are:

- Appendix A (District Descriptions and Maps) - Geographic aggregations of the 50 States and the District of Columbia into Refining Districts which make up the PAD Districts.
- Appendix B (Detailed Statistics Explanatory Notes) - Information describing data collection, sources, estimation methodology, data quality control procedures, modifications to reporting requirements and interpretation of tables.
- Appendix C (Impact of Resubmissions) - Information on revisions to published statistics caused by resubmission of respondent survey forms.
- Appendix D (EIA-819M, Monthly Oxygenate Telephone Report) - Preliminary information on production and stocks of fuel ethanol and methyl tertiary butyl ether (MTBE) by PAD District. Data are collected from a sample of respondents reporting on the MPSRS surveys. Data are also published in the *WPSR* and are available electronically approximately 15 working days after the end of the month.

Industry terminology and product definitions are listed alphabetically in the Glossary. Final statistics for the data series published in the *PSM*, as well as additional data from the annual refinery and oxygenate capacity surveys are published in the *PSA*. The *PSA* is published approximately five months after the end of the report year.

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Articles

Feature articles on energy-related subjects are frequently included in this publication. The following articles have appeared in previous issues.

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U.S. Petroleum Exports Show Slight Upturn	January 1986
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Refinery Capacity Trends and Outlook	March 1986
Timeliness and Accuracy of Petroleum Supply Data	April 1986
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Drilling Sideways.....	June 1993

Feature Article

A refinery worker makes his way around a towering storage tank to check the tank level.

The Economics of the Clean Air Act Amendments of 1990: Review of the 1992-1993 Oxygenated Motor Gasoline Season

by Charles Dale¹

Introduction

The Clean Air Act Amendments (CAAA), adopted in November 1990, already have had significant effects on the oil and gas industry. Title II of the act relates to mobile sources of air pollution.² This paper analyzes the requirements that arose out of those provisions for oxygenated gasoline in certain parts of the country.

The oxygenated gasoline program focuses on adding oxygenates to gasoline as a means of reducing air pollution. Oxygenates are liquid organic compounds which, when added to conventional gasoline, reduce the carbon monoxide emissions of the gasoline. Virtually the only oxygenates used this season were ethanol and methyl tertiary butyl ether (MTBE). Fuel ethanol contains

significantly higher amounts of oxygen than MTBE. The blending octane value of fuel ethanol is slightly higher than that of MTBE. However, blending Reid Vapor Pressure, which is a measure of the volatility of the gasoline, is lower for MTBE than for fuel ethanol. In addition, MTBE may be transported, although with some difficulty, in existing pipelines, while pipeline operators are extremely reluctant to transport ethanol blended with gasoline at all, because of water condensation. Prior to passage of the CAAA, ethanol was blended with gasoline and marketed nationwide as gasohol or E10 (10 percent ethanol by volume and 90 percent gasoline by volume). MTBE, which comes from methanol, had primarily been used as an octane booster in the past.

Under the CAAA, the Environmental Protection Agency (EPA) identified areas of the country that did not meet carbon monoxide

Figure FE1. 1992-93 Participating Oxygenated Gasoline Control Areas By PAD Sub-District

Source: State Environmental Offices.

¹The author is grateful to Robert Schmer and Tancred Lidderdale of the Energy Information Administration, John Ostrich of SAIC, Inc., and Joanne Shore and John Hackworth of OnLocation, Inc., for helpful comments. The views expressed in this paper are solely those of the author and not necessarily those of the aforementioned individuals or the U.S. Department of Energy.

²For details, see Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(92/08) (Washington, DC, August 1992), pp. 1-11, or Information Resources, Inc., *Implementing the Clean Air Act: Fuel Reformulation and Regulation in the 1990's* (Washington, DC, October 1, 1992).

air quality standards. The EPA subsequently designated 39 carbon monoxide nonattainment areas and required that the gasolines sold in those areas contain 2.7 percent oxygen by weight during the winter months. Not all of the designated nonattainment areas complied with the oxygenation program, for reasons to be discussed below. The regions that participated, concentrated heavily on the East and West Coasts, are shown by Petroleum Administration for Defense (PAD) Districts in Figure FE1. Those regions have a population of nearly 81 million, or 32.6 percent, of the country.

The first oxygenated gasoline season went smoothly, but not as predicted. Demand for oxygenated gasoline and, in particular, for the oxygenate MTBE was lower than expected. Prior to the season, there was concern that oxygenates might be in short supply; however, no supply shortages developed and prices of both oxygenates and gasoline fell during the season. This paper will explore these issues. It also will address what the oxygenated gasoline requirement finally cost the consumer and whether or not refiners were able to recover their compliance costs.

Oxygenated Gasoline Demand

The Energy Information Administration (EIA)³ projected that total seasonal oxygenated gasoline consumption during the full compliance months⁴ would be 2.72 million barrels per day, and total seasonal oxygenate blending, expressed in MTBE equivalent units,⁵ would be 475,000 barrels per day. The MTBE estimate was derived by separating oxygenate blending into various components and forecasting them independently. The nonattainment compliance blending was estimated by allocating gasoline consumption to nonattainment areas on a population basis and calculating the amount of oxygenates required to meet this gasoline need. In addition, an estimate was made of the quantity of oxygenates that would be used in attainment areas. Estimates were also made of "over-compliance blending," i.e., the quantity of MTBE that would be used to provide a safety margin and the quantity of ethanol that would be used in excess of requirements to obtain subsidies. Finally, an estimate was made of oxygenated gasoline consumption outside of but bordering nonattainment areas, referred to as "spillover." Spillover was assumed to occur as a result of storage and transportation limitations that would require distributors and marketers to supply oxygenated gasoline to attainment areas.

Final oxygenated gasoline demand for the full compliance months, based on calculations from data in the April 1993 *Petroleum Supply Monthly*, was estimated to be only 2.2 million barrels per day, and the total seasonal demand for oxygenates was only about 402,000 barrels MTBE equivalent per day, 15.4 percent less than

forecast. To understand the reason for this surprisingly weak demand, this article will examine how the administration of the oxygenation program and other factors, such as spillover sales of oxygenated gasoline into attainment areas, affected oxygenate blending.

How States Administered the Program. Under the oxygenated gasoline program, the individual States are responsible for implementing the oxygenation program by submitting amended State Implementation Plans to EPA for approval. As a result, differences in implementing the program abound. For example, some States made adjustments in their oxygenated gasoline control areas⁶ on the basis of sparse population and other considerations. Several States simply opted not to participate in the program this season. The Boston-Lawrence-Salem, Memphis, and Duluth areas all chose not to participate in the program this year. Fairbanks, Alaska, started out with an oxygenation program but suspended it in December. Those areas that did not participate in the oxygenated gasoline program were part of the reason that demand for MTBE and oxygenated gasoline was lower than expected.⁷

States have different control periods. For this first oxygenation season, all States were required to begin their program no later than November 1, 1992; although Texas, Nevada, and Arizona started October 1, 1992. The EPA agreed to the November 1 start date during the regulation negotiation process in August 1991, and confirmed their decision in February 1992. Next season, additional areas will start on October 1 and Spokane, Washington, will start on September 1. The end of the control periods were January 31 at the earliest, but most ended February 28, and a few ended in March or even later. The fact that the control period will begin earlier than November 1 for many areas next season means that demand for MTBE and oxygenated gasoline will be higher next season.

California had special considerations. Some scientists believe that oxygenated gasoline increases production of nitrogen oxides (NOx) emissions, which can lead to higher levels of smog (ozone) in the atmosphere. California applied for a waiver from the EPA to produce gasoline with an oxygen content of 2.0 percent by weight (actually a range from 1.8 to 2.2 percent), not the 2.7 percent by weight of other areas. Since the Federal hearing on the waiver was not held until May 1993,⁸ the State operated according to its proposed plan at the reduced oxygen content level. This provision was included in the original EIA forecast of Winter 1992-93 oxygenated gasoline demand.

Only one of these administrative issues should have affected actual oxygenated gasoline consumption in a way differently from the

³Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(92/08) (Washington, DC, August 1992), p. 3.

⁴Full compliance months are November, December, and January, when every participating area is using oxygenated gasoline. The term "seasonal" consumption or use of oxygenates will be used to represent average blending use during the full compliance months.

⁵"MTBE equivalent units" refers to oxygen content. For pure MTBE and ethanol, 1 barrel of ethanol = 2.04 barrels of MTBE. In practice, however, MTBE is usually about 99 percent pure and fuel ethanol may be mixed with several percent denatured alcohol, so 1 barrel ethanol = 1.96 barrels MTBE.

⁶This paper uses "control areas" to mean everywhere that oxygenated gasoline was mandated by a State. These were frequently more inclusive than the "nonattainment areas" designated by the Environmental Protection Agency.

⁷The nonparticipating areas were partially offset by the increased demand from attainment areas in California and New Jersey that chose to participate.

⁸Conversation with Dick Lum of the California Air Resources Board. As of June 25, no decision on the waiver had been made.

forecast -- the noncompliance by the Boston-Lawrence-Salem, Memphis and Duluth areas and the participation of several attainment areas. The lower California requirement was taken into consideration in the forecast, and because the forecast was for a typical full compliance month, the forecast would not have been affected by overlapping control periods and delays. The lack of compliance in some areas, however, is not an adequate explanation for the lower consumption level. Other factors as discussed below contributed also.

The Spillover Question. "Spillover" refers to the sale of oxygenated gasoline outside of oxygenated gasoline control areas which can occur because of either distribution problems or the economics of gasoline production. Normal use of oxygenates outside of control areas, such as baseline attainment gasohol sales, are not considered to be spillover. Forecasted spillover was significant. Baseline seasonal nonattainment oxygenated gasoline demand during the full compliance months is assumed to be 32.6 percent of the total gasoline demand, in proportion to the population in participating control areas.⁹ Prior to this first season, the EIA¹⁰ estimated that there could be a spillover rate of as much as 22 percent of baseline oxygenated gasoline demand in areas outside control areas. Nevertheless, detailed discussions with State governments and oil companies indicated that actual spillover was negligible. The distribution system of oxygenated gasoline functioned more efficiently than previously estimated. As discussed later in this article, there was no added margin on oxygenated gasoline sales in control areas, a factor which provided a strong economic incentive to reduce spillover into areas in which only lower conventional gasoline prices could be charged for the higher cost oxygenated gasoline.

The possibility of spillover creates storage problems for terminals that supply gasoline to both control areas and the surrounding areas. There are over 1,200 refined petroleum products terminals in the United States. (Each company with facilities at a tank farm is considered to be a separate terminal.) Less than half of these (about 450) are located either in or within 100 miles of a control area. Terminal operators employed a variety of distribution strategies to minimize spillover sales. First, some terminals stored conventional gasoline in tanks and blended oxygenates, mainly ethanol, by in-line blending or splash blending. The oxygenate may even have come from a competitor's terminal. The addition of oxygenates only when necessary helped to diminish spillover. Second, the discussions with suppliers indicated that some small refiners simply couldn't afford to compete in the oxygenated gasoline market, so they did not cause any spillover. Finally, in spite of all of these distribution strategies, some spillover sales were inevitable in regions where a terminal supplied a control area and there were no terminals nearby to serve the needs of the surrounding area. Also, sales to an area outside a control area may be so small that they do not justify either holding separate stockpiles of gasoline, or splash blending at the terminal, or making an exchange agreement with a competitor. Nevertheless, company officials were unanimous in stating that they did everything they could to reduce spillover.

Other Factors. Other factors that influence oxygenate demand include continued demand for oxygenates in attainment areas and over-compliance demand. Oxygenates were already being used in attainment areas, primarily as octane boosters and to produce gasohol. At the same time, more oxygenates may be used than mandated to ensure compliance because of uncertainty in laboratory testing procedures. The largest source of over-compliance being forecast was the use of ethanol in quantities high enough to receive tax credits. The forecast was made with the assumption that producers would add enough ethanol to receive the tax subsidy, which was provided for ethanol used at 10 percent by volume gasoline. Only 7.7 percent ethanol is required to satisfy the CAAA in most nonattainment areas. As will be discussed later, the tax subsidy was changed January 1, 1993, to prorate the subsidy for lower ethanol volume percents consistent with the oxygenated gasoline requirements. This resulted in ethanol over-compliance demand being less than forecast.

There is a great deal of uncertainty in estimating these other quantities of oxygenate use, but these other uses represent a significant portion of oxygenate blending, and they played a role in the difference between the forecast and actual use of oxygenates last winter. The previous EIA forecast projected 55,000 barrels per day of MTBE equivalent oxygenates for attainment area demand and 43,000 barrels per day for over-compliance demand. The total 98,000 barrels per day of these other factors was 32 percent of required oxygenate use for nonattainment areas. Thus, the forecast 475,000 barrels per day of equivalent oxygenate demand included a 55- percent increase over nonattainment area baseline needs due to spillover, use in attainment areas, and over-compliance.

Combined Impacts of Administrative Changes, Reduced Spillover, and Other Factors. The major difference between the forecast 475,000 barrels per day and the actual equivalent oxygenate blended of 402,000 barrels per day was due to differences in spillover, in over-compliance, in continued blending in attainment areas, and in participation of nonattainment areas.

Seasonal baseline oxygenated gasoline control area use was very close to the forecast value. Data are collected only on total MTBE and ethanol supplied. Data are not collected for the different uses of oxygenate supplied (i.e., oxygenates required for nonattainment areas, spillover, over-compliance, and baseline attainment demand). As a result, there is no definitive answer as to how each of these uses contributed to total consumption last winter, but a reasonable approximation can be made, as shown in Table FE1.

The final estimate of oxygenates required for State control regions during the full compliance months of November, December, and January was 300,000 barrels per day on average: 228,000 barrels per day for MTBE and 72,000 barrels per day of ethanol "equivalent" oxygenate. This amount is almost identical to the forecast of 306,000 barrels per day required. The loss of the Boston, Duluth, and Memphis areas was countered to some degree by more ethanol being blended in State control areas than

⁹Estimates of the amount of oxygenated gasoline in the total gasoline pool, including spillover, go as high as 40 percent (see Benedict, *Oil Daily*, January 5, 1993, p. 5, or Lundberg Letter, "Starting On A Low Note," January 15, 1993).

¹⁰Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(92/08) (Washington, DC, August 1992), p. 5.

Table FE1. Forecast and Actual Oxygenate Use During Full Compliance Period
(Thousand Barrels per Day)

	Forecast	Actual		
	Total MTBE Equivalent Oxygenates	MTBE	Ethanol MTBE Equivalent	Total MTBE Equivalent Oxygenates
Estimated Control Area Use	306	228	72	300
Estimated Spillover	71	5	2	7
Estimated Use Attainment Areas, Over-compliance	98	0	95	95
Total Oxygenates Blended	475	233	169	402

Source: Energy Information Administration, Office of Oil and Gas.

previously estimated and by the addition of several attainment areas that chose to participate.

Thus, the major difference between the forecast and actual oxygenate blended lies in the remaining factors: spillover, over-compliance, and attainment baseline use. First, consider MTBE. One would expect MTBE attainment baseline blending to be very small during the oxygenation season because additional octane enhancement is not needed, and over-compliance was not a major issue with MTBE. The total use of MTBE averaged 233,000 barrels per day during the full compliance months. This only leaves 5,000 barrels per day for spillover and baseline attainment area use. The 5,000 barrels per day is only about 2.2 percent of MTBE required. Since some MTBE was probably used in attainment areas for octane enhancement due to excess supplies and to low MTBE spot prices at the end of the season, spillover was probably less than 2 percent for MTBE.

Estimates of 72,000 barrels per day of ethanol required last winter to serve State control areas leave 97,000 barrels per day for spillover, over-compliance, and baseline attainment use. Baseline attainment use was still significant for ethanol, but over-compliance blending was somewhat less than forecast due to the change in the tax regulations in January. There is no evidence to suggest that spillover was significant. Since ethanol is splash blended, controlling ethanol spillover should be easier than controlling MTBE spillover. As a result, it was assumed ethanol spillover would be equal to or smaller than MTBE spillover (i.e., less than 2 percent).

In conclusion, spillover for all oxygenated gasoline was probably less than 2 percent this past winter. This fact alone would account for most of the difference between the forecast and actual oxygenates blended. Differences in over-compliance use of ethanol and estimates of baseline attainment use account for the small remaining differences.

Oxygenate Supply

Because of its importance to gasoline supply, EIA began collecting monthly data on oxygenate supply in January 1992. The respondents to the new monthly survey Form EIA-819M,

"Monthly Oxygenate Telephone Report," provide data on production, motor gasoline blending, inventories, and imports of oxygenates. Figures FE2 and FE3 show ethanol and MTBE production and stocks by month for 1992 through June of 1993.

Oxygenate production volumes in 1992 were greatest for MTBE, followed by fuel ethanol. Production volumes of tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other oxygenates, which includes other aliphatic alcohols and ethers, account for about 10 percent of oxygenate production; they have been withheld from publication to avoid disclosure of individual company data.

While exports and imports of oxygenates during the first oxygenation season were not a large factor, they were an important marginal contributor to the excess supply. One source estimated imports of MTBE ranged from 5,000 barrels per day in February 1992 to a high of 32,000 barrels per day in November 1992,¹¹ increasing the excess supply. Exports ranged from only 2,000 barrels per day to 8,000 barrels per day in 1992, although they rose to 11,000 barrels per day in January 1993 as opportunities arose for suppliers to reduce excess MTBE inventories. Net imports supplied approximately 5 to 10 percent of the MTBE demand during the full compliance months.

Operable production capacity as of January 1, 1993, was reported for several oxygenate categories (Table FE2). The largest production capacity was reported for MTBE. ARCO Chemical Company operates a plant in Corpus Christi, Texas, which is capable of producing either 9,500 barrels per day of ethyl tertiary butyl ether (ETBE) or 12,000 barrels per day of MTBE. As of January 1, 1993, the plant was producing ETBE and, therefore, is included as ETBE production capacity in Table FE2.

Oxygenate production is concentrated in the Gulf Coast and the Midwest grain region. PAD District III accounted for 94 percent of U.S. methanol production, which is a feedstock for MTBE, and 88 percent of U.S. MTBE production in 1992. MTBE production in PAD District III is blended with gasoline and shipped by pipeline. PAD District II accounted for production of 95 percent of U.S. fuel ethanol, which was shipped by railroad tank cars and trucks to terminal facilities for splash blending with gasoline. PAD District III dominated the production of all other oxygenates,

¹¹Oil Market Listener, "Oxygenate Overhang Thwarts Ability of U.S. Refiners to Recoup Production Costs," March 19, 1993, pp. 1-3.

Figure FE2. U.S. MTBE and Ethanol Production by Month, 1992-1993

Source: Energy Information Administration, *Petroleum Supply Annual 1992*, and *Petroleum Supply Monthly*, various months, 1993.

Figure FE3. U.S. MTBE and Ethanol Stocks by Month, 1992-1993

Source: Energy Information Administration, *Petroleum Supply Annual 1992*, and *Petroleum Supply Monthly*, various months, 1993.

and PAD District IV and PAD District V reported the smallest quantities of total oxygenate production.

Production of MTBE in 1992 reached its highest level during November at 128,000 barrels per day, a level representing a

75-percent-capacity utilization rate of the 170,000-barrels-per-day operable production capacity reported for January 1, 1993. Approximately two-thirds of the production is supplied by merchant producers,¹² while the remainder is produced by petroleum companies for internal use.

¹²"Merchant" MTBE plants are production facilities that are not associated with a petroleum refinery. Production from merchant facilities is sold under contract or on the spot market to refiners or other gasoline blenders. "Captive" MTBE plants are production facilities located within or adjacent to a refinery complex.

Table FE2. Operable Production Capacity^a of Oxygenate Producers by Petroleum Administration for Defense (PAD) Districts, January 1, 1993
(Thousand Barrels per Day)

District	Fuel Ethanol	MTBE	TAME	ETBE	Other ^b
U.S. Total	90	170	5	10	6
PAD I	1	5	0	1	0
PAD II	84	11	0	0	0
PAD III	4	143	5	10	6
PAD IV	1	4	0	0	0
PAD V	1	7	0	0	0

^a Operable production capacity is the sum of operating and idle capacity.

^b Includes other aliphatic alcohols and ethers not specifically listed on the survey forms.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, Form EIA-819A, "Annual Oxygenate Capacity Report."

Ethanol production has been very steady since EIA began collecting monthly production data. January 1992 remains the highest ethanol production month on record, with 78,000 barrels per day, followed by March 1993 at 77,000 barrels per day. Operable production capacity utilization for ethanol was 84 percent during January 1993.

As anticipated, the full compliance months saw demands considerably higher than production capability. During August, prior to the oxygenated gasoline season, 47,000 barrels per day of MTBE were blended. This value is representative of typical baseline needs for MTBE as an octane enhancing agent. Blending leaped more than 400 percent during the full compliance months, averaging 233,000 barrels per day during November through January.

Prior to the oxygenation season, the rate at which MTBE was blended into gasoline, when compared to production, averaged 48 percent for March through August, a period covering the busy driving months. The remaining production was used to build MTBE inventories. To a lesser extent, ethanol inventories also were built up prior to the season to handle the anticipated need.

Considerable uncertainty existed during the months preceding the first winter season of the Federal oxygenated gasoline rules pertaining to adequacy of MTBE supplies. EIA estimated that, in order to meet the projected demand for MTBE during the first winter of the federal oxygenated gasoline program, an oxygenate inventory of 27 million barrels of MTBE equivalent volume would be required.¹³ Stocks of MTBE peaked on August 31, 1992, at 23.1 million barrels, while ethanol reached its highest level of nearly 3.0 million barrels on September 30, 1992. The stock drawdown began in October and continued through February, as shown in Figure FE4. This pattern of stock build and stock draw will be typical of the oxygenate cycle next year as well.

Drawdowns will start earlier, though, as many programs will begin in October rather than November.

While fuel ethanol blended into motor gasoline increased somewhat over the oxygenated gasoline season, it did not experience the dramatic blending increases of MTBE. Fuel ethanol was blended into motor gasoline at the rate of about 69,000 barrels per day during 1992. This quantity is calculated by the EIA to be production plus imports, minus stock change.¹⁴

Prices

Prices of Oxygenates. In previous years, the price of MTBE was determined by its usefulness as an octane enhancer. MTBE was priced just under the cost of producing one octane number at the refinery.¹⁵ This pricing was changed, however, when ARCO Chemical decided to price MTBE by its oxygenate value. The new pricing formula included rack and spot gasoline prices, along with the spot price of butanes at Mt. Belvieu, Texas. The old formula had depended more heavily on pipeline or spot barge gasoline prices. Since ARCO Chemical is the world's largest MTBE supplier and supplies about 60 percent of the merchant MTBE market, their new pricing mechanism had a significant impact on MTBE pricing. Contract MTBE prices rose from less than 90 cents per gallon in early 1992 to \$1.10 per gallon in the summer of 1992. Discussions with industry participants indicate that most MTBE was sold at contract prices.

The spot market in MTBE has much less volume than the contract market. Nevertheless, spot MTBE prices may be used to approximate the marginal MTBE price and, therefore, reflect market pricing pressures (e.g., spot prices moving up reflect a tightening market and spot prices moving down imply a loosening market). In the first quarter of 1992, it appeared there would be a very strong demand for MTBE to meet the required fourth quarter implementation of the winter oxygenated motor gasoline program.

¹³Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(92/08) (Washington, DC, August 1992), p. 2.

¹⁴Approximately 60 percent of the respondents to the oxygenate frames study could account for the end use of fuel ethanol in their custody. Of the reported uses, motor gasoline blending accounted for 99 percent of ethanol use. Many bulk terminal and bulk station operators participating in the oxygenate frames study indicated that "they could not report the end use of fuel ethanol stored in tanks leased to others on the basis of their own knowledge. Because of these findings, the monthly oxygenate survey does not attempt to collect ethanol blending data directly.

¹⁵*Octane Week*, "New MTBE Contracts to Factor in Oxygen Value," Vol. 35, January 21, 1991, pp. 1ff.

Many of the major oil companies contracted for large quantities of MTBE at prices well above the traditional octane value price to ensure an adequate supply to meet their individual market needs. MTBE spot prices on the Gulf Coast reached a high of 98 cents per gallon in June 1992 and then fell steadily to a low of 71 cents per gallon in January 1993. At the end of March 1993, spot MTBE was trading in a range of 70 to 71 cents per gallon.

Price movements for oxygenates during the control season are summarized in Figure FE5. Spot prices of oxygenates fell steadily during the control period, because of lower than expected demand for oxygenates, large stocks, and minimal spillover.

The Ethanol Tax Credit Structure. Since the early 1980's, ethanol has grown in importance as a blending component of gasoline. Because of its expense, ethanol is uneconomical to blend into gasoline without tax subsidies provided by the Federal Government and some States. Until January 1, 1993, the Federal Government provided a 54 cents per gallon tax subsidy for ethanol, if it was used for at least 10 percent by volume of gasoline. This amounts to a tax credit of 5.4 cents per gallon of gasohol. According to the U.S. Department of the Treasury, Office of Tax Policy, on January 1, 1993, the subsidy was changed to give a

prorated amount for two other ethanol percentages: 7.7 percent by volume ethanol, which would bring the gasoline oxygen content up to the required 2.7 percent by weight level required in most nonattainment areas, or 5.7 percent by volume ethanol, which would bring the oxygen content up to the 2.0 percent by weight oxygen level required in California. For example, blending 7.7 percent of ethanol to meet the 2.7 percent oxygen level would result in a Federal subsidy of 41.58 cents per gallon (77 percent of 54 cents) of ethanol.

As a result, more ethanol than was needed to meet CAAA compliance requirements was used by some refiners prior to January. However, some of those refiners found it advantageous to cut back slightly in January as evidenced by the drop in ethanol blended from December to January shown in Figure FE6.¹⁶

Until mid-1992, ethanol prices were higher than unleaded gasoline prices by approximately the 54 cents per gallon Federal tax incentive. After the changes in MTBE contract prices, ethanol contract prices, too, were often based on their oxygenate value.¹⁷ Ethanol prices in PADD V reached a premium of 78 cents per gallon over unleaded gasoline prices in October 1992, before falling back to 66 cents per gallon in January 1993.

¹⁶Washington and Oregon and some other States offered tax special incentives, in addition to Federal subsidies, for ethanol blending. Ethanol was also a favored oxygenate in some areas of northern California. One industry estimate was that ethanol use in Washington and Oregon alone decreased the use of MTBE in the range of 10,000 to 20,000 barrels per day during the control season (see *Platt's Oilgram Price Report* 1993).

¹⁷*Octane Week*, "Oxygenate Pricing Heading Toward Marginal Costs of Production," VII:36: January 25, 1993, 1ff.

Figure FE4. U.S. MTBE Supply and Use by Month, 1992-1993

Source: Energy Information Administration, *Petroleum Supply Annual* 1992, and *Petroleum Supply Monthly*, various months, 1993.

Prices of Oxygenated Gasoline. The oxygenated gasoline season had greatly different effects on consumers in attainment and nonattainment areas.¹⁸ Shortly after the start of the oxygenation season, on November 6, 1992, consumers in the nonattainment areas of Philadelphia, Los Angeles, Long Island, and Denver were paying from 2.69 to 6.13 cents per gallon more for self service regular unleaded gasoline than they had been 2 weeks earlier. An extreme example of the higher cost of oxygenated gasoline was in Anchorage, Alaska. Self service, regular unleaded gasoline there rose by 14.5 cents per gallon between October 9 and November 6, 1992. In contrast, consumers in the attainment areas of Chicago, Dallas, Rochester, and Salt Lake City were paying from only 1.32 cents per gallon more to 0.52 cent per gallon less than two weeks before.

Table FE3 shows national average gasoline prices obtained from EIA-878, "Motor Gasoline Telephone Price Survey." Two points stand out from this table. First, a month before the oxygenation season started in most areas, prices in nonattainment areas were already 7.5 cents per gallon higher than in attainment areas. There are numerous reasons for regional price variations, such as tax variations, distribution costs, seasonal variations in demand, different service station labor, rental, and utilities costs, etc. Thus, differences in gasoline prices between attainment and

nonattainment areas can only be attributed to the increased costs of oxygenates to the extent the difference exceeds the underlying baseline difference. For example, on January 25, 1993, prices in nonattainment areas were 116.0 cents per gallon, or 13.8 cents per gallon higher than in attainment areas. But only 6.3 (13.8 - 7.5) cents per gallon could be attributed to the incremental costs of oxygenates if the underlying baseline difference remained at 7.5 cents per gallon.

Regional variations in oxygenated gasoline price effects are difficult to determine because the sample size for the EIA-878 was chosen to determine national averages. As a result, meaningful conclusions about PAD Districts can be inferred only for PAD Districts I and II. Also, PAD District V is dominated by California, which was entirely in control areas, so attainment versus nonattainment comparisons would not be meaningful. Finally, even within a PAD District, the regional variations noted above can occur.

On October 5, 1992, in PAD District I, prior to its oxygenated gasoline season, the EIA-878 survey showed a 3.5 cents per gallon higher retail gasoline price in nonattainment areas over attainment areas. With the start of the season, the price difference widened to 8.2 cents per gallon on November 16 and 9.7 cents on December

Figure FE5. MTBE and Spot Ethanol Prices

Sources: *Platt's Oilgram Price Report*, EIA; *Octane Week*, various issues, 1992-1993.

¹⁸Lundberg Letter, "How Did Oxy Mandates Affect Prices?" XIX:23, December 11, 1992.

28. During the previous year, when there was no oxygenate requirement, the price difference between nonattainment and attainment areas grew an additional 2 cents per gallon between October and December.¹⁹ Taking into account this baseline price difference, it would appear that the incremental difference attributable to oxygenate costs are in the range of 3 to 5 cents per gallon.

Similarly, in PAD District II there was a 3.1-cent-per-gallon difference in retail gasoline prices between attainment and nonattainment areas on October 5, 1992. That spread widened to a 7.6 cents per gallon on November 9, and narrowed to 6.0 cents per gallon in December. The 1991 price data for PAD District II showed no significant seasonal changes in the price difference between attainment and nonattainment areas. Thus, in PAD District II, the incremental price differences attributable to oxygenate costs are also in the 3 to 5 cent per gallon range.

Table FE3 also clearly shows a steady decline in the prices of all types of gasoline during the oxygenation control period, which helped to cushion the impact on consumers of this first oxygenation season. The falling gasoline prices resulted, in part, from falling crude prices. The Organization of Petroleum Exporting Countries (OPEC) had disagreements about production

quotas, resulting in ample crude supplies and declining crude prices, and thus lower gasoline prices. The refiners composite acquisition price for crude went from \$19.49 per barrel in October to \$17.10 in January. It then rose slightly, to \$18.04 in March. Following the crude price changes, oxygenated gasoline prices shown in Table FE3, on average, went from a high of about 121 cents per gallon in November to as low as 114 cents per gallon by the end of February. March, however, saw a slight increase to 117 cents per gallon, which was about 5 cents per gallon less than at the beginning of the season.

Since gasoline prices normally increase during the summer driving season, a seasonal decline in fourth quarter prices is normal without any decline in crude prices. However, gasoline prices increased very little in the summer of 1992, so less decline in gasoline prices during fourth quarter 1992 would have been expected. As crude prices fell, the concerns over oxygenated gasoline supplies at the beginning of the first oxygenation season may have helped to hold average retail gasoline prices up in both attainment and nonattainment areas. When supply worries disappeared by the end of the year, gasoline prices at both wholesale and retail drifted downward with crude prices. On balance, the supply concerns may have given gasoline marketers a few cents of added margin above normal fourth quarter levels,

Figure FE6. U.S. Ethanol Blended Into Gasoline by Month

Source: Energy Information Administration, *Petroleum Supply Annual 1992*, and *Petroleum Supply Monthly*, various issues, 1993.

¹⁹The data explored for the baseline estimate was wholesale price data from the Computer Petroleum Corporation published in the *Oil and Gas Journal*. The implied 3 to 5 cent per gallon oxygenated gasoline price difference is also consistent with Platts Cargo Market prices, Platts Terminal prices, and Lundberg Terminal Prices for terminals selling both oxygenated and conventional gasoline.

helping to compensate for the high priced oxygenates purchased on the contract market to build stocks prior to the season.

Refinery Economics

Refiners' Costs. An important question is whether or not refiners were able to pass the incremental costs of oxygenated gasoline on to consumers. EIA refinery models²⁰ were used to explore this question. As indicated earlier, oxygenates are not just materials that contain oxygen. They are also high-octane blending components, which can be used to replace some of the higher octane materials that would otherwise have been used in producing gasoline. The materials being replaced are of higher value than the average finished gasoline value. Thus, high cost oxygenates are substituted for other high cost materials. In addition, in a refinery producing oxygenated fuels, the addition of oxygenates produces higher output yields than can be produced when making

conventional gasoline. As a result, the incremental cost to produce oxygenated gasoline is less than the cost of simply replacing gasoline volume with oxygenate volume.

The EIA computer models show that the impact of the high octane contribution to incremental cost varies with the percent volume of oxygenated fuel produced by the refiner. When the percent of gasoline that is oxygenated is low, the refiner has the greatest latitude to adjust operations to take advantage of the oxygenates' octane contribution while meeting the oxygen content requirement. Thus, for low volume percents of oxygenated gasoline, the incremental cost of producing oxygenated gasoline is lowest.

When the percent of oxygenated gasoline is high (say over 70 percent), the gasoline pool is awash with octane, and the refiner cannot compensate much further. At this volume percent, the

Table FE3. Retail Gasoline Prices in Attainment and Nonattainment Areas National Average of Unleaded Regular, Self Service Cash
(Cents per Gallon, Including Taxes)

Date	Attainment Areas	Nonattainment	Difference	Average Areas
10/5/92	109.8	117.3	7.5	111.4
10/13	109.7	118.0	8.3	111.6
10/19	109.2	118.2	9.0	111.3
10/26	109.2	118.4	9.2	111.3
Control Season Begins In Most Areas 11/1/92				
11/2	109.4	120.6	11.2	112.0
11/9	109.2	121.0	11.8	112.0
11/16	108.4	120.3	11.9	111.2
11/23	107.6	120.2	12.6	110.6
11/30	106.8	119.6	12.8	109.8
12/7	105.9	118.7	12.8	108.9
12/14	104.7	117.8	13.1	107.8
12/21	104.3	117.6	13.3	107.4
12/28	103.8	116.9	13.1	106.9
1/4/93	103.5	116.2	12.7	106.5
1/11	103.7	115.8	12.1	106.6
1/18	103.1	115.9	12.8	106.1
1/25	102.2	116.0	13.8	105.5
2/1	103.1	115.9	12.8	105.5
2/8	104.0	115.7	11.7	106.2
2/15	103.1	114.7	11.6	105.3
2/22	102.5	114.0	11.5	104.7
3/1	103.6	117.2	13.6	104.2
3/8	104.3	116.4	12.1	104.8
3/15	105.3	116.5	11.2	105.8
3/22	105.2	116.3	11.1	105.6

Source: Energy Information Administration, Form EIA-878, "Motor Gasoline Telephone Price Survey."

²⁰Energy Information Administration, *Refinery Evaluation Modeling System (REMS) Model* (Washington, DC, 1984) and *Refinery Yield Model Spreadsheet System: RYMSS-PC Documentation* (Washington, DC, 1989).

incremental cost of producing oxygenated gasoline approaches the incremental cost of simply substituting oxygenate volume for gasoline volume. That is, there is little compensating cost reduction from the octane enhancement capability.

Figures FE7 and FE8 show a typical refiner's incremental cost of producing oxygenated gasoline from both MTBE and ethanol over conventional gasoline. The incremental cost increases as the oxygenated gasoline volume percent of the pool is increased and as the cost of the oxygenate is increased. As explained above, the cost to produce the first barrel of oxygenated gasoline is where incremental cost is lowest. Figure FE7 indicates that if MTBE were 65 cents per gallon, the refiner would incur no additional cost over conventional gasoline cost to produce the first barrel of oxygenated gasoline. At an MTBE price of 83 cents per gallon, the refiner's additional cost is just over 2 cents per gallon, and so forth. As refiners increase the volume percent of oxygenated gasoline, and their flexibility to take advantage of the octane value declines, the incremental cost increases. A refiner at 40 volume percent-oxygenated gasoline production paying 83 cents per gallon for MTBE would incur about 3.0 cents per gallon incremental cost to produce the next barrel of oxygenated gasoline, a cost which is almost 1 cent per gallon more than the refiner would have incurred for the first oxygenated gasoline barrel.

Both ethanol and MTBE have high octane content but large differences in oxygen content. Thus, by the time refineries produce 40-percent-oxygenated gasoline, they use about twice the volume of MTBE to meet oxygenate requirements as would be required if they used ethanol. The extra MTBE results in about twice the amount of octane being added over what ethanol adds. This results in the slope of the MTBE cost curve being steeper than the ethanol curve.

An estimate of the cost to refiners of producing oxygenated gasoline over this past season can be made from Figure FE7. In PAD District I, where refiners were supplying a large number of control areas, refiners were producing an average of 45-volume-percent oxygenated gasoline (range of 20-70 percent). The actual costs to refiners of oxygenates, however, is unclear. If a refiner paid in the range of 85 to 100 cents per gallon on average for MTBE, Figure FE7 indicates that the incremental oxygenated gasoline cost over regular gasoline was in the 2.5- to 6.1-cents-per-gallon range.

The prior section on prices concluded that the premium charged for oxygenated gasoline seemed to be in the 3- to 5-cents-per-gallon range. The PAD District I estimate for costs in the range of 2.5 to 6.1 cents per gallon implies that refiners as a group were probably able to pass through most of their increased costs, and probably earned little or no extra margin. However, individual refiners may have experienced different results. For example, a refiner that had contracted for MTBE at 100 cents per gallon or more for most of its supply would have lower margins on oxygenated gasoline than on conventional gasoline, while a refiner with more favorable oxygenate cost terms and a need to

produce only lower percentages of oxygenated gasoline may have made an extra contribution to margin.

The Preliminary Outlook For Next Season

While this first oxygenation season saw no major problems in spite of tremendous uncertainties, refiners cannot relax because they must prepare for the next season. The next season will not be the same as the first season because of differences in participating areas, a different length of the season, possible changes in demand, and excess oxygenate capacity. An investigation of what is needed for next season requires an explanation of the overall gasoline market, as well as specific oxygenated gasoline market factors.

This past winter, the United States experienced higher distillate demands than in recent years. Because of higher distillate demands, more gasoline was produced. In addition, oxygenates were being added to the gasoline, contributing another 250,000 barrels per day to gasoline supply. The consequence was significantly higher gasoline stocks going into the 1993 summer gasoline season than have been seen for at least 5 years. The high stocks should lessen the likelihood of tight supply in the summer and dampen prospects for strong summer prices.

During this past winter, all gasoline prices fell throughout the oxygenation season due, in part, to falling crude prices. For the upcoming oxygenation season, it is unlikely that crude prices will increase substantially; however, crude price declines may not occur to cushion the oxygenated gasoline price increases as they did this year.

The main change in the upcoming oxygenation season will be higher overall oxygenated gasoline needs. The two main reasons for the increase are earlier participation of some areas (October 1 rather than November 1) and probable inclusion of the Boston, Memphis, and Duluth areas. Uncertainty still exists over the oxygen content that will be required in California, and over which attainment areas will choose to participate and thereby further increase demand for oxygenated gasoline.

Inventory needs at the end of August can be estimated by assuming some production level and approximating the new higher MTBE demands for next season. If overall gasoline consumption remains about the same as it was this past year, the additional participants will increase seasonal MTBE demand by about 20,000 barrels per day. Further, if new capacity comes on line as planned and production averages 150,000 barrels per day next season (versus 123,000 barrels per day during the full compliance months this past season), and imports average about 16,000 barrels per day, then inventories may need to be about 23 million barrels at the end of August. This is the same inventory level achieved last season at the end of September.

The 23 million barrel inventory can be achieved if pre-season production plus imports average 140,000 barrels per day, and

Figure FE7. Incremental Refinery Cost to Produce Oxygenated Gasoline

Figure FE8. Incremental Refinery Cost to Produce Oxygenated Gasoline

baseline MTBE demand is about 50,000 barrels per day.²¹ This leaves about 90,000 barrels per day, or 2.8 million barrels per month, that will be added to inventory. Since inventories at the end of April were about 12 million barrels, the excess supply over consumption appears adequate to meet the inventory requirement described above.

Prices may be different for MTBE next year than they were this past year. Prices weakened this past year as the MTBE oversupply situation unfolded. Prudent refiners that had committed early to large contract coverage paid more for their MTBE than refiners that waited and relied more on the spot markets. This year, there is less uncertainty about supply capability, particularly storage

²¹Estimate of 50,000 off-season baseline can also be found in *MTBE/Oxygenates/New Fuels*, "MTBE Outlook For The Second Quarter," March 18, 1993, pp. 1ff.

availability, and refiners will probably be less conservative in their supply arrangements. This behavior could result in a tighter supply situation and higher prices during the upcoming season than occurred last year. Exactly how much higher is still unclear. Presumably, if no shortages develop, spot prices will return to values closer to the contract values seen earlier this past year; i.e., around 100 cents per gallon.

Conclusions

The following conclusions are based on the analysis in this article:

- There were no shortages of either the oxygenates MTBE and ethanol or of oxygenated gasoline during the 1992-93 oxygenation season, in spite of previous predictions that shortages might occur. Reasons for this include: adequate industry stock building in anticipation of the oxygenation season and lower demand due to much smaller spillover of oxygenated gasoline sales in attainment areas than had been anticipated, as a strong economic incentive existed for the industry to make numerous adjustments and exchange agreements for the efficient distribution of oxygenated and conventional gasoline.
- Because of falling world crude oil prices and lower than expected demand for oxygenates, prices of both oxygenates and oxygenated gasoline fell throughout the control season along with all gasoline prices. Oxygenate prices went from just over 80 cents per gallon in November to a low of 71 cents per gallon in January, which is about where it remained for the rest of the oxygenated gasoline season. Oxygenated gasoline prices on average went from a high of about 121 cents per gallon in November to as low as 114 cents per gallon at the end of February. March saw prices rise again to 117 cents per gallon, which was still about 5 cents per gallon less than at the beginning of the season. As a result, oxygenated gasoline consumers received some relief during the season due to overall declining gasoline prices, and consumers in general benefitted in April and afterwards from lower prices caused by excess gasoline supplies.
- The incremental cost to refiners of producing oxygenated gasoline with MTBE was estimated at between 2.5 and 6.1 cents per gallon. The consumer paid on average anywhere from 3 to 5 cents per gallon more for oxygenated gasoline than conventional gasoline, so refiners were able to pass through most of their incremental costs to consumers.
- In spite of uncertainties associated with the number of areas that will actually participate, the outlook for the 1993-94 oxygenation season is that there is excess capacity and ample storage facilities for both MTBE and oxygenated gasoline. Prices for MTBE, however, may be higher during the next oxygenation season. Refiners will probably be less conservative in their contracting and stocking behavior, preventing another oversupply situation and keeping prices up.

Highlights

Highlights

Total demand for petroleum products (measured as product supplied) declined in May to 16.5 million barrels per day (Table H1), although it was slightly above the level of the last 2 years. The U.S. Department of Commerce reported that the index of leading economic indicators declined slightly in May, while industrial production showed moderate increases over April and the year-earlier period. The weather during May was fairly mild, with moderate temperatures over most of the Nation precluding the need for space-cooling or heating.

Other May 1993 highlights include:

- Demand for motor gasoline in May was slightly above the normal seasonal level, while production of these fuels was at a record high for the month.
- Strong industrial production somewhat offset a seasonal decline in heating fuels use. Demand for distillate fuel oil fell from the January-April 1993 levels, but remained at the high end of the normal range in May.
- Mild weather, declining natural gas prices, and decreased electric power generation combined to lower demand for residual fuel oil in May.

- U.S. stocks of propane recorded strong gains during May, although inventories in Petroleum Administration for Defense (PAD) District II remained below last year's levels. PAD District II stocks going into next winter are expected to be lower than the stock level going into the 1992-1993 heating season, while U.S. inventories are expected to be within the normal range.
- Strong freight and passenger commercial air travel resulted in a continued strong demand for kerosene-type jet fuel.
- Domestic crude oil production declined in May due to seasonal maintenance and weather related problems in the Alaskan oil fields. Imports of crude oil (excluding the Strategic Petroleum Reserve) declined in May. During the first 5 months of 1993, crude oil imports were higher from Venezuela than during the comparable 1992 period, while those from Saudi Arabia were below the comparable 1992 period.

Motor Gasoline

Demand for motor gasoline increased slightly in May, as the Memorial Day holiday sparked increased driving. Demand of 7.5

More than one-half of the U.S. crude oil imports came from OPEC during the first 5 months of 1993. The volumes from Venezuela increased sharply while those from Saudi Arabia fell significantly, compared with shipments during the same period a year earlier.

Table H1. Petroleum Supply Summary
(Million Barrels per Day, Except Where Noted)

Category	1993			1992	January—May	
	May	April	Difference ^a	May	1993	1992
Products Supplied	16.5	16.8	-0.3	16.5	17.0	16.8
Finished Motor Gasoline	7.5	7.4	0.1	7.3	7.2	7.1
Distillate Fuel Oil	2.8	3.1	-0.3	2.8	3.3	3.1
Residual Fuel Oil	1.0	1.1	-0.1	1.0	1.1	1.2
Jet Fuel	1.4	1.4	(s)	1.3	1.4	1.4
Liquefied Petroleum Gases	1.4	1.5	-0.1	1.4	1.7	1.7
Other Petroleum Products ^b	2.4	2.4	(s)	2.6	2.3	2.3
Crude Oil	(s)	(s)	(s)	(s)	(s)	(s)
Crude Oil Inputs	13.7	13.5	0.2	13.7	13.3	13.1
Operating Utilization Rate (percent)	93.5	91.9	1.6	93.1	88.5	88.9
Imports	8.3	8.5	-0.1	7.8	8.2	7.5
Crude Oil	6.5	6.7	-0.1	6.1	6.4	5.7
Strategic Petroleum Reserve	0.0	0.1	0.0	0.0	(s)	0.0
Other	6.5	6.6	(s)	6.1	6.4	5.7
Products	1.8	1.8	(s)	1.8	1.8	1.8
Finished Motor Gasoline	0.3	0.3	0.1	0.4	0.2	0.3
Distillate Fuel Oil	0.2	0.2	-0.1	0.2	0.2	0.2
Residual Fuel Oil	0.3	0.4	-0.1	0.3	0.3	0.4
Jet Fuel	0.1	0.1	(s)	0.1	0.1	0.1
Liquefied Petroleum Gases	0.1	0.1	(s)	0.1	0.1	0.1
Other Petroleum Products ^b	0.8	0.7	0.1	0.7	0.8	0.7
Exports	0.9	0.9	(s)	0.9	0.9	0.9
Crude Oil	0.1	0.1	(s)	0.1	0.1	0.1
Products	0.8	0.9	-0.1	0.8	0.8	0.9
Total Net Imports	7.4	7.5	-0.1	6.9	7.3	6.6
Stock Change^c	1.0	0.9	0.1	0.6	0.3	-0.1
Crude Oil	0.1	0.5	-0.4	-0.1	0.3	0.1
Products	0.9	0.4	0.5	0.8	0.1	-0.2
Total Stocks at End of Period (million barrels)	1,643	1,611	32	1,602	--	--
Crude Oil	935	931	4	912	--	--
Strategic Petroleum Reserve	582	582	(s)	569	--	--
Other	353	349	4	344	--	--
Products	708	681	28	690	--	--
Finished Motor Gasoline	185	183	2	186	--	--
Distillate Fuel Oil	102	98	3	96	--	--
Residual Fuel Oil	43	41	2	41	--	--
Jet Fuel	42	41	1	45	--	--
Liquefied Petroleum Gases	97	81	17	100	--	--
Other Petroleum Products ^b	239	236	3	222	--	--

^a Difference is equal to volume for current month minus volume for previous month.

^b Includes pentanes plus, other hydrocarbons and oxygenates, unfinished oils, gasoline blending components, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, and liquefied petroleum gases.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase.

(s) = Less than 0.05 million barrels per day, or less than 0.05 percent, or less than 0.5 million barrels.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration, 1992, EIA, *Petroleum Supply Annual*; 1993, *Petroleum Supply Monthly*.

million barrels per day was at the high end of the normal seasonal range.

Production of motor gasoline during May averaged 7.4 million barrels per day, a record high for May. High refinery inputs at the Nation's complex refineries, which maximize production of light-end petroleum products, were behind the high production.

Stocks of finished motor gasoline increased slightly to 185 million barrels. This was within the normal range for this time of year.

Distillate Fuel Oil

Demand for distillate fuel oil decreased in May, to 2.8 million barrels per day, close to the normal range for this time of the year. Continued growth in manufacturing sustained transportation demand, but this was offset by a seasonal decline in heating fuel use due to mild weather. Rain in the Midwest had a dampening effect on agricultural use of diesel fuel in May.

Stocks of distillate fuel oil increased in May to 102 million barrels. This was close to the seasonal level of recent years.

Residual Fuel Oil

Demand for residual fuel oil remained weak in May, declining to 1.0 million barrels per day. Mild weather during May resulted in lower electric power generation, which reduced demand. Natural gas prices, which increased during much of the year, began to decline somewhat during the month, making residual fuel oil less attractive at dual-fuel fired electric power plants.

Liquefied Petroleum Gases

Field production of natural gas liquids (NGL's) averaged 1.7 million barrels per day, continuing the strong output of these products observed during the last 5 years. The high levels of production are due to improvements to fractionators and supporting infrastructure.

U.S. stocks of propane recorded strong gains during May as the seasonal buildup of propane continued for the 1993-1994 heating season. The robust 8.1-million barrel increase from April boosted the Nation's inventory of propane to a level just below the lower limit of its seasonally adjusted average range of the last 3 years. Regionally, stocks in PAD District I increased to 2.5 million barrels during May, well within the average range for this time of year. PAD District II stocks rose to 12.7 million barrels and were at a level well below the average range for this time of year, while PAD District III stocks increased to 20.7 million barrels during this same period and were within the normal range for this time of the year.

Although the May 1993 level remains below the average stock range for this time of year, industry sources speculate that propane inventories will eventually reach nearly 60 million barrels by the end of September 1993 (beginning of the 1993-1994 heating

season), a level that is well within the average range of the last 3 years. Moreover, industry sources speculate further that PAD District II stock levels prior to the 1993-1994 winter heating season will fall short of the record 25 million barrels recorded at the end of September 1992. The record 1992 stockbuild was fueled, in part, by the diversion of some propane intended for storage on the Gulf Coast (PAD District III) to storage sites in the Midwest (PAD District II). Limited capacity on pipelines serving the Gulf Coast region was one of the major factors causing propane's displacement to Midwest storage sites during the 1992 stockbuild. However, industry sources speculate that this situation will be remedied by the addition of several new pipelines now operating in PAD District III, which should significantly reduce some of the bottlenecks in propane movements to the Gulf Coast during the 1993-1994 stockbuild.

Kerosene-Type Jet Fuel

Demand for kerosene-type jet fuel remained fairly strong in May at 1.3 million barrels per day. Increased international and domestic commercial air travel, both passenger and cargo, has been the underlying reason for the recent strong demand. The publicized conversion to the use of kerosene-type jet fuel by the U.S. Department of Defense has been offset by an overall decline in purchases due to base closings and cutbacks. The military changeover, in which kerosene-type jet fuel will replace the naphtha-type jet fuel, is expected to be complete by 1995.

Crude Oil

Domestic crude oil production continued its decline, and averaged 6.8 million barrels per day in May. Much of the drop has been due to the declining output in Alaska. In May, crude oil production in Alaska averaged 1.6 million barrels per day, and the decline was attributed to various North Slope field and maintenance projects, as well as unseasonably warm temperatures which reduced the efficiency of gas compressors.

Imports of crude oil (excluding the Strategic Petroleum Reserve) averaged 6.5 million barrels per day in May. This was slightly below the month-earlier level, but considerably higher than those during the comparable periods in 1991 and 1992. Imports of crude oil from Organization of Petroleum Exporting Countries (OPEC) averaged 3.7 million barrels per day during the first 5 months of 1993, up 0.4 million barrels per day or 13 percent from the same period during 1992. The OPEC crude oil accounted for 57 percent of all foreign crude oils brought into the United States this year, essentially unchanged from the January to May 1992 imports.

Venezuelan crude oil shipments grew by 0.2 million barrels per day or 28 percent to 0.9 million barrels per day in 1993, as several companies stepped up purchases of these South American crude oils (Figure H1). Citgo Petroleum Corp., a subsidiary of Petroleos de Venezuela, purchased increased volumes for its recently enlarged U.S. petroleum operations. In a move that will involve larger purchases of Venezuelan crude oil in the near future, Citgo and Lyondell Petrochemical Co. are planning a joint venture to

Figure H1. Imports of Crude Oil From Saudi Arabia and Venezuela, January-May 1989-1993
(Thousand Barrels per Day)

Sources: Energy Information Administration, *Petroleum Supply Monthly*, July 1993, and *Petroleum Supply Annual*, Vol. 2, 1989-1992.

upgrade the Lyondell Houston, Texas, refinery to process large volumes of Venezuelan heavy crude oil. Improvements will include modifications to the crude oil distillation unit, and new crude oil distillation, coking, hydrotreating, and sulfur recovery units.

During the first 5 months of 1993, crude oil imports from Saudi Arabia averaged 1.4 million barrels per day, down 12 percent or 0.2 million barrels per day from a year earlier. Some industry analysts reported that the slump in U.S. purchases of Saudi crude oil was due in part to tying crude oil term contract prices to Alaska North Slope spot prices at the Gulf Coast. Industry analysts indicated that the declining North Slope production coupled with

strong demand for these crude oils on the West Coast frequently inflates the prices of North Slope and other crude oils tied to it.

Refinery Utilization

Refineries continued to operate at high rates in May. Gross inputs of crude oil and other oils to atmospheric crude oil distillation units increased to 14.0 million barrels per day, well above the normal seasonal level, and the operating utilization rate increased to 93.5 percent. The operable utilization rate, which reflects refining capacity if all idle capacity is included, increased to 92.1 percent (Table H2).

Table H2. U.S. Refinery Inputs, Capacities and Utilization Rates: 1992-1993
(Thousand Barrels per Day, Except Where Noted)

Item	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1992												
Gross Refinery Inputs	13,097	12,742	13,292	13,356	13,850	14,285	14,176	13,649	13,886	13,651	13,795	13,400
Operating Refinery Capacity ¹	14,965	14,940	14,893	14,958	14,873	14,808	14,808	14,861	14,809	14,844	14,728	14,691
Idle Capacity²	731	731	725	669	618	650	623	460	499	443	576	619
Idle Three Months or Less	290	268	292	199	149	56	53	15	57	15	133	191
Idle More than Three Months	441	463	433	470	469	594	570	445	442	428	443	428
Operable Refinery Capacity	15,696	15,671	15,618	15,626	15,490	15,458	15,432	15,332	15,308	15,287	15,304	15,311
Utilization Rate (percent)												
Operating Capacity	87.5	85.3	89.2	89.3	93.1	96.5	95.7	91.8	93.8	92.0	93.7	91.2
Operable Capacity	83.4	81.3	85.1	85.5	89.4	92.4	91.9	89.1	90.7	89.3	90.1	87.5
1993												
Gross Refinery Inputs	13,176	13,161	13,535	13,773	13,957	NA	NA	NA	NA	NA	NA	NA
Operating Refinery Capacity ¹	14,784	14,819	14,908	14,985	14,931	NA	NA	NA	NA	NA	NA	NA
Idle Capacity²	360	320	239	158	225	NA	NA	NA	NA	NA	NA	NA
Idle Three Months or Less	273	190	131	36	97	NA	NA	NA	NA	NA	NA	NA
Idle More than Three Months	87	130	108	122	128	NA	NA	NA	NA	NA	NA	NA
Operable Refinery Capacity	15,143	15,140	15,148	15,144	15,156	NA	NA	NA	NA	NA	NA	NA
Utilization Rate (percent)												
Operating Capacity	89.1	88.8	90.8	91.9	93.5	NA	NA	NA	NA	NA	NA	NA
Operable Capacity	87.0	86.9	89.4	91.0	92.1	NA	NA	NA	NA	NA	NA	NA

¹ Operating capacity equals the operable capacity less the total idle capacity.

² Idle capacity is the component of operable capacity that is not in operation and not under active repair, but is capable of being placed in operation within 30 days; and capacity not in operation but is under active repair that can be completed within 90 days.

NA = Not Available.

Sources: Energy Information Administration, *Petroleum Supply Monthly*, 1993 data issue, Table 28; *Petroleum Supply Annual*, Volume 2, 1992, Table 16; Form EIA-810, "Monthly Refinery Report."

Finished Motor Gasoline Product Supplied Adjustment

Beginning with the reporting of January 1993 data, the Energy Information Administration (EIA) has made adjustments to the product supplied series for finished motor gasoline. It was recognized that motor gasoline statistics published by the EIA through 1992 were underreported because the reporting system was not collecting all fuel ethanol and motor gasoline blending components being blended downstream from the refinery. The EIA was able to quantify these volumes and make corrective adjustments for 1992 in 1993. Each of these adjustments is discussed in detail following Table H3.

As a result of the changes, any comparisons of 1993 motor gasoline data to historical series must recognize the adjustments made in 1993. To assist in this comparison, the EIA has prepared a table of 1992 finished motor gasoline product supplied on the 1993 basis (Table H3 below) showing the published numbers by month, the adjustments, and the 1993 product supplied basis number. When making a comparison of 1993 to 1992 finished motor gasoline product supplied, it is important to use the 1993 basis numbers. For example, from Table H3 the January 1993 product supplied number of 6,746 should be compared to 6,929, not the original 6,869. The year 1992 is the only historical year for which data are available to do a comparison on the 1993 basis.

Table H3. Finished Motor Gasoline Product Supplied Adjustment, 1992 and 1993
(Thousand Barrels per Day)

Year/Month	Product Supplied 1992 Basis	Fuel Ethanol Adjustment	Motor Gasoline Blending Component Adjustment	Product Supplied 1993 Basis	Difference
1992:					
January	6,869	68	-8	6,929	60
February	6,963	68	-6	7,025	62
March	7,137	62	59	7,258	121
April	7,238	68	49	7,355	117
May	7,328	55	36	7,419	91
June	7,460	64	11	7,535	75
July	7,639	52	75	7,766	127
August	7,380	66	91	7,537	157
September	7,344	54	43	7,441	97
October	7,338	76	-14	7,400	62
November	7,102	91	68	7,261	159
December	7,396	100	66	7,562	166
Average	7,268	69	39	7,376	108
1993:					
January	—	60	25	6,746	—
February	—	67	2	7,129	—
March	—	70	42	7,397	—
April	—	62	45	7,401	—
May	—	57	53	7,531	—

Note: Totals may not equal sum of components due to independent rounding.

Source: • Fuel Ethanol Adjustment - 1992, Energy Information Administration (EIA), *Petroleum Supply Monthly*, January, 1993, Appendix D, EIA-819M, "Monthly Oxygenate Telephone Report;" 1993, EIA, *Petroleum Supply Monthly*. • Motor Gasoline Blending Component Adjustment - 1992, EIA, *Petroleum Supply Annual*, Volumes I and II; 1993, EIA, *Petroleum Supply Monthly*.

Revised Fuel Ethanol Adjustment

Prior to 1993, an estimated 60 to 70 thousand barrels per day of fuel ethanol were added to motor gasoline to produce gasohol but were not included in the Energy Information Administration's (EIA) finished motor gasoline production data. In 1992, the EIA attempted to collect these data from downstream fuel ethanol motor gasoline blenders but found that this effort was impractical and the results were inaccurate.

Beginning in January 1993, an estimate for the missing fuel ethanol blended into motor gasoline is calculated. This estimate is calculated as production (from the EIA-819M, "Monthly Oxygenate Telephone Report"), plus imports (from the EIA-814, "Monthly Imports Report"), minus inputs at refineries (from the EIA-810, "Monthly Refinery Report"), plus or minus stock change (from the EIA-819M survey). This estimate for the amount of fuel ethanol blended into motor gasoline is added to Table 1 for Natural Gas Liquids Field Production (line 14) and in the Field Production column for finished motor gasoline in Tables 2 through 25.

Due to interpretation problems encountered by survey respondents with the definition of "oxygenated" motor gasoline, the definition of oxygenated motor gasoline has been simplified. The new definition was developed with the cooperation and approval of the Environment Protection Agency (EPA) and petroleum industry organizations. It is based on the specification that oxygenated gasoline includes all motor gasoline that has 1.8 percent or more oxygen content, by weight. By definition, all gasohol falls into this category. Therefore, the adjustment that was made to January through April 1993 data to determine how much of the gasohol is used as "oxygenated" gasoline in the EPA carbon monoxide (CO) non-attainment areas specified by the Clean Air Act Amendments of 1990, and how much is used as "other" gasoline is no longer valid and has been discontinued. Revisions to January through April data will be published in the 1993 *Petroleum Supply Annual*. Gasohol will be classified entirely as "oxygenated" motor gasoline for the remainder of 1993.

An estimate for the total amount of gasohol produced with the ethanol is given as 10 times the estimated fuel ethanol blended (this assumes a 10 percent ethanol blend.) This amount is added to the column labeled field production of "oxygenated gasoline" and subtracted from "other gasoline" in Tables 2 through 5.

Motor Gasoline Blending Component Adjustment

Prior to 1993, the EIA published a "product supplied" for motor gasoline blending components. Since these components are to be blended into finished motor gasoline, there is no actual demand for this intermediate product. The EIA is correcting this series by including the quantity of "product supplied" for motor gasoline blending components with "other" finished motor gasoline. This change is accomplished in Tables 2 through 25 by adding product supplied for motor gasoline blending components to the column labeled Field Production of "other" motor gasoline, and subtracting it from the Field Production column for "motor gasoline blending components."

The blending components adjustment shown in Table H3 is product supplied for blending components published in the 1992 issue of the *Petroleum Supply Annual*.

Fuel Ethanol Stock Adjustment

As discussed previously, downstream fuel ethanol motor gasoline blenders do not report on the Petroleum Supply Reporting System (PSRS). As a result, total end-of-month stocks of fuel ethanol have been underreported in the PSRS. Total stocks of fuel ethanol are assumed to be those reported by ethanol producers on the Form EIA-819M, "Monthly Oxygenate Telephone Report." The difference between the stocks reported on the EIA-819M and the stocks reported in the PSRS (from refiners, bulk terminal and pipeline operators) is added to the stocks shown for bulk terminals.

Summary Statistics

Incinerators such as this one at a chemical installation turn toxic chemicals into water vapor and other harmless elements.

Table S1. Crude Oil and Petroleum Products Overview, 1981 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month	Field Production			Stock Change ^a		Petroleum Products Supplied	Ending Stocks ^b (Million Barrels)
	Total Domestic ^c	Crude Oil	Natural Gas Plant Liquids	Crude Oil ^d	Petroleum Products		Crude Oil ^d and Petroleum Products
1981 Average	10,230	8,572	1,609	9 290	9 -130	16,058	1,484
1982 Average	10,252	8,649	1,550	136	-283	15,296	9 1,430
1983 Average	10,299	8,688	1,559	9 214	9 -234	15,231	1,454
1984 Average	10,554	8,879	1,630	199	81	15,726	1,556
1985 Average	10,636	8,971	1,609	50	-153	15,726	1,519
1986 Average	10,289	8,880	1,551	78	124	16,281	1,593
1987 Average	10,008	8,349	1,595	128	-87	16,665	1,607
1988 Average	9,818	8,140	1,625	1	-29	17,283	1,597
1989 Average	9,219	7,613	1,546	86	-129	17,325	1,581
1990 Average	8,994	7,355	1,559	-35	142	16,988	1,621
1991 January	9,255	7,500	1,647	-71	-1,027	16,893	1,587
February	9,424	7,637	1,695	231	-704	16,339	1,573
March	9,301	7,546	1,683	-239	-268	16,212	1,558
April	9,262	7,509	1,665	50	628	16,139	1,578
May	9,157	7,409	1,657	566	988	16,189	1,626
June	9,032	7,320	1,627	-299	546	16,878	1,634
July	9,056	7,347	1,622	-153	199	16,971	1,635
August	9,027	7,316	1,627	103	316	17,183	1,648
September	9,088	7,368	1,623	-156	653	16,848	1,663
October	9,212	7,437	1,686	51	-659	16,996	1,644
November	9,129	7,328	1,697	43	62	16,730	1,647
December	9,089	7,299	1,686	-611	-365	17,145	1,617
Average	9,168	7,417	1,659	-42	32	16,714	--
1992 January	9,176	7,361	1,688	540	-757	17,012	1,610
February	9,175	7,389	1,696	171	-951	16,893	1,588
March	9,123	7,348	1,694	-250	-291	16,825	1,571
April	9,072	7,293	1,693	315	92	16,764	1,583
May	8,949	7,169	1,695	-144	770	16,485	1,602
June	8,968	7,167	1,701	-581	604	16,978	1,603
July	8,961	7,131	1,683	244	290	17,143	1,620
August	8,678	6,922	1,638	-124	161	16,929	1,621
September	8,843	7,030	1,660	-160	653	16,876	1,636
October	9,025	7,126	1,722	411	-258	17,448	1,640
November	8,975	7,024	1,754	-227	77	17,091	1,636
December	9,019	7,103	1,744	-212	-1,203	17,928	9 1,592
Average	8,996	7,171	1,697	-1	-68	17,033	--
1993 January	E 9,257	E 7,008	1,728	264	9 370	16,502	9 1,611
February	E 8,948	E 6,957	1,761	219	-799	17,577	1,595
March	E 9,009	E 6,976	1,799	246	-619	17,752	1,584
April	E 8,904	E 6,897	1,790	537	388	16,796	1,611
May	E 8,775	RE 6,833	R 1,719	R 133	897	16,503	1,643
June*	NA	PE 6,771	E 1,905	E -5	NA	NA	NA
6-Mo. Average	NA	PE 6,907	E 1,783	E 232	NA	NA	--
1992 6-Mo. Average	9,076	7,287	1,694	8	-84	16,825	--
1991 6-Mo. Average	9,237	7,485	1,662	38	33	16,443	--

^a A negative number indicates a decrease in stocks and a positive number indicates an increase.

^b Stocks are totals as of end of period.

^c Includes crude oil, natural gas plant liquids, and other liquids. Beginning in 1993, fuel ethanol blended into finished motor gasoline and oxygenate production from merchant MTBE plants are also included.

^d Includes stocks located in the Strategic Petroleum Reserve.

^e Includes crude oil for storage in the Strategic Petroleum Reserve.

^f Net Imports equal Imports minus Exports.

^g In January 1981 and 1983, numerous respondents were added to surveys affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. Bulk terminal and pipeline stocks of oxygenates were added beginning in January 1993. See Summary Statistics Explanatory Note 4.

Footnotes continued on following page.

Table S1. Crude Oil and Petroleum Products Overview, 1981 - Present (Continued)
(Thousand Barrels per Day, Except Where Noted)

Year/Month	Imports			Exports			Net Imports ¹
	Total	Crude Oil ^a	Petroleum Products	Total	Crude Oil	Petroleum Products	
1981 Average	5,996	4,396	1,599	595	228	367	5,401
1982 Average	5,113	3,488	1,625	815	236	579	4,298
1983 Average	5,051	3,329	1,722	739	164	575	4,312
1984 Average	5,437	3,426	2,011	722	181	541	4,715
1985 Average	5,067	3,201	1,866	781	204	577	4,286
1986 Average	6,224	4,178	2,045	785	154	631	5,439
1987 Average	6,678	4,674	2,004	764	151	613	5,914
1988 Average	7,402	5,107	2,295	815	155	661	6,587
1989 Average	8,061	5,843	2,217	859	142	717	7,202
1990 Average	8,018	5,894	2,123	857	109	748	7,161
1991 January	7,103	5,296	1,808	1,199	50	1,149	5,904
February	6,865	5,485	1,380	1,441	152	1,288	5,424
March	6,646	5,166	1,480	944	137	807	5,702
April	7,418	5,529	1,888	737	162	575	6,680
May	8,518	6,363	2,155	1,149	165	984	7,369
June	8,245	6,334	1,911	921	78	843	7,323
July	7,755	5,955	1,801	963	139	824	6,793
August	8,670	6,645	2,025	837	55	783	7,832
September	7,826	5,812	2,015	785	109	676	7,042
October	7,467	5,683	1,784	918	92	826	6,550
November	7,615	5,528	2,087	926	126	800	6,690
December	7,337	5,565	1,772	1,213	133	1,081	6,124
Average	7,627	5,782	1,844	1,001	116	885	6,626
1992 January	7,712	5,956	1,756	1,144	118	1,026	6,568
February	6,827	5,079	1,748	852	22	829	5,975
March	7,068	5,321	1,747	912	105	807	6,156
April	8,092	6,127	1,966	937	23	914	7,155
May	7,823	6,060	1,763	885	106	779	6,939
June	7,946	6,171	1,775	957	107	850	6,989
July	8,479	6,796	1,683	929	53	876	7,550
August	8,260	6,457	1,803	789	133	657	7,470
September	8,178	6,218	1,960	848	68	780	7,330
October	8,505	6,696	1,810	902	106	796	7,603
November	7,872	6,121	1,751	995	111	885	6,877
December	7,839	5,937	1,901	1,237	107	1,130	6,602
Average	7,888	6,083	1,805	950	89	861	6,938
1993 January	7,964	6,292	1,672	953	129	825	7,011
February	7,930	6,156	1,775	853	166	687	7,077
March	8,342	6,513	1,829	905	139	766	7,437
April	8,485	6,698	1,787	944	73	871	7,541
May	R 8,348	R 6,549	R 1,799	R 919	R 112	R 807	R 7,429
June*	E 8,517	E 6,883	E 1,634	E 886	E 107	E 779	E 7,631
6-Mo. Average	E 8,268	E 6,518	E 1,749	E 911	E 121	E 791	E 7,356
1992 6-Mo. Average	7,582	5,790	1,792	949	81	868	6,833
1991 6-Mo. Average	7,472	5,696	1,775	1,062	124	938	6,410

Footnotes continued.

R = Revised data. E = Estimated. PE = Preliminary estimate. RE = Revised estimate. NA = Not Available.

* See Summary Statistics Explanatory Note 1.

Notes: • Crude oil includes lease condensate. • Italics denote estimates based upon preliminary data. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

Figure S1. Petroleum Overview, May 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S1. See Summary Statistics Table and Figure Sources.

Figure S2. Petroleum Products Supplied, May 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Tables S4-S7, and S9. See Summary Statistics Table and Figure Sources.

Figure S3. Crude Oil Supply and Disposition, May 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S2. See Summary Statistics Table and Figure Sources.

Figure S4. Crude Oil Ending Stocks¹, May 1992 - Present

¹Excludes stocks held in the Strategic Petroleum Reserve (SPR).

Note: The National Petroleum Council (NPC) defines the Minimum Operating Inventory as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. In its 1988 study, the NPC estimated this inventory level for crude oil to be 300 million barrels.

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S2. See Summary Statistics Table and Figure Sources.

Table S2. Crude Oil Supply and Disposition, 1981 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month	Supply						Disposition
	Field Production		Imports			Unaccounted for Crude Oil ^c	Crude Losses
	Total Domestic	Alaskan	Total	SPR	Other		
1981 Average	8,572	1,609	4,396	256	4,141	83	5
1982 Average	8,649	1,696	3,488	165	3,323	71	3
1983 Average	8,688	1,714	3,329	234	3,096	114	2
1984 Average	8,879	1,722	3,426	197	3,229	185	2
1985 Average	8,971	1,825	3,201	118	3,083	145	1
1986 Average	8,680	1,867	4,178	48	4,130	139	(s)
1987 Average	8,349	1,962	4,674	73	4,601	145	(s)
1988 Average	8,140	2,017	5,107	51	5,055	196	(s)
1989 Average	7,613	1,874	5,843	56	5,787	200	(s)
1990 Average	7,355	1,773	5,894	27	5,867	258	(s)
1991 January	7,500	1,848	5,296	0	5,296	-59	0
February	7,637	1,908	5,485	0	5,485	324	0
March	7,546	1,887	5,166	0	5,166	43	(s)
April	7,509	1,798	5,529	0	5,529	236	(s)
May	7,409	1,771	6,363	0	6,363	513	(s)
June	7,320	1,757	6,334	0	6,334	59	(s)
July	7,347	1,775	5,955	0	5,955	403	0
August	7,316	1,731	6,645	0	6,645	11	0
September	7,368	1,787	5,812	0	5,812	484	0
October	7,437	1,843	5,683	0	5,683	-59	(s)
November	7,328	1,765	5,528	0	5,528	263	(s)
December	7,299	1,718	5,565	0	5,565	146	0
Average	7,417	1,798	5,782	0	5,782	195	(s)
1992 January	7,361	1,789	5,956	0	5,956	290	0
February	7,389	1,808	5,079	0	5,079	229	(s)
March	7,348	1,785	5,321	0	5,321	287	(s)
April	7,293	1,741	6,127	0	6,127	189	0
May	7,169	1,682	6,060	0	6,060	421	0
June	7,167	1,703	6,171	34	6,138	259	(s)
July	7,131	1,655	6,796	0	6,796	332	0
August	6,922	1,635	6,457	18	6,439	65	(s)
September	7,030	1,700	6,218	16	6,202	385	0
October	7,126	1,696	6,696	49	6,647	290	(s)
November	7,024	1,674	6,121	0	6,121	296	(s)
December	7,103	1,705	5,937	0	5,937	61	(s)
Average	7,171	1,714	6,083	10	6,073	258	(s)
1993 January	E 7,008	E 1,654	6,292	0	6,292	82	(s)
February	E 6,957	E 1,628	6,156	0	6,156	206	(s)
March	E 6,976	E 1,639	6,513	32	6,481	156	0
April	E 6,897	E 1,587	6,698	112	6,586	535	(s)
May	RE 6,833	RE 1,566	6,549	0	R 6,549	R 575	0
June*	PE 6,771	PE 1,521	E 6,883	E 0	E 6,883	E 586	E 0
6-Mo. Average	PE 6,907	PE 1,599	E 6,518	E 24	E 6,494	E 357	E (s)
1992 6-Mo. Average	7,287	1,751	5,790	6	5,784	280	(s)
1991 6-Mo. Average	7,485	1,827	5,696	0	5,696	184	(s)

^a Stocks are totals as of end of period.

^b A negative number indicates a decrease in stocks and a positive number indicates an increase.

^c Unaccounted for crude oil represents the difference between the supply and disposition of crude oil. Preliminary estimates of crude oil imports at the National level have historically understated final values by approximately 50 thousand barrels per day. This causes the preliminary values of unaccounted for crude oil to overstate the final values by the same amount.

^d Previously published as crude used directly.

^e Stock changes are calculated using new basis stock levels.

See Summary Statistics Explanatory Note 4.

Footnotes continued on following page.

Table S2. Crude Oil Supply and Disposition, 1981 - Present (Continued)
(Thousand Barrels per Day, Except Where Noted)

Year/Month	Disposition					Ending Stocks ^a (Million Barrels)		
	Stock Change ^b		Refinery Inputs	Exports	Product Supplied	Total	SPR	Other Primary
	SPR	Other						
1981 Average	336	^e -46	12,470	228	^d 58	594	230	363
1982 Average	174	^e -38	11,774	236	^d 59	^e 644	294	^e 350
1983 Average	234	^e -20	11,685	164	66	723	379	344
1984 Average	195	4	12,044	181	64	796	451	345
1985 Average	117	-67	12,002	204	60	814	493	321
1986 Average	50	28	12,716	154	49	843	512	331
1987 Average	80	49	12,854	151	34	890	541	349
1988 Average	52	-51	13,246	155	40	890	560	330
1989 Average	56	30	13,401	142	28	921	580	341
1990 Average	16	-51	13,409	109	24	908	586	323
1991 January	0	-71	12,735	50	23	906	586	320
February	-147	379	13,046	152	17	913	582	331
March	-422	183	12,839	137	18	905	568	337
April	0	50	13,042	162	21	907	568	338
May	0	566	13,539	165	15	924	568	356
June	(s)	-299	13,918	78	16	915	568	347
July	(s)	-153	13,703	139	15	911	569	342
August	(s)	103	13,800	55	13	914	569	345
September	0	-156	13,694	109	16	909	569	341
October	(s)	51	12,896	92	22	911	569	342
November	(s)	43	12,929	126	22	912	569	344
December	(s)	-611	13,465	133	23	893	569	325
Average	-47	5	13,301	116	18	--	--	--
1992 January	(s)	540	12,923	118	26	910	569	341
February	0	171	12,486	22	17	915	569	346
March	(s)	-250	13,083	105	18	907	569	339
April	0	315	13,260	23	11	917	569	348
May	(s)	-145	13,679	106	10	912	569	344
June	34	-615	14,059	107	12	895	570	325
July	(s)	244	13,953	53	9	902	570	333
August	20	-144	13,426	133	8	898	570	328
September	43	-204	13,714	68	11	893	571	322
October	69	342	13,584	106	10	906	574	333
November	15	-243	13,547	111	10	899	574	325
December	22	-234	13,194	107	12	893	575	318
Average	17	-18	13,411	89	13	--	--	--
1993 January	19	245	12,980	129	10	901	575	326
February	18	202	12,923	166	10	907	576	331
March	58	188	13,249	139	11	915	578	337
April	136	401	13,512	73	9	931	582	349
May	^R 13	^R 120	^R 13,701	^R 112	^R 10	^R 935	^R 582	^R 353
June*	^E 14	^E -19	^E 14,129	^E 107	^E 10	^E 934	^E 583	^E 351
6-Mo. Average	^E 43	^E 189	^E 13,419	^E 121	^E 10	--	--	--
1992 6-Mo. Average	6	3	13,252	81	16	--	--	--
1991 6-Mo. Average	-95	133	13,185	124	18	--	--	--

Footnotes continued.

R = Revised data. (s) = Less than 500 barrels per day. E = Estimated. PE = Preliminary estimate. RE = Revised estimate.

SPR = Strategic Petroleum Reserve.

* See Summary Statistics Explanatory Note 1.

Notes: • Crude oil includes lease condensate. • Italics denote estimates based upon preliminary data. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

Table S3. Crude Oil and Petroleum Product Imports, 1981 - Present
(Thousand Barrels per Day)

Year/Month		Imports from Arab-OPEC Sources							
		Algeria		Iraq		Kuwait		Libya	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1981	Average	311	261	(s)	0	0	0	319	317
1982	Average	170	90	3	3	5	2	26	23
1983	Average	240	176	10	10	14	7	0	0
1984	Average	323	194	12	12	36	24	1	0
1985	Average	187	84	46	46	21	4	4	0
1986	Average	271	78	81	81	68	28	0	0
1987	Average	295	115	83	82	84	70	0	0
1988	Average	300	58	345	343	92	80	0	0
1989	Average	269	60	449	441	157	155	0	0
1990	Average	280	63	518	514	86	79	0	0
1991	January	327	48	0	0	0	0	0	0
	February	246	20	0	0	0	0	0	0
	March	222	45	0	0	0	0	0	0
	April	282	74	0	0	0	0	0	0
	May	308	72	0	0	0	0	0	0
	June	304	37	0	0	0	0	0	0
	July	202	28	0	0	0	0	0	0
	August	182	16	0	0	0	0	0	0
	September	205	19	0	0	34	34	0	0
	October	235	53	0	0	33	33	0	0
	November	278	58	0	0	0	0	0	0
	December	247	54	0	0	0	0	0	0
	Average	253	44	0	0	6	6	0	0
1992	January	206	37	0	0	0	0	0	0
	February	218	57	0	0	0	0	0	0
	March	215	37	0	0	0	0	0	0
	April	182	19	0	0	0	0	0	0
	May	202	7	0	0	0	0	0	0
	June	144	12	0	0	0	0	0	0
	July	179	37	0	0	58	23	0	0
	August	261	45	0	0	66	33	0	0
	September	184	19	0	0	70	33	0	0
	October	186	8	0	0	137	109	0	0
	November	171	0	0	0	117	117	0	0
	December	203	9	0	0	165	149	0	0
	Average	196	24	0	0	51	39	0	0
1993	January	153	28	0	0	144	129	0	0
	February	256	0	0	0	251	229	0	0
	March	185	7	0	0	316	300	0	0
	April	274	26	0	0	262	262	0	0
	May	228	3	0	0	222	222	0	0
	5-Mo. Average	218	13	0	0	239	228	0	0
1992	5-Mo. Average	205	31	0	0	0	0	0	0
1991	5-Mo. Average	278	52	0	0	0	0	0	0

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1981 - Present (Continued)
(Thousand Barrels per Day)

Year/Month		Imports from Arab-OPEC Sources							
		Qatar		Saudi Arabia ^b		United Arab Emirates		Total Arab OPEC	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1981	Average	7	7	1,129	1,112	81	77	1,848	1,774
1982	Average	7	7	552	530	92	81	854	736
1983	Average	(s)	0	337	321	30	18	632	533
1984	Average	5	4	325	309	117	90	819	634
1985	Average	(s)	0	168	132	45	35	472	300
1986	Average	13	12	685	618	44	38	1,162	854
1987	Average	0	0	751	642	61	56	1,274	965
1988	Average	0	0	1,073	911	29	23	1,839	1,415
1989	Average	2	2	1,224	1,116	28	21	2,130	1,794
1990	Average	4	4	1,339	1,195	17	9	2,244	1,864
1991									
	January	0	0	1,934	1,782	0	0	2,261	1,830
	February	0	0	1,566	1,538	0	0	1,812	1,559
	March	0	0	1,683	1,646	0	0	1,905	1,691
	April	0	0	1,764	1,702	0	0	2,046	1,776
	May	0	0	2,258	2,053	0	0	2,566	2,124
	June	0	0	1,841	1,795	0	0	2,145	1,832
	July	0	0	1,725	1,641	0	0	1,928	1,670
	August	0	0	2,019	1,964	7	0	2,208	1,980
	September	0	0	1,708	1,562	0	0	1,947	1,615
	October	0	0	1,671	1,545	18	18	1,956	1,649
	November	0	0	1,778	1,626	16	0	2,072	1,684
	December	0	0	1,645	1,566	0	0	1,892	1,620
	Average	0	0	1,802	1,703	3	2	2,064	1,754
1992									
	January	0	0	2,017	1,900	18	0	2,241	1,937
	February	0	0	1,776	1,687	0	0	1,995	1,745
	March	0	0	1,707	1,568	0	0	1,922	1,605
	April	0	0	1,734	1,524	0	0	1,916	1,543
	May	0	0	1,764	1,584	0	0	1,966	1,591
	June	0	0	1,744	1,610	0	0	1,888	1,621
	July	8	0	1,713	1,599	0	0	1,958	1,659
	August	0	0	1,594	1,473	7	0	1,929	1,551
	September	0	0	1,593	1,477	0	0	1,847	1,529
	October	0	0	1,593	1,482	4	0	1,920	1,599
	November	0	0	1,608	1,540	17	0	1,913	1,657
	December	0	0	1,793	1,725	28	0	2,188	1,882
	Average	1	0	1,720	1,597	6	0	1,974	1,660
1993									
	January	0	0	1,687	1,571	0	0	1,984	1,728
	February	0	0	1,626	1,480	0	0	2,133	1,709
	March	6	0	1,479	1,349	0	0	1,987	1,655
	April	0	0	1,606	1,478	17	17	2,161	1,783
	May	0	0	1,524	1,361	59	59	2,034	1,646
	5-Mo. Average	1	0	1,584	1,447	16	16	2,058	1,704
1992	5-Mo. Average	0	0	1,801	1,653	4	0	2,009	1,684
1991	5-Mo. Average	0	0	1,847	1,749	0	0	2,125	1,801

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1981 - Present (Continued)
(Thousand Barrels per Day)

Year/Month		Imports from Other-OPEC Sources							
		Ecuador		Gabon		Indonesia		Iran	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1981	Average	48	38	35	35	366	318	0	0
1982	Average	42	32	40	40	248	226	35	35
1983	Average	61	56	59	59	338	315	48	48
1984	Average	55	47	58	57	343	304	10	10
1985	Average	67	56	52	51	314	292	27	27
1986	Average	77	64	26	25	318	297	19	19
1987	Average	29	23	35	35	285	262	98	98
1988	Average	47	33	16	15	205	186	^e (s)	^e (s)
1989	Average	89	80	50	49	183	158	0	0
1990	Average	49	38	64	64	114	98	0	0
1991	January	18	6	41	41	70	70	0	0
	February	66	55	95	95	162	153	0	0
	March	67	58	29	29	93	93	0	0
	April	35	24	72	72	69	69	0	0
	May	109	103	96	96	97	97	0	0
	June	129	126	70	70	187	187	0	0
	July	62	47	137	137	88	88	81	81
	August	112	93	56	56	93	87	48	48
	September	31	25	91	91	83	64	152	152
	October	30	24	137	137	118	91	43	43
	November	55	48	91	91	120	96	64	64
	December	41	23	91	91	163	134	0	0
	Average	63	53	84	84	111	102	32	32
1992	January	56	56	91	91	125	117	0	0
	February	61	48	105	105	39	39	0	0
	March	26	26	25	25	85	83	0	0
	April	53	46	186	186	54	49	0	0
	May	51	51	135	135	155	133	0	0
	June	105	101	129	129	109	102	0	0
	July	111	111	143	143	65	65	0	0
	August	99	93	108	108	91	85	0	0
	September	97	97	165	158	57	38	0	0
	October	42	36	167	167	54	43	0	0
	November	53	53	114	114	36	23	0	0
	December	24	24	120	120	60	60	0	0
	Average	65	62	124	123	78	70	0	0
1993	January	76	70	90	89	37	37	0	0
	February	14	14	88	88	52	51	0	0
	March	59	59	126	123	67	64	0	0
	April	74	62	127	127	76	76	0	0
	May	56	56	169	169	82	82	0	0
	5-Mo. Average	56	53	121	120	63	62	0	0
1992	5-Mo. Average	49	46	108	108	93	85	0	0
1991	5-Mo. Average	59	49	66	66	97	96	0	0

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1981 - Present (Continued)
(Thousand Barrels per Day)

Year/Month		Imports from Other-OPEC Sources						Total OPEC ^c	
		Nigeria		Venezuela		Total Other OPEC			
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1981	Average	620	611	406	147	1,476	1,149	3,323	2,922
1982	Average	514	510	412	155	1,291	998	2,146	1,734
1983	Average	302	301	422	164	1,231	944	1,862	1,477
1984	Average	216	207	548	253	1,230	878	2,049	1,512
1985	Average	293	280	605	306	1,358	1,012	1,830	1,312
1986	Average	440	437	733	416	1,674	1,259	2,837	2,113
1987	Average	535	529	804	488	1,787	1,435	3,060	2,400
1988	Average	618	607	794	439	1,681	1,281	3,520	2,696
1989	Average	815	800	873	495	2,010	1,582	4,140	3,376
1990	Average	800	784	1,125	666	2,052	1,650	4,296	3,514
1991	January	504	481	1,005	673	1,637	1,271	3,898	3,101
	February	721	717	959	686	2,003	1,705	3,815	3,264
	March	531	531	998	631	1,718	1,341	3,623	3,033
	April	677	649	845	470	1,698	1,283	3,744	3,059
	May	860	838	997	581	2,158	1,715	4,724	3,839
	June	832	827	1,135	705	2,354	1,915	4,498	3,747
	July	833	817	1,102	683	2,304	1,855	4,232	3,525
	August	1,016	983	1,070	701	2,394	1,906	4,602	3,946
	September	489	467	1,163	790	2,009	1,589	3,956	3,204
	October	651	623	1,087	777	2,057	1,694	4,023	3,343
	November	704	674	1,065	671	2,099	1,644	4,171	3,328
	December	617	593	987	655	1,899	1,496	3,791	3,116
	Average	703	683	1,035	668	2,028	1,622	4,092	3,377
1992	January	593	566	1,119	787	1,984	1,617	4,224	3,554
	February	322	303	1,028	655	1,555	1,150	3,549	2,895
	March	441	409	1,106	793	1,684	1,336	3,606	2,941
	April	798	788	1,079	722	2,169	1,791	4,085	3,334
	May	773	773	1,038	745	2,152	1,837	4,118	3,428
	June	740	740	1,059	738	2,141	1,809	4,029	3,430
	July	900	883	1,163	912	2,382	2,114	4,339	3,772
	August	815	795	1,102	841	2,215	1,922	4,144	3,473
	September	774	754	1,333	953	2,426	2,001	4,174	3,531
	October	827	813	1,497	1,073	2,587	2,133	4,507	3,732
	November	626	608	1,343	921	2,173	1,719	4,086	3,376
	December	549	532	1,164	763	1,917	1,499	4,105	3,381
	Average	681	665	1,170	826	2,117	1,746	4,092	3,406
1993	January	729	729	1,385	1,038	2,317	1,962	4,301	3,690
	February	927	913	1,290	925	2,372	1,990	4,505	3,699
	March	928	892	1,208	817	2,388	1,955	4,375	3,611
	April	892	871	1,297	1,006	2,466	2,141	4,627	3,924
	May	741	723	1,226	954	2,275	1,984	4,308	3,630
	5-Mo. Average	842	823	1,281	948	2,363	2,006	4,426	3,710
1992	5-Mo. Average	587	570	1,075	742	1,912	1,550	3,920	3,234
1991	5-Mo. Average	657	642	962	607	1,841	1,460	3,965	3,261

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1981 - Present (Continued)
(Thousand Barrels per Day)

Year/Month		Imports from Non-OPEC Sources ^a											
		Angola		Australia		Bahama Islands		Brazil		Canada		China People's Republic	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1981	Average	49	45	5	0	74	0	23	14	447	164	18	0
1982	Average	44	42	5	(s)	65	0	47	19	482	214	40	8
1983	Average	78	71	4	0	125	0	41	2	547	274	34	6
1984	Average	90	85	38	25	88	0	60	(s)	630	341	46	15
1985	Average	110	104	37	21	40	0	61	0	770	468	59	36
1986	Average	112	102	41	30	37	0	50	0	807	570	90	68
1987	Average	192	180	58	49	37	0	84	0	848	608	82	63
1988	Average	212	203	64	59	32	0	98	0	999	681	88	82
1989	Average	284	279	36	31	34	0	82	0	931	630	80	76
1990	Average	237	236	53	47	37	0	49	0	934	643	80	77
1991	January	232	232	21	21	25	0	31	0	978	718	68	63
	February	202	202	0	0	14	0	13	0	1,135	881	102	96
	March	186	186	0	0	0	0	0	0	1,058	764	96	96
	April	337	337	55	55	35	0	17	0	1,103	768	113	113
	May	220	220	64	57	42	0	31	0	1,027	752	119	113
	June	205	205	43	31	30	0	41	0	986	705	144	139
	July	264	264	20	20	19	0	21	0	848	615	88	88
	August	298	298	37	22	78	0	27	0	1,011	694	85	75
	September	230	230	24	24	29	0	19	0	1,137	849	91	86
	October	300	300	13	0	51	0	16	0	936	639	29	24
	November	213	213	25	13	46	0	45	0	1,107	796	96	96
	December	359	359	13	13	53	0	8	0	1,083	759	65	65
	Average	254	254	26	21	35	0	22	0	1,033	743	91	87
1992	January	360	360	11	11	63	0	18	0	1,045	786	144	144
	February	246	246	10	10	47	0	12	0	1,147	834	80	69
	March	339	339	0	0	76	0	(s)	0	1,100	832	75	75
	April	381	381	39	22	67	0	17	0	1,121	835	86	69
	May	264	264	0	0	46	0	18	0	1,013	779	129	114
	June	286	286	21	21	57	0	28	0	970	736	110	95
	July	443	443	20	20	22	0	25	0	1,044	798	68	64
	August	335	323	21	21	8	0	10	0	1,038	762	66	66
	September	248	248	0	0	8	0	21	0	1,131	839	80	75
	October	395	395	11	11	1	0	10	0	1,063	761	61	61
	November	458	458	53	49	20	0	32	0	1,037	784	86	86
	December	279	279	38	38	19	0	50	0	1,122	816	97	90
	Average	336	336	19	17	36	0	20	0	1,069	797	90	84
1993	January	354	354	0	0	18	0	3	0	1,034	778	60	60
	February	348	348	0	0	19	0	22	0	1,084	782	44	44
	March	408	408	0	0	30	0	27	0	1,065	814	79	73
	April	322	322	0	0	16	0	56	0	1,032	783	0	0
	May	287	287	13	13	8	0	41	0	1,119	874	40	40
	5-Mo. Average	344	344	3	3	18	0	30	0	1,067	807	45	44
1992	5-Mo. Average	318	318	12	8	60	0	13	0	1,084	813	103	95
1991	5-Mo. Average	235	235	28	27	23	0	19	0	1,058	775	99	96

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1981 - Present (Continued)
(Thousand Barrels per Day)

Year/Month		Imports from Non-OPEC Sources ^a									
		Colombia		Italy		Malaysia		Mexico		Netherlands	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1981	Average	1	0	11	0	36	33	522	469	30	(s)
1982	Average	5	0	18	(s)	20	18	685	645	35	(s)
1983	Average	10	0	18	(s)	4	3	826	766	65	3
1984	Average	8	0	45	(s)	1	0	748	659	65	3
1985	Average	23	0	60	(s)	3	1	816	715	58	0
1986	Average	87	57	76	0	12	11	699	621	54	0
1987	Average	148	115	54	1	13	12	655	602	60	0
1988	Average	134	106	65	5	19	19	747	674	61	0
1989	Average	172	136	34	3	39	39	767	716	49	0
1990	Average	182	140	58	2	41	40	755	689	55	0
1991	January	194	174	25	0	0	0	798	778	6	0
	February	151	98	42	13	9	8	742	693	17	0
	March	157	127	29	0	21	21	795	772	33	0
	April	163	131	41	12	0	0	891	819	35	0
	May	163	112	60	0	66	66	757	736	45	0
	June	169	124	46	0	63	63	919	872	49	0
	July	163	111	54	0	9	9	835	748	47	0
	August	219	162	57	11	14	14	878	797	30	0
	September	168	103	89	0	10	10	805	768	44	0
	October	128	80	41	0	64	64	811	754	16	0
	November	145	135	15	0	10	10	716	656	24	0
	December	138	117	61	0	14	14	732	708	4	0
	Average	163	123	47	3	24	24	807	759	29	0
1992	January	158	111	51	0	0	0	764	721	31	0
	February	114	92	48	0	0	0	838	807	9	0
	March	101	74	44	0	0	0	846	809	34	0
	April	150	129	75	0	0	0	857	795	8	0
	May	57	46	57	0	5	5	788	764	27	0
	June	135	114	69	0	8	8	905	883	25	0
	July	103	93	36	0	40	40	830	788	21	0
	August	156	142	94	0	22	22	857	790	45	0
	September	190	179	81	0	17	17	755	720	39	0
	October	153	132	37	0	17	17	829	783	18	0
	November	127	84	33	0	8	8	762	700	26	0
	December	66	34	37	0	4	4	930	888	33	0
	Average	126	102	55	0	10	10	830	787	26	0
1993	January	188	167	48	0	0	0	858	820	11	0
	February	148	137	34	0	0	0	807	748	18	0
	March	161	129	43	0	11	10	861	815	11	0
	April	152	138	14	0	8	8	844	818	0	0
	May	147	90	18	0	21	10	907	846	10	0
	5-Mo. Average	159	132	32	0	8	6	856	811	10	0
1992	5-Mo. Average	116	90	55	0	1	1	818	779	22	0
1991	5-Mo. Average	166	129	39	5	20	20	797	760	27	0

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1981 - Present (Continued)
(Thousand Barrels per Day)

Year/Month		Imports from Non-OPEC Sources ^a											
		Netherlands Antilles		Norway		Puerto Rico		Spain		Trinidad and Tobago		United Kingdom	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1981	Average	197	0	119	114	62	0	1	(s)	133	102	375	369
1982	Average	175	0	102	102	50	0	3	(s)	112	92	456	441
1983	Average	189	0	66	65	40	0	2	(s)	96	83	382	365
1984	Average	188	0	114	112	42	0	11	0	94	87	402	378
1985	Average	40	0	32	31	28	0	29	1	113	98	310	278
1986	Average	25	0	60	53	21	0	53	0	125	93	350	317
1987	Average	29	0	80	70	21	0	55	0	106	75	352	304
1988	Average	36	0	67	62	22	0	68	0	97	71	315	254
1989	Average	42	0	138	127	32	0	67	0	94	73	215	160
1990	Average	31	0	102	96	32	0	47	0	96	76	189	155
1991	January	103	0	45	34	22	0	26	0	75	64	32	19
	February	23	0	37	37	20	0	18	0	76	76	34	21
	March	56	0	25	16	14	0	13	0	86	73	48	19
	April	61	0	51	35	23	0	66	0	84	64	61	37
	May	113	0	165	156	42	0	53	0	61	61	222	188
	June	84	0	99	84	19	0	41	0	118	104	105	70
	July	86	0	69	63	25	0	22	0	91	72	228	164
	August	100	0	142	136	42	0	48	0	91	66	254	217
	September	67	0	79	72	34	0	42	0	119	75	218	194
	October	90	0	98	98	12	0	24	0	88	76	201	166
	November	100	0	73	65	35	0	19	0	77	69	84	18
	December	88	0	94	88	36	0	26	0	87	71	154	151
	Average	81	0	82	74	27	0	33	0	88	72	138	106
1992	January	40	0	25	17	32	0	35	0	108	79	129	115
	February	82	0	11	0	23	0	16	0	109	76	63	0
	March	49	0	11	0	18	0	37	0	105	85	79	52
	April	73	0	155	147	14	0	35	0	79	75	157	128
	May	59	0	210	200	22	0	30	0	69	54	198	180
	June	83	0	234	225	36	0	46	0	94	74	248	206
	July	49	0	186	179	11	0	18	0	103	78	354	337
	August	65	0	142	134	38	0	29	0	106	54	295	282
	September	60	0	103	102	37	0	56	0	84	56	341	291
	October	90	0	190	177	29	0	32	0	108	71	411	411
	November	56	0	111	104	26	0	36	0	85	62	336	285
	December	80	0	140	133	28	0	17	0	91	71	148	110
	Average	65	0	127	119	26	0	32	0	95	70	230	200
1993	January	73	0	70	70	37	0	44	0	59	48	228	201
	February	80	0	62	61	21	0	25	0	72	58	173	127
	March	61	0	122	115	26	0	21	0	92	71	315	281
	April	86	0	109	109	18	0	61	0	78	55	348	281
	May	77	0	65	65	38	0	34	0	61	51	486	458
	5-Mo. Average	75	0	86	84	28	0	37	0	72	57	312	272
1992	5-Mo. Average	60	0	83	73	22	0	31	0	94	74	126	96
1991	5-Mo. Average	72	0	65	56	24	0	35	0	76	67	80	58

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1981 - Present (Continued)
(Thousand Barrels per Day)

Year/Month		Imports from Non-OPEC Sources ^a								Total Imports	
		Russia ^d		Virgin Islands		Other Non-OPEC		Total Non-OPEC			
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1981	Average	5	(s)	327	0	236	163	2,672	1,474	5,996	4,396
1982	Average	1	0	316	0	306	174	2,968	1,754	5,113	3,488
1983	Average	1	(s)	282	0	378	215	3,189	1,853	5,051	3,329
1984	Average	13	(s)	294	0	411	210	3,388	1,914	5,437	3,426
1985	Average	8	(s)	247	0	394	137	3,237	1,888	5,067	3,201
1986	Average	18	(s)	244	0	426	144	3,387	2,065	6,224	4,178
1987	Average	11	0	272	0	459	196	3,617	2,274	6,678	4,674
1988	Average	29	0	242	0	487	196	3,882	2,411	7,402	5,107
1989	Average	48	0	321	0	457	197	3,921	2,467	8,061	5,843
1990	Average	45	1	282	0	417	180	3,721	2,381	8,018	5,894
1991	January	28	0	261	0	235	91	3,205	2,195	7,103	5,296
	February	17	0	222	0	180	96	3,051	2,221	6,865	5,485
	March	13	0	214	0	179	60	3,023	2,133	6,646	5,166
	April	39	0	245	0	256	99	3,674	2,470	7,418	5,529
	May	42	0	264	0	239	63	3,794	2,524	8,518	6,363
	June	0	0	234	0	349	189	3,747	2,587	8,245	6,334
	July	58	0	191	0	384	275	3,524	2,430	7,755	5,955
	August	80	11	208	0	369	197	4,067	2,699	8,670	6,645
	September	23	0	269	0	374	197	3,871	2,608	7,826	5,812
	October	13	0	262	0	252	139	3,444	2,340	7,467	5,683
	November	16	0	264	0	335	130	3,444	2,200	7,615	5,528
	December	16	0	286	0	229	104	3,546	2,448	7,337	5,565
	Average	29	1	243	0	282	137	3,535	2,405	7,627	5,782
1992	January	17	0	250	0	208	59	3,488	2,402	7,712	5,956
	February	3	0	222	0	196	50	3,278	2,184	6,827	5,079
	March	0	0	202	0	345	114	3,462	2,380	7,068	5,321
	April	0	0	234	0	458	212	4,007	2,793	8,092	6,127
	May	0	0	246	0	467	225	3,705	2,633	7,823	6,060
	June	0	0	266	0	297	95	3,917	2,741	7,946	6,171
	July	72	32	280	0	415	152	4,140	3,024	8,479	6,796
	August	62	31	263	0	464	357	4,116	2,984	8,260	6,457
	September	53	0	217	0	382	160	3,904	2,687	8,178	6,218
	October	9	0	254	0	279	144	3,998	2,964	8,505	6,696
	November	0	0	274	0	219	124	3,786	2,745	7,872	6,121
	December	0	0	273	0	283	92	3,734	2,556	7,839	5,937
	Average	18	5	249	0	335	149	3,796	2,676	7,888	6,083
1993	January	0	0	252	0	325	104	3,663	2,602	7,964	6,292
	February	0	0	244	0	223	151	3,425	2,457	7,930	6,156
	March	0	0	244	0	390	186	3,967	2,903	8,342	6,513
	April	16	16	245	0	455	243	3,859	2,774	8,485	6,698
	May	32	32	279	0	356	152	4,039	2,919	8,348	6,549
	5-Mo. Average	10	10	253	0	352	167	3,798	2,736	8,218	6,446
1992	5-Mo. Average	4	0	231	0	336	133	3,589	2,480	7,510	5,714
1991	5-Mo. Average	28	0	241	0	218	81	3,353	2,309	7,318	5,570

^a Includes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC) primarily from Caribbean and West European areas as petroleum products that were refined from crude oil produced by OPEC.

^b Imports from the Neutral Zone between Kuwait and Saudi Arabia are included in imports from Saudi Arabia.

^c Excludes petroleum imported into the United States indirectly from members of the Organization of Petroleum Exporting Countries (OPEC), primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC.

^d Imports from other States in the former U.S.S.R. may be included in imports from Russia for the years 1981 through 1992.

^e A small amount of Iranian crude oil entered the United States in January 1988 from the Virgin Islands. This oil originated in Iran and was exported to the Virgin Islands prior to the signing of Executive Order 12613 on October 29, 1987.

(s) = Less than 500 barrels per day.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

Figure S5. Finished Motor Gasoline Supply and Disposition, May 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S4. See Summary Statistics Table and Figure Sources.

Figure S6. Motor Gasoline Ending Stocks, May 1992 - Present

Note: • Total motor gasoline includes motor gasoline blending components and finished motor gasoline. • The National Petroleum Council (NPC) defines the Minimum Operating Inventory as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. In its 1988 study, the NPC estimated this inventory level for total motor gasoline to be 205 million barrels.

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S4. See Summary Statistics Table and Figure Sources.

Table S4. Finished Motor Gasoline Supply and Disposition, 1981 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply		Disposition			Ending Stocks ^a (Million Barrels)		Ending Stocks (Million Barrels)
		Total Production ^b	Imports ^c	Stock Change ^{c,d}	Exports	Product Supplied ^b	Motor Gasoline		Oxygenates
							Total ^e	Finished	
1981	Average	6,405	157	^f -28	2	6,588	253	203	--
1982	Average	6,338	197	-25	20	6,539	^f 235	^f 194	--
1983	Average	6,340	247	^f -45	10	6,622	222	186	--
1984	Average	6,453	299	54	6	6,693	243	205	--
1985	Average	6,419	381	-41	10	6,831	223	190	--
1986	Average	6,752	326	11	33	7,034	233	194	--
1987	Average	6,841	384	-15	35	7,206	226	189	--
1988	Average	6,956	405	3	22	7,336	228	190	--
1989	Average	6,963	369	-35	39	7,328	213	177	--
1990	Average	6,959	342	10	55	7,235	220	181	--
1991	January	6,629	228	162	50	6,645	225	186	--
	February	6,573	115	-252	102	6,838	219	179	--
	March	6,643	235	-236	97	7,017	210	171	--
	April	6,742	381	-67	53	7,137	205	169	--
	May	7,063	528	95	59	7,437	209	172	--
	June	7,351	364	160	99	7,456	214	177	--
	July	7,274	232	-177	122	7,561	208	172	--
	August	7,247	385	7	98	7,528	209	172	--
	September	7,030	312	195	63	7,083	216	178	--
	October	6,749	236	-354	58	7,281	203	167	--
	November	7,018	322	228	104	7,008	209	173	--
	December	7,354	216	267	79	7,224	219	182	--
	Average	6,975	297	3	82	7,188	--	--	--
1992	January	7,013	246	304	87	6,869	229	191	--
	February	6,726	275	-22	59	6,963	230	191	--
	March	6,683	247	-278	71	7,137	220	182	--
	April	6,954	428	54	90	7,238	218	183	--
	May	7,092	392	74	82	7,328	220	186	--
	June	7,198	424	76	86	7,460	225	188	--
	July	7,195	303	-249	108	7,639	215	180	--
	August	6,817	240	-446	123	7,380	201	167	--
	September	7,071	418	60	85	7,344	206	168	--
	October	7,198	193	-41	94	7,338	204	167	--
	November	7,323	170	318	74	7,102	214	177	--
	December	7,411	202	32	184	7,396	216	178	--
	Average	7,058	294	-11	96	7,268	--	--	--
1993	January	7,254	204	571	142	6,746	237	195	14
	February	7,172	216	160	99	7,129	242	200	13
	March	6,897	198	-411	109	7,397	227	187	14
	April	7,123	253	-137	111	7,401	222	183	15
	May	7,394	^R 308	^R 80	^R 90	7,531	^R 223	^R 185	17
	June*	NA	^E 294	^E -126	^E 109	NA	^E 221	^E 183	NA
	6-Mo. Average	NA	^E 246	^E 22	^E 110	NA	--	--	--
1992	6-Mo. Average	6,945	335	35	79	7,166	--	--	--
1991	6-Mo. Average	6,835	311	-20	76	7,090	--	--	--

^a Stocks are totals as of end of period.
^b Beginning in 1993, motor gasoline production and product supplied includes blending of fuel ethanol and an adjustment to correct for the imbalance of motor gasoline blending components.
^c Beginning in 1981, excludes blending components.
^d A negative number indicates a decrease in stocks and a positive number indicates an increase.
^e Includes motor gasoline blending components but excludes stocks of oxygenates.
^f In January 1981 and 1983, numerous respondents were added to surveys affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 4.
^R = Revised data. ^(s) = Less than 500 barrels per day. ^E = Estimated. NA = Not Available.
* See Summary Statistics Explanatory Note 1.
Notes: * Italics denote estimates based upon preliminary data. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Source: See Summary Statistics Table and Figure Sources.

Figure S7. Distillate Fuel Oil Supply and Disposition, May 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S5. See Summary Statistics Table and Figure Sources.

Figure S8. Distillate Fuel Oil Ending Stocks, May 1992 - Present

Note: The National Petroleum Council (NPC) defines the Minimum Operating Inventory as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. In its 1988 study, the NPC estimated this inventory level for distillate fuel oil to be 85 million barrels.

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S5. See Summary Statistics Table and Figure Sources.

Table S5. Distillate Fuel Oil Supply and Disposition, 1981 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply ^a		Disposition			Ending Stocks ^b (Million Barrels)		
		Total Production	Imports	Stock Change ^c	Exports	Product Supplied ^a	Total	0.05% Sulfur and Under	Greater than 0.05% Sulfur
1981	Average	2,613	173	^d -38	5	2,829	192	--	--
1982	Average	2,606	93	-35	74	2,671	^d 179	--	--
1983	Average	2,456	174	^d -124	64	2,690	140	--	--
1984	Average	2,681	272	57	51	2,845	161	--	--
1985	Average	2,687	200	-48	67	2,868	144	--	--
1986	Average	2,798	247	31	100	2,914	155	--	--
1987	Average	2,731	255	-56	66	2,976	134	--	--
1988	Average	2,859	302	-30	69	3,122	124	--	--
1989	Average	2,899	306	-49	97	3,157	106	--	--
1990	Average	2,925	278	73	109	3,021	132	--	--
1991	January	2,845	192	-662	332	3,367	112	--	--
	February	2,870	139	-359	393	2,976	102	--	--
	March	2,865	206	-112	198	2,984	98	--	--
	April	2,819	258	156	81	2,839	103	--	--
	May	2,929	186	132	218	2,765	107	--	--
	June	2,941	209	225	150	2,775	114	--	--
	July	2,998	155	356	149	2,648	125	--	--
	August	2,961	168	214	144	2,770	131	--	--
	September	3,055	237	291	136	2,865	140	--	--
	October	3,040	207	-59	259	3,047	138	--	--
	November	3,103	249	206	224	2,921	144	--	--
	December	3,107	252	-30	302	3,087	144	--	--
	Average	2,962	205	31	215	2,921	--	--	--
1992	January	2,818	232	-541	360	3,231	127	--	--
	February	2,661	217	-619	278	3,219	109	--	--
	March	2,749	238	-358	138	3,207	98	--	--
	April	2,930	202	-185	278	3,039	92	--	--
	May	2,933	179	139	222	2,753	96	--	--
	June	2,995	157	268	205	2,679	104	--	--
	July	3,067	172	328	201	2,710	115	--	--
	August	2,865	229	262	127	2,705	123	--	--
	September	2,983	237	168	145	2,908	128	--	--
	October	3,251	263	290	169	3,056	137	--	--
	November	3,240	236	316	230	2,929	146	--	--
	December	3,179	229	-183	276	3,316	141	--	--
	Average	2,974	216	-8	219	2,979	--	--	--
1993	January	2,909	182	-336	105	3,322	130	22	108
	February	2,813	224	-742	121	3,658	109	16	94
	March	2,918	235	-386	90	3,450	97	12	85
	April	3,010	209	30	119	3,071	98	13	86
	May	R 2,930	R 153	R 104	R 192	R 2,787	R 102	14	87
	June*	E 3,093	E 209	E 284	E 138	E 2,881	E 109	NA	NA
	6-Mo. Average	E 2,947	E 202	E -169	E 127	E 3,190	--	--	--
1992	6-Mo. Average	2,848	204	-215	246	3,021	--	--	--
1991	6-Mo. Average	2,878	199	-102	227	2,952	--	--	--

^a Excludes 10,000 barrels per day in 1981 and 1982 previously published as crude used directly.

^b Stocks are totals as of end of period.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase.

^d In January 1981 and 1983, numerous respondents were added to surveys affecting stocks reported and stock change calculations. Stock changes are calculated using new stock basis stock levels. See Summary Statistics Explanatory Note 4.

R = Revised data. (s) = Less than 500 barrels per day. E = Estimated. NA = Not available.

* See Summary Statistics Explanatory Note 1.

Notes: • Italics denote estimates based upon preliminary data. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

Figure S9. Residual Fuel Oil Supply and Disposition, May 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S6. See Summary Statistics Table and Figure Sources.

Figure S10. Residual Fuel Oil Ending Stocks, May 1992 - Present

Note: The National Petroleum Council (NPC) defines the Minimum Operating Inventory as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. In its 1988 study, the NPC estimated this inventory level for residual fuel oil to be 30 million barrels.

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S6. See Summary Statistics Table and Figure Sources.

Table S6. Residual Fuel Oil Supply and Disposition, 1981 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply ^a		Disposition			Ending Stocks ^c (Million Barrels)
		Total Production	Imports	Stock Change ^b	Exports	Product Supplied ^a	
1981	Average	1,321	800	^d -37	118	2,088	78
1982	Average	1,070	776	-32	209	1,716	^d 66
1983	Average	852	699	^d -55	185	1,421	49
1984	Average	891	681	12	190	1,369	53
1985	Average	882	510	-7	197	1,202	50
1986	Average	889	669	-8	147	1,418	47
1987	Average	885	565	(s)	186	1,264	47
1988	Average	926	644	-8	200	1,378	45
1989	Average	954	629	-2	215	1,370	44
1990	Average	950	504	13	211	1,229	49
1991	January	1,001	425	-19	320	1,124	48
	February	1,050	384	-76	299	1,211	46
	March	995	332	-85	178	1,234	43
	April	916	416	68	145	1,119	45
	May	929	425	50	300	1,003	47
	June	933	512	-103	245	1,303	44
	July	871	420	-1	176	1,117	44
	August	925	599	68	216	1,240	46
	September	838	481	78	168	1,074	48
	October	814	438	6	217	1,029	48
	November	896	455	24	189	1,139	49
	December	1,051	547	28	264	1,307	50
	Average	934	453	4	226	1,158	-
1992	January	965	364	-144	184	1,289	45
	February	957	498	-55	176	1,334	44
	March	990	397	-77	310	1,154	41
	April	900	342	-78	265	1,055	39
	May	964	328	67	207	1,019	41
	June	894	334	-11	230	1,009	41
	July	838	280	-37	169	986	40
	August	815	347	125	96	941	44
	September	810	349	123	149	887	47
	October	818	376	-72	156	1,110	45
	November	895	411	49	216	1,041	47
	December	862	481	-127	158	1,312	43
	Average	892	375	-20	193	1,094	-
1993	January	820	383	49	133	1,020	44
	February	841	325	-75	113	1,128	42
	March	819	352	-46	152	1,065	41
	April	887	377	24	169	1,070	41
	May	^R 896	308	^R 53	^R 137	^R 1,014	^R 43
	June*	^E 799	^E 323	^E 44	^E 186	^E 892	^E 46
	6-Mo. Average	^E 843	^E 345	^E 9	^E 149	^E 1,031	-
1992	6-Mo. Average	945	376	-50	229	1,142	-
1991	6-Mo. Average	970	415	-27	248	1,165	-

^a Excludes 48,000 barrels per day in 1981 and 1982 previously published as crude used directly.

^b A negative number indicates a decrease in stocks and a positive number indicates an increase.

^c Stocks are totals as of end of period.

^d In January 1981 and 1983, numerous respondents were added to surveys affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 4.

R = Revised data. (s) = Less than 500 barrels per day. E = Estimated.

* See Summary Statistics Explanatory Note 1.

Notes: • Italics denote estimates based upon preliminary data. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

Figure S11. Jet Fuel Supply and Disposition, May 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S7. See Summary Statistics Table and Figure Sources.

Figure S12. Jet Fuel Ending Stocks, May 1992 - Present

Note: The observed minimum for total stocks in the last 36-month period was 41.0 million barrels, occurring in January 1993.
Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S7. See Summary Statistics Table and Figure Sources.

Table S7. Jet Fuel Supply and Disposition, 1981 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply			Disposition				Ending Stocks ^a (Million Barrels)	
		Production		Imports	Stock Change ^b	Exports	Product Supplied		Total	Kerosene Type
		Total	Kerosene-Type				Total	Kerosene-Type		
1981	Average	968	775	38	^c -4	2	1,007	809	41	34
1982	Average	978	778	29	-12	6	1,013	804	^c 37	^c 31
1983	Average	1,022	817	29	^c (s)	6	1,046	839	39	32
1984	Average	1,132	919	62	9	9	1,175	953	42	35
1985	Average	1,189	983	39	-4	13	1,218	1,005	40	34
1986	Average	1,293	1,097	57	25	18	1,307	1,105	50	43
1987	Average	1,343	1,138	67	(s)	24	1,385	1,181	50	42
1988	Average	1,370	1,164	90	-17	28	1,449	1,236	44	38
1989	Average	1,403	1,197	106	-8	27	1,489	1,284	41	34
1990	Average	1,488	1,311	108	31	43	1,522	1,340	52	46
1991	January	1,509	1,354	67	-55	73	1,559	1,378	50	44
	February	1,548	1,384	44	-108	159	1,541	1,360	47	41
	March	1,299	1,157	65	-99	40	1,423	1,270	44	38
	April	1,286	1,135	73	-8	38	1,329	1,173	44	38
	May	1,367	1,191	87	85	35	1,334	1,143	47	41
	June	1,473	1,300	64	58	13	1,465	1,280	48	43
	July	1,426	1,255	67	-47	31	1,509	1,343	47	41
	August	1,486	1,316	88	21	11	1,543	1,343	48	42
	September	1,495	1,322	92	71	10	1,506	1,321	50	45
	October	1,415	1,253	59	-66	50	1,489	1,319	48	43
	November	1,433	1,276	56	15	5	1,469	1,282	48	44
	December	1,530	1,357	42	22	59	1,492	1,338	49	44
	Average	1,438	1,274	67	-9	43	1,471	1,296	--	--
1992	January	1,352	1,200	39	-127	44	1,473	1,314	45	40
	February	1,311	1,164	56	-73	42	1,398	1,250	43	38
	March	1,347	1,215	56	31	7	1,365	1,218	44	39
	April	1,286	1,131	74	-68	18	1,409	1,262	42	37
	May	1,393	1,214	93	114	26	1,346	1,198	45	40
	June	1,374	1,234	86	-21	45	1,436	1,308	45	39
	July	1,473	1,328	81	59	62	1,433	1,280	46	42
	August	1,471	1,339	111	-32	28	1,585	1,438	45	41
	September	1,448	1,296	93	78	20	1,442	1,313	48	43
	October	1,408	1,265	105	-12	44	1,480	1,315	47	43
	November	1,456	1,319	90	-41	59	1,528	1,411	46	41
	December	1,462	1,336	102	-101	112	1,553	1,410	43	39
	Average	1,399	1,254	82	-16	43	1,454	1,310	--	--
1993	January	1,437	1,306	89	-73	134	1,464	1,371	41	36
	February	1,442	1,318	110	46	17	1,488	1,346	42	38
	March	1,463	1,332	102	-29	101	1,493	1,371	41	37
	April	1,390	1,262	88	-4	88	1,393	1,278	41	37
	May	^R 1,426	^R 1,300	^R 75	^R 37	^R 60	^R 1,404	^R 1,289	42	^R 38
	June*	^E 1,559	^E 1,426	^E 73	^E 123	^E 39	^E 1,469	^E 1,335	^E 45	^E 41
	6-Mo. Average	^E 1,453	^E 1,324	^E 89	^E 16	^E 74	^E 1,452	^E 1,332	--	--
1992	6-Mo. Average	1,344	1,194	67	-23	30	1,404	1,258	--	--
1991	6-Mo. Average	1,412	1,252	67	-20	58	1,441	1,266	--	--

^a Stocks are totals as of end of period.

^b A negative number indicates a decrease in stocks and a positive number indicates an increase.

^c In January 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 4.

R = Revised data. (s) = Less than 500 barrels per day. E = Estimated.

* See Summary Statistics Explanatory Note 1.

Notes: • Italics denote estimates based upon preliminary data. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

Figure S13. Propane/Propylene Supply and Disposition, April 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S8. See Summary Statistics Table and Figure Sources.

Figure S14. Propane/Propylene Ending Stocks, April 1992 - Present

Note: The Observed Minimum for propane stocks in the last 36 month period was 21.8 million barrels, occurring in March 1993.
Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S8. See Summary Statistics Table and Figure Sources.

Table S8. Propane/Propylene Supply and Disposition, 1981 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month	Supply		Disposition				Ending Stocks ^b (Million Barrels)
	Total Production	Imports	Stock Change ^a	Refinery Inputs	Exports	Product Supplied	
1981 Average	745	70	^c 18	5	18	773	76
1982 Average	711	63	-59	4	31	798	^c 54
1983 Average	730	44	^c -24	4	43	751	^c 48
1984 Average	806	67	^c 7	4	30	833	58
1985 Average	816	67	-50	3	48	883	39
1986 Average	817	110	64	4	28	831	63
1987 Average	828	88	-41	8	24	924	48
1988 Average	863	106	7	8	31	923	50
1989 Average	862	111	-52	11	24	990	32
1990 Average	878	115	48	(s)	28	917	49
1991 January	920	105	-449	0	51	1,422	35
February	923	90	-174	0	40	1,147	30
March	912	56	-10	0	45	933	30
April	900	101	179	0	25	798	35
May	922	90	214	0	31	767	42
June	906	81	223	0	22	741	49
July	901	91	81	0	15	895	51
August	891	73	40	0	13	910	52
September	905	92	-22	0	14	1,006	52
October	902	146	35	0	18	995	53
November	930	82	-37	0	20	1,030	52
December	964	86	-128	(s)	38	1,139	48
Average	915	91	-3	(s)	28	982	--
1992 January	949	90	-282	(s)	72	1,249	39
February	955	86	-200	(s)	27	1,214	33
March	940	68	-15	(s)	26	997	33
April	961	80	120	0	24	896	36
May	977	72	253	(s)	23	773	44
June	978	66	206	(s)	27	811	50
July	964	68	176	(s)	35	821	56
August	946	85	117	(s)	25	889	59
September	931	71	51	(s)	25	927	61
October	933	134	-88	(s)	30	1,095	58
November	964	90	-243	0	33	1,273	51
December	977	131	-385	0	45	1,448	39
Average	956	85	-24	(s)	33	1,032	--
1993 January	965	72	-173	1	31	1,179	33
February	959	78	-261	(s)	37	1,261	26
March	971	80	-140	(s)	32	1,165	22
April	973	112	233	(s)	40	812	29
May	942	96	262	0	30	746	37
5-Mo. Average	962	89	-13	(s)	34	1,029	--
1992 5-Mo. Average	956	79	-24	(s)	35	1,024	--
1991 5-Mo. Average	915	88	-47	0	38	1,012	--

^a A negative number indicates a decrease in stocks and a positive number indicates an increase.

^b Stocks are totals as of end of period.

^c In January 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 4.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

Figure S15. Liquefied Petroleum Gases Supply and Disposition, April 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S9. See Summary Statistics Table and Figure Sources.

Figure S16. Liquefied Petroleum Gases Ending Stocks, April 1992 - Present

Source: Energy Information Administration, *Petroleum Supply Monthly*, Table S9. See Summary Statistics Table and Figure Sources.

Table S9. Liquefied Petroleum Gases Supply and Disposition, 1981 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply		Disposition			Ending Stocks ^b (Million Barrels)
		Total Production	Imports	Stock Change ^a	Refinery Inputs	Exports	
1981	Average	1,571	244	^c 18	289	42	1,466
1982	Average	1,528	226	-111	300	65	1,499
1983	Average	1,642	190	^c -4	253	73	1,509
1984	Average	1,697	195	^c -19	291	48	1,572
1985	Average	1,704	187	-75	304	62	1,599
1986	Average	1,695	242	80	302	42	1,512
1987	Average	1,748	190	-15	304	38	1,612
1988	Average	1,817	209	1	321	49	1,656
1989	Average	1,791	181	-47	315	35	1,668
1990	Average	1,749	188	48	293	40	1,556
1991	January	1,753	148	-658	364	56	2,139
	February	1,865	126	-271	322	60	1,880
	March	1,942	91	113	249	56	1,615
	April	1,937	154	346	237	31	1,477
	May	1,989	129	428	239	45	1,407
	June	1,949	148	328	245	32	1,492
	July	1,913	151	211	253	24	1,575
	August	1,899	143	175	255	18	1,594
	September	1,806	147	-84	288	31	1,718
	October	1,805	233	33	345	31	1,629
	November	1,789	156	-330	413	40	1,821
	December	1,810	139	-488	437	73	1,927
	Average	1,871	147	-15	304	41	1,689
1992	January	1,820	142	-452	384	80	1,950
	February	1,917	126	-365	326	33	2,051
	March	2,033	97	153	247	43	1,687
	April	2,102	127	401	233	45	1,549
	May	2,106	106	489	245	44	1,433
	June	2,102	104	334	257	59	1,550
	July	2,090	106	345	255	52	1,544
	August	2,016	148	369	233	55	1,507
	September	1,886	114	37	299	45	1,620
	October	1,892	171	-242	369	39	1,898
	November	1,854	148	-541	403	43	2,097
	December	1,849	176	-660	453	49	2,184
	Average	1,972	131	-10	309	49	1,755
1993	January	1,837	117	-441	440	39	1,917
	February	1,912	128	-310	367	55	1,928
	March	2,106	123	9	263	47	1,910
	April	2,151	142	466	263	69	1,495
	May	2,091	148	538	258	50	1,393
	5-Mo. Average	2,021	131	57	318	52	1,726
1992	5-Mo. Average	1,996	120	48	287	49	1,731
1991	5-Mo. Average	1,898	129	-6	282	50	1,702

^a A negative number indicates a decrease in stocks and a positive number indicates an increase.

^b Stocks are totals as of end of period.

^c In January 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 4.

Notes: • Liquefied petroleum gases includes ethane, propane, normal butane, and isobutane. Beginning in January 1984, unfractionated stream, is reported by individual product. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

Table S10. Other Petroleum Products Supply and Disposition, 1981 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month		Supply		Disposition			Ending Stocks ^b (Million Barrels)
		Total Production	Imports	Stock Change ^a	Refinery Inputs	Exports	
1981	Average	2,771	188	^c -42	723	197	2,081
1982	Average	2,475	305	-68	787	205	^c 216
1983	Average	2,437	382	^c -6	712	236	^c 217
1984	Average	2,500	503	^c -32	791	236	198
1985	Average	2,532	550	22	886	227	206
1986	Average	2,704	504	-15	888	291	201
1987	Average	2,737	543	-1	829	264	200
1988	Average	2,773	645	22	799	294	208
1989	Average	2,771	627	12	797	305	213
1990	Average	2,842	705	-32	887	289	201
1991	January	2,653	748	204	844	317	207
	February	2,668	573	363	726	275	217
	March	2,576	551	151	819	239	221
	April	2,724	607	133	753	228	226
	May	2,853	800	198	900	327	232
	June	3,030	615	-123	1,092	304	228
	July	3,029	776	-143	1,081	321	224
	August	2,993	642	-169	1,013	296	219
	September	3,010	746	101	802	267	222
	October	2,824	611	-218	944	211	215
	November	2,750	850	-81	1,093	238	213
	December	2,797	577	-163	1,147	304	208
	Average	2,826	675	18	936	277	--
1992	January	2,702	734	203	787	272	214
	February	2,642	575	183	883	240	219
	March	2,752	713	238	730	239	227
	April	2,900	793	-31	1,043	217	226
	May	2,929	665	-113	910	199	222
	June	3,126	669	-42	787	225	221
	July	3,207	740	-156	996	284	216
	August	3,068	729	-116	884	227	212
	September	3,114	748	188	675	336	218
	October	2,923	701	-182	954	295	212
	November	2,915	697	-24	989	264	212
	December	2,853	711	-165	1,223	352	^c 207
	Average	2,928	707	-3	906	263	--
1993	January	3,026	698	^c 600	829	271	225
	February	2,815	773	122	949	282	228
	March	2,866	818	243	747	269	236
	April	2,862	719	9	900	315	236
	May	2,899	808	85	979	278	239
	5-Mo. Average	2,895	763	215	879	283	--
1992	5-Mo. Average	2,786	697	96	869	233	--
1991	5-Mo. Average	2,695	658	207	810	278	--

^a A negative number indicates a decrease in stocks and a positive number indicates an increase.

^b Stocks are totals as of end of period.

^c In January 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. Bulk terminal and pipeline stocks of oxygenates were added beginning in January 1993. See Summary Statistics Explanatory Note 4.

Notes: • Other petroleum products includes pentanes plus, other hydrocarbons and oxygenates, unfinished oils, gasoline blending components and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, and liquefied petroleum gases. • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: See Summary Statistics Table and Figure Sources.

Summary Statistics Table and Figure Sources

Information about petroleum supply and disposition at the National level are presented in the Summary Statistics tables. Industry terminology and product definitions are listed alphabetically in the Glossary.

The data presented in these tables are from several sources and represent different levels of timeliness and data finality.

- U.S. Department of Energy, Energy Information Administration (EIA), *Petroleum Supply Annual* (1981 through 1992).
- EIA, *Petroleum Supply Monthly* (January 1993 through May 1993).

- EIA, Weekly Petroleum Supply Reporting System (except domestic crude oil production) (June 1993). A more detailed explanation is provided in Summary Statistics Explanatory Note 1.

- Domestic crude oil production estimate is based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. (January 1993 through June 1993). Refer to Summary Statistics Explanatory Note 2 for a more detailed explanation.

Summary Statistics Explanatory Notes

The following explanatory notes are provided to assist in understanding and interpreting the data presented in the Summary Statistics section of this publication.

Note 1. Preliminary Monthly Statistics Derivation

Data collected from the Weekly Petroleum Supply Reporting System (WPSRS) are used to develop estimates of the most current monthly quantities. The forms that comprise the WPSRS are:

<u>Form Number</u>	<u>Name</u>
EIA-800	"Weekly Refinery Report"
EIA-801	"Weekly Bulk Terminal Report"
EIA-802	"Weekly Product Pipeline Report"
EIA-803	"Weekly Crude Oil Stocks Report"
EIA-804	"Weekly Imports Report"

A sample of all petroleum companies report weekly data to the Energy Information Administration (EIA) on crude oil and petroleum products stocks, refinery inputs and production, and crude oil and petroleum product imports. The sample of companies that report weekly is selected from the universe of companies that report on the comparable monthly surveys.

The sampling procedure used for the weekly system is the cut-off method. In the cut-off method, companies are ranked from largest to smallest on the basis of the quantities reported during a 12-month period. Companies are chosen for the sample beginning with the largest companies with additional companies added until the total sample coverage represents a minimum of 90 percent of each item by geographic region being measured. All monthly-from-weekly estimates are shown in italics.

In calculating monthly estimates based upon weekly submissions, an interpolation process is used to make the weekly figures comparable to the monthly. The interpolation process is designed to resolve the timing differences between the weekly and the monthly systems -- the time-of-day of reporting periods and the day-of-month of reporting periods. The end of the weekly reporting period (exactly 1 week long) is 7 a.m. Friday. The end of the monthly reporting period (one calendar month long) is 12 midnight on the last day of the month. To resolve the difference in the time-of-day of the weekly and monthly reporting periods, it is assumed that there is no activity during the period 12 midnight Thursday

through 7 a.m. Friday. Thus, for the purposes of interpolation, the weekly system reporting period is assumed to end at 12 midnight on Thursday. The resolution of the day-of-month differences depends on whether the series is a cumulative one (such as production and imports) or a value at a fixed point-in-time (i.e., stocks).

For cumulative items (all items except stocks) the following method is used to calculate a monthly-from-weekly figure for a given month. First, a weight is assigned to each week in the month based on the number of days in that week that are in the month. (All intermediate weeks in a month will have a weight of seven; the beginning and ending weeks in the month may have a weight of less than seven, according to the number of days of the week that are in the month.) The weight for each week is then multiplied by the average daily volume for that week. To arrive at the monthly-from-weekly figure, a sum is taken of these weighted weekly volumes. The daily average for the monthly-from-weekly figure is calculated by dividing the total monthly-from-weekly figure by the number of days in the month.

Stock figures are not cumulative but represent inventories as of the last day of the reporting period. When the reporting week does not coincide with the end of a reporting month, an interpolation is necessary to derive a monthly-from-weekly figure for end-of-month stocks.

To derive the monthly-from-weekly stock figures, the two weekly reports that bracket the end of the month are used. Average daily stock change and the number of interpolated days are determined. The average daily stock change is defined as one-seventh of the difference between the stock level at the end of the last full week of the month and the stock level at the end of the week containing the last day of the month. The number of interpolation days is defined as the number of days between the end of the preceding weekly reporting period (midnight Thursday) and the end of the monthly reporting period. The end-of-month stock levels are then estimated as the sum of (a) the stock level reported the last full week of the month, plus (b) the number of interpolation days multiplied by the average daily stock change for the week.

The monthly-from-weekly exports data are derived from the most recent data published in the *Weekly Petroleum Status Report*. Beginning with statistics for the first week ending in October 1991, weekly estimates of exports are forecast using an autoregressive integrated moving-average (ARIMA) procedure. The ARIMA procedure models a value as a linear combination of its own past values and present and past values of other related time series. The most recent 5 years of

past data are used to obtain the forecast. In addition, for the major products and crude oil, 5 years of related price data are used. The price data include some U.S. and some foreign series.

Note 2. Domestic Crude Oil Production

The Energy Information Administration (EIA) collects monthly crude oil production data on an ongoing basis. Data on crude oil production for States are reported to the EIA by State government agencies. Data on crude oil production for Federal offshore areas are reported to the EIA by the Minerals Management Service of the U.S. Department of the Interior and the Conservation Committee of California Oil Producers.

Currently, all except four crude oil producing States (Michigan, New York, Ohio, and Pennsylvania) report production on a monthly basis. These four States report crude oil production on an annual basis. Estimates of monthly crude oil production for these four States are made by the EIA using data reported on Form EIA-182, "Domestic Crude Oil First Purchase Report." After the end of each calendar year, the monthly crude oil production estimates are updated using annual reports from various State agencies, the Minerals Management Service, and the Conservation Committee of California Oil Producers. The final estimate is published in the *Petroleum Supply Annual*. There is a time lag of approximately 4 months between the end of the production month and the time when most monthly State crude oil production data become available.

In order to present more timely crude oil production estimates, the EIA prepares an original, forecast estimate on the first day of the production month (indicated with a "PE"). Approximately 45 days later, this original estimate of monthly crude oil production is replaced by State-level interim estimates (indicated with an "RE"). The State-level interim estimates are based on: (a) data reported by the States (e.g., production data for Alaska are typically reported to the EIA before the interim estimate is made); (b) first purchase data reported on Form EIA-182, "Domestic Crude Oil First Purchase Report;" (c) exponential or hyperbolic curve fitted projections based on recent State data; or (d) constant level projections based on the average production rate during a recent time period.

Note 3. Figures

Figures associated with the Summary Statistics tables are provided which depict the balance between supply, disposition, and ending stocks for various commodities.

The national inventory (stocks) graphs (Figures S4, S6, S8, S10, S12, S14, and S16) for crude oil, finished motor gasoline, distillate fuel oil, residual fuel oil, jet fuel,

propane/propylene, and liquefied petroleum gases, in this publication include features to assist in comparing current inventory levels with past inventory levels and minimum operating levels. These features are described below.

The graphs displaying inventory levels provide the reader with actual inventory data compared to an *average range* from the most recent 3-year period running from January through December or from July through June. The ranges are updated every 6 months in April and October. The 3-year period is adjusted by dropping the oldest 6 months and including the most recent 6 months. The ranges also reflect seasonal variation determined from a 7-year period. The seasonal factors, which determine the shape of the upper and lower curves, are updated annually in October, using the most recent year's final monthly data.

The monthly seasonal factors are estimated by means of a seasonal adjustment technique developed at the U.S. Bureau of the Census (Census X-11). The seasonal factors are assumed to be stable (i.e., unchanging from year to year) and additive (i.e., the series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported inventory levels). The intent of deseasonalization is to remove only variation from the data. Thus, a deseasonalized series would contain the same trends, cyclical components, and irregularities as the original data.

After seasonal factors are derived, data from the most recent 3-year period (January through December or July through June) are deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard deviation of the deseasonalized 36 months is calculated adjusting for extreme data points. The upper curve of the average range is defined as the average plus the seasonal factors plus the standard deviation. The lower curve is defined as the average plus the seasonal factors minus the standard deviation. Thus, the width of the average range is twice the standard deviation.

The lines labeled "Minimum Operating Inventory" (MOI) on the stocks graphs for crude oil, finished motor gasoline, distillate fuel oil, and residual fuel oil represent estimates of those inventory levels made by the National Petroleum Council (NPC) and published in April 1989 in a report of the NPC's Committee on Petroleum Storage & Transportation. The NPC defines the MOI as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. The NPC report presents the findings of a study which was directed by the NPC Committee. MOI estimates presented in the report were developed by consensus through a decision-making process that relied on the judgement of Committee members based on their operating experience, on historical inventory trends, and on the results of an NPC survey of companies that provide primary inventory data to the EIA. The estimated MOI

values are: Crude oil -- 300 million barrels; finished motor gasoline -- 205 million barrels; distillate fuel oil -- 85 million barrels; and residual fuel oil -- 30 million barrels.

The NPC did not develop a minimum operating inventory level for jet fuel stocks or propane/propylene stocks. The line labeled "observed minimum" is the lowest inventory level observed during the most recent 36-month period as published in the *Petroleum Supply Monthly*.

Note 4. Frames Maintenance

In January 1981 and 1983, numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported and stock change calculations. Using the expanded coverage (new basis), the end-of-year stocks, in million barrels, would have been as listed below.

- Crude Oil: 1982-645 (Total) and 351 (Other Primary).
- Crude Oil and Petroleum Products: 1980-1,425; and 1982-1,461.
- Motor Gasoline: 1980-263 (Total) and 214 (Finished); 1982-244 (Total) and 202 (Finished).
- Distillate Fuel Oil: 1980-205; and 1982-186.
- Residual Fuel Oil: 1980-91; and 1982-69.
- Jet Fuel: 1980-42 (Total) and 36 (Kerosene-type); and 1982-39 (Total) and 32 (Kerosene-type).
- Propane/Propylene: 1980-69; and 1982-57.
- Liquefied Petroleum Gases: 1980-128; and 1982-102.
- Other Petroleum Products: 1980-207; and 1982-219.

Stock change calculations beginning in 1981 and 1983 were made using new basis stock levels.

Stocks of Alaskan crude oil in-transit were included for the first time in January 1981. The major impact of this change is on the reporting of stock change calculations. Using the expanded coverage (new basis), 1980 end-of-year crude oil

stocks would have been 488 million barrels (Total) and 380 million barrels (Other Primary).

Beginning with January 1984, natural gas liquids supply and disposition data were collected on a component basis rather than a product basis. This change affected stocks reported and stock change calculations. Under the new basis, end-of-year 1983 stocks would have been:

- Propane/Propylene: 1983-55.
- Liquefied Petroleum Gases: 1983-108.
- Other Petroleum Products: 1983-210.

Beginning no later than November 1992, the Clean Air Act Amendments of 1990 require that all gasoline sold in carbon monoxide nonattainment areas have an oxygen content of 2.7 percent (by weight) during winter months. Beginning in 1995 further requirements are that only reformulated gasoline having an average oxygen content of 2.0 percent be sold in the nine worst ozone nonattainment areas.

In 1991, the Energy Information Administration (EIA) conducted a frame identifier survey of companies that produce, blend, store, or import oxygenates. The purpose of this survey was to (1) identify all U.S. producers, blenders, storers, and importers of oxygenates; and (2) collect supply and blending data for 1990 and end of 1990 inventory data on those oxygenates blended into motor gasoline. A summary of the results from the identification survey were published in the *Weekly Petroleum Status Report* dated February 12, 1992 and in the February 1992 issue of the *Petroleum Supply Monthly*.

In order to continue to provide relevant information about U.S. and regional gasoline supply, the EIA conducted a second frame identifier survey of these companies during 1992. As a result, a number of respondents were added to the monthly surveys effective in January 1993: 19 blenders, 25 stock holders, and 8 importers. This change affected stocks reported and stock change calculations. However, a new basis stock level was not calculated.

Table 1. U.S. Petroleum Balance, May 1993

Commodity	Current Month		Year to Date	
	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day
Crude Oil				
Field Production				
(1) Alaska	E 48,540	E 1,566	E 243,826	E 1,615
(2) Lower 48 States	E 163,289	E 5,267	E 803,218	E 5,319
(3) Total U.S.	E 211,830	E 6,833	E 1,047,044	E 6,934
Net Imports				
(4) Imports (Gross Excluding Strategic Petroleum Reserve (SPR))	203,007	6,549	968,930	6,417
(5) SPR Imports	0	0	4,354	29
(6) Exports	3,479	112	18,600	123
(7) Imports (Net Including SPR)	199,528	6,436	954,684	6,322
Other Sources				
(8) SPR Stock Change (Withdrawal (+), Addition (-))	-417	-13	-7,395	-49
(9) Other Stock Change (Withdrawal (+), Addition (-))	-3,716	-120	-34,796	-230
(10) Product Supplied and Losses	-325	-10	-1,542	-10
(11) Unaccounted for ^a	17,829	575	47,030	311
(12) Total Other Sources	13,371	431	3,297	22
(13) Crude Input to Refineries	424,729	13,701	2,005,026	13,278
(13) = (3) + (7) + (12)				
Natural Gas Liquids (NGL)				
(14) Field Production ^b	56,726	1,830	280,299	1,856
(15) Net Imports ^c	1,333	43	4,874	32
(16) Stock Change (Withdrawal (+), Addition (-)) ^c	-553	-18	-1,326	-9
(17) Total NGL Supply	57,506	1,855	283,847	1,880
Other Liquids				
Unfinished Oils and Gasoline Blending Components, Total				
(18) Stock Change (Withdrawal (+), Addition (-))	-1,520	-49	-16,966	-112
(19) Net Imports	16,637	537	77,672	514
(20) Other Liquids New Supply (Field Production)	3,461	112	28,571	189
(21) Refinery Processing Gain ^a	23,388	754	115,515	765
(22) Crude Oil Product Supplied	325	10	1,536	10
(23) Total Other Liquids	42,291	1,364	206,328	1,366
(23) = (18) through (22)				
(24) Total Production of Products	524,526	16,920	2,495,201	16,525
(24) = (13) + (17) + (23)				
Net Imports of Refined Products				
(25) Imports (Gross)	37,663	1,215	183,912	1,218
(26) Exports	24,861	802	118,545	785
(27) Imports (Net)	12,802	413	65,367	433
(28) Total New Supply of Products	537,328	17,333	2,560,568	16,957
(28) = (24) + (27)				
(29) Refined Products Stock Change (Withdrawal (+), Addition (-))	-25,732	-830	8,949	59
(30) Total Petroleum Products Supplied for Domestic Use	511,596	16,503	2,569,517	17,017
(30) = (28) + (29)				
(31) Finished Motor Gasoline	233,459	7,531	1,093,531	7,242
(32) Distillate Fuel Oil	86,385	2,787	490,912	3,251
(33) Residual Fuel Oil	31,432	1,014	159,771	1,058
(34) Jet Fuel	43,530	1,404	218,672	1,448
(35) Liquefied Petroleum Gases	43,180	1,393	260,648	1,726
(36) Other ^d	73,285	2,364	344,447	2,281
(37) Crude Oil	325	10	1,536	10
(38) Total Products Supplied	511,596	16,503	2,569,517	17,017
(38) = (31) through (37)				
Ending Stocks, All Oils				
(39) Crude Oil (Excluding SPR)	352,845	--	352,845	--
(40) Strategic Petroleum Reserve	582,119	--	582,119	--
(41) Finished Motor Gasoline	185,412	--	185,412	--
(42) Distillate Fuel Oil	101,556	--	101,556	--
(43) Residual Fuel Oil	43,046	--	43,046	--
(44) Jet Fuel	42,471	--	42,471	--
(45) Liquefied Petroleum Gases	97,260	--	97,260	--
(46) Other ^d	238,566	--	238,566	--
(47) Total Stocks	1,643,275	--	1,643,275	--
(47) = (39) through (46)				

^a Unaccounted for crude oil represents the difference between the supply and disposition of crude oil. Refinery processing gain represents the volumetric amount by which total output is greater than input for a given period of time. Preliminary estimates of crude oil imports at the National level have historically understated final values by approximately 50 thousand barrels per day. This causes the preliminary values of unaccounted for crude oil to overstate the final values by the same amount.

^b Includes fuel ethanol blended into finished motor gasoline.

^c Includes products in the pentanes plus category only.

^d Includes pentanes plus, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, and liquefied petroleum gases.

(s) = Less than 500 barrels per day. E = Estimated.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA), Monthly Petroleum Supply Reporting System. • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 2. U.S. Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products,
May 1993**
(Thousand Barrels)

Commodity	Supply				Disposition					Ending Stocks
	Field Production	Refinery Production	Imports	Unaccounted For Crude Oil ^a	Stock Change ^b	Crude Losses	Refinery Inputs	Exports	Products Supplied ^c	
Crude Oil	E 211,830	--	203,007	17,829	4,133	0	424,729	3,479	325	934,964
Natural Gas Liquids and LRGs	53,299	21,832	5,912	--	17,217	--	12,760	1,548	49,518	107,496
Pentanes Plus	10,311	--	1,334	--	553	--	4,753	1	6,338	10,236
Liquefied Petroleum Gases	42,988	21,832	4,578	--	16,664	--	8,007	1,547	43,180	97,260
Ethane/Ethylene	17,331	881	207	--	885	--	0	0	17,534	20,480
Propane/Propylene	15,534	13,666	2,970	--	8,120	--	0	935	23,115	36,937
Normal Butane/Butylene	3,205	6,549	1,048	--	5,755	--	2,609	612	1,826	26,599
Isobutane/Isobutylene	6,918	736	353	--	1,904	--	5,398	0	705	13,244
Other Liquids	3,461	--	16,780	--	1,520	--	25,611	143	-7,033	158,333
Other Hydrocarbons/Oxygenates	5,108	--	520	--	1,340	--	4,288	0	0	16,702
Unfinished Oils	--	--	15,775	--	2,450	--	20,358	0	-7,033	104,377
Motor Gasoline Blend. Comp.	-1,647	--	485	--	-2,264	--	959	143	0	37,201
Aviation Gasoline Blend. Comp.	--	--	0	--	-6	--	6	0	0	53
Finished Petroleum Products	3,427	464,656	33,085	--	9,068	--	--	23,314	468,786	442,482
Finished Motor Gasoline	3,427	225,777	9,547	--	2,492	--	--	2,800	233,459	185,412
Reformulated	--	0	0	--	0	--	--	NA	NA	0
Oxygenated	17,800	3,854	0	--	-1,125	--	--	NA	NA	10,155
Other	-14,373	221,923	9,547	--	3,617	--	--	NA	NA	175,257
Finished Aviation Gasoline	--	770	13	--	-97	--	--	0	880	1,674
Jet Fuel	--	44,203	2,334	--	1,149	--	--	1,858	43,530	42,471
Naphtha-Type	--	3,906	250	--	199	--	--	398	3,559	4,242
Kerosene-Type	--	40,297	2,084	--	950	--	--	1,460	39,971	38,229
Kerosene	--	804	3	--	237	--	--	235	335	4,170
Distillate Fuel Oil	--	90,821	4,729	--	3,215	--	--	5,950	86,385	101,556
0.05 percent sulfur and under	--	8,251	2,808	--	1,347	--	--	NA	NA	14,123
Greater than 0.05 percent sulfur	--	82,570	1,921	--	1,868	--	--	NA	NA	87,433
Residual Fuel Oil	--	27,763	9,544	--	1,637	--	--	4,238	31,432	43,046
Naphtha For Petro. Feed. Use	--	4,237	3,029	--	386	--	--	0	6,880	2,746
Other Oils For Petro. Feed. Use	--	8,327	2,310	--	130	--	--	0	10,507	1,502
Special Naphthas	--	1,681	134	--	76	--	--	45	1,694	2,456
Lubricants	--	4,799	267	--	-473	--	--	1,143	4,396	12,503
Waxes	--	619	56	--	122	--	--	51	502	1,002
Petroleum Coke	--	18,436	0	--	298	--	--	6,920	11,218	10,830
Asphalt and Road Oil	--	14,220	762	--	-108	--	--	64	15,026	30,745
Still Gas	--	20,982	0	--	0	--	--	0	20,982	0
Miscellaneous Products	--	1,217	357	--	4	--	--	10	1,560	2,369
Total	272,017	486,488	258,784	17,829	31,938	0	463,100	28,484	511,596	1,643,275

^a Unaccounted for crude oil represents the difference between the supply and disposition of crude oil. Preliminary estimates of crude oil imports at the National level have historically understated final values by approximately 50,000 barrels per day. This causes the preliminary values of unaccounted for crude oil to overstate the final values by the same amount.

^b A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^c Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, minus stock change, minus crude losses, minus refinery inputs, minus exports.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report." • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 3. U.S. Year-to-Date Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products,
January-May 1993
(Thousand Barrels)**

Commodity	Supply				Disposition					Ending Stocks
	Field Production	Refinery Production	Imports	Unaccounted For Crude Oil ^a	Stock Change ^b	Crude Losses	Refinery Inputs	Exports	Products Supplied ^c	
Crude Oil	^E 1,047,044	--	973,284	47,030	42,191	6	2,005,026	18,600	1,536	934,964
Natural Gas Liquids and LRGs	265,630	89,110	24,825	--	9,908	--	70,852	7,904	290,901	107,496
Pentanes Plus	49,599	--	4,983	--	1,326	--	22,894	109	30,253	10,236
Liquefied Petroleum Gases	216,031	89,110	19,842	--	8,582	--	47,958	7,795	260,648	97,260
Ethane/Ethylene	87,722	4,035	1,216	--	1,753	--	0	0	91,220	20,480
Propane/Propylene	78,031	67,239	13,390	--	-1,912	--	29	5,112	155,431	36,937
Normal Butane/Butylene	20,830	16,048	4,102	--	6,262	--	23,596	2,684	8,438	26,599
Isobutane/Isobutylene	29,448	1,788	1,134	--	2,479	--	24,333	0	5,558	13,244
Other Liquids	28,571	--	78,724	--	16,966	--	109,902	1,052	-20,625	158,333
Other Hydrocarbons/Oxygenates	33,696	--	1,998	--	9,820	--	25,874	0	0	16,702
Unfinished Oils	--	--	72,022	--	9,048	--	83,612	0	-20,638	104,377
Motor Gasoline Blend. Comp.	-5,125	--	4,704	--	-1,896	--	423	1,052	0	37,201
Aviation Gasoline Blend. Comp.	--	--	0	--	-6	--	-7	0	13	53
Finished Petroleum Products	14,669	2,212,185	164,070	--	-17,531	--	--	110,749	2,297,705	442,482
Finished Motor Gasoline	14,669	1,067,735	35,631	--	7,830	--	--	16,673	1,093,531	185,412
Reformulated	--	0	0	--	NA	--	--	NA	NA	0
Oxygenated	32,776	93,905	0	--	NA	--	--	NA	NA	10,155
Other	-18,107	973,830	35,631	--	NA	--	--	NA	NA	175,257
Finished Aviation Gasoline	--	3,052	26	--	135	--	--	0	2,943	1,674
Jet Fuel	--	216,165	13,954	--	-813	--	--	12,260	218,672	42,471
Naphtha-Type	--	19,330	984	--	-334	--	--	2,965	17,683	4,242
Kerosene-Type	--	196,835	12,970	--	-479	--	--	9,294	200,990	38,229
Kerosene	--	7,038	167	--	-1,308	--	--	1,140	7,373	4,170
Distillate Fuel Oil	--	440,555	30,210	--	-39,078	--	--	18,931	490,912	101,556
0.05 percent sulfur and under	--	42,241	10,376	--	NA	--	--	NA	NA	14,123
Greater than 0.05 percent sulfur ...	--	398,314	19,834	--	NA	--	--	NA	NA	87,433
Residual Fuel Oil	--	128,693	52,733	--	337	--	--	21,318	159,771	43,046
Naphtha For Petro. Feed. Use	--	19,713	6,845	--	1,049	--	--	0	25,509	2,746
Other Oils For Petro. Feed. Use	--	44,158	16,175	--	-391	--	--	0	60,724	1,502
Special Naphthas	--	7,873	700	--	320	--	--	585	7,668	2,456
Lubricants	--	23,668	1,629	--	-808	--	--	3,181	22,924	12,503
Waxes	--	3,039	319	--	93	--	--	272	2,993	1,002
Petroleum Coke	--	91,548	238	--	1,305	--	--	36,033	54,448	10,830
Asphalt and Road Oil	--	55,608	4,899	--	13,387	--	--	309	46,811	30,745
Still Gas	--	96,913	0	--	0	--	--	0	96,913	0
Miscellaneous Products	--	6,427	544	--	411	--	--	47	6,513	2,369
Total	1,355,915	2,301,295	1,240,903	47,030	51,534	6	2,185,780	138,306	2,569,517	1,643,275

^a Unaccounted for crude oil represents the difference between the supply and disposition of crude oil. Preliminary estimates of crude oil imports at the National level have historically understated final values by approximately 50,000 barrels per day. This causes the preliminary values of unaccounted for crude oil to overstate the final values by the same amount.

^b A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^c Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, minus stock change, minus crude losses, minus refinery inputs, minus exports.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report." • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 4. U.S. Daily Average Supply and Disposition of Crude Oil and Petroleum Products,
May 1993**
(Thousand Barrels per Day)

Commodity	Supply				Disposition				
	Field Production	Refinery Production	Imports	Unaccounted For Crude Oil ^a	Stock Change ^b	Crude Losses	Refinery Inputs	Exports	Products Supplied ^c
Crude Oil	^E 6,833	--	6,549	575	133	0	13,701	112	10
Natural Gas Liquids and LRGs	1,719	704	191	--	555	--	412	50	1,597
Pentanes Plus	333	--	43	--	18	--	153	(s)	204
Liquefied Petroleum Gases	1,387	704	148	--	538	--	258	50	1,393
Ethane/Ethylene	559	28	7	--	29	--	0	0	566
Propane/Propylene	501	441	96	--	262	--	0	30	746
Normal Butane/Butylene	103	211	34	--	186	--	84	20	59
Isobutane/Isobutylene	223	24	11	--	61	--	174	0	23
Other Liquids	112	--	541	--	49	--	826	5	-227
Other Hydrocarbons/Oxygenates	165	--	17	--	43	--	138	0	0
Unfinished Oils	--	--	509	--	79	--	657	0	-227
Motor Gasoline Blend. Comp.	-53	--	16	--	-73	--	31	5	0
Aviation Gasoline Blend. Comp.	--	--	0	--	(s)	--	(s)	0	0
Finished Petroleum Products	111	14,989	1,067	--	293	--	--	752	15,122
Finished Motor Gasoline	111	7,283	308	--	80	--	--	90	7,531
Reformulated	--	0	0	--	0	--	--	NA	NA
Oxygenated	574	124	0	--	-36	--	--	NA	NA
Other	-464	7,159	308	--	117	--	--	NA	NA
Finished Aviation Gasoline	--	25	(s)	--	-3	--	--	0	28
Jet Fuel	--	1,426	75	--	37	--	--	60	1,404
Naphtha-Type	--	126	8	--	6	--	--	13	115
Kerosene-Type	--	1,300	67	--	31	--	--	47	1,289
Kerosene	--	26	(s)	--	8	--	--	8	11
Distillate Fuel Oil	--	2,930	153	--	104	--	--	192	2,787
0.05 percent sulfur and under	--	266	91	--	43	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	2,664	62	--	60	--	--	NA	NA
Residual Fuel Oil	--	896	308	--	53	--	--	137	1,014
Naphtha For Petro. Feed. Use	--	137	98	--	12	--	--	0	222
Other Oils For Petro. Feed. Use	--	269	75	--	4	--	--	0	339
Special Naphthas	--	54	4	--	2	--	--	1	55
Lubricants	--	155	9	--	-15	--	--	37	142
Waxes	--	20	2	--	4	--	--	2	16
Petroleum Coke	--	595	0	--	10	--	--	223	362
Asphalt and Road Oil	--	459	25	--	-3	--	--	2	485
Still Gas	--	677	0	--	0	--	--	0	677
Miscellaneous Products	--	39	12	--	(s)	--	--	(s)	50
Total	8,775	15,693	8,348	575	1,030	0	14,939	919	16,503

^a Unaccounted for crude oil represents the difference between the supply and disposition of crude oil. Preliminary estimates of crude oil imports at the National level have historically understated final values by approximately 50,000 barrels per day. This causes the preliminary values of unaccounted for crude oil to overstate the final values by the same amount.

^b A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^c Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, minus stock change, minus crude losses, minus refinery inputs, minus exports.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 5. U.S. Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels per Day)

Commodity	Supply				Disposition				
	Field Production	Refinery Production	Imports	Unaccounted For Crude Oil ^a	Stock Change ^b	Crude Losses	Refinery Inputs	Exports	Products Supplied ^c
Crude Oil	E 6,934	--	6,446	311	279	(s)	13,278	123	10
Natural Gas Liquids and LRGs	1,759	590	164	--	66	--	469	52	1,926
Pentanes Plus	328	--	33	--	9	--	152	1	200
Liquefied Petroleum Gases	1,431	590	131	--	57	--	318	52	1,726
Ethane/Ethylene	581	27	8	--	12	--	0	0	604
Propane/Propylene	517	445	89	--	-13	--	(s)	34	1,029
Normal Butane/Butylene	138	106	27	--	41	--	156	18	56
Isobutane/Isobutylene	195	12	8	--	16	--	161	0	37
Other Liquids	189	--	521	--	112	--	728	7	-137
Other Hydrocarbons/Oxygenates	223	--	13	--	65	--	171	0	0
Unfinished Oils	--	--	477	--	60	--	554	0	-137
Motor Gasoline Blend. Comp.	-34	--	31	--	-13	--	3	7	0
Aviation Gasoline Blend. Comp.	--	--	0	--	(s)	--	(s)	0	(s)
Finished Petroleum Products	97	14,650	1,087	--	-116	--	--	733	15,217
Finished Motor Gasoline	97	7,071	236	--	52	--	--	110	7,242
Reformulated	--	0	0	--	NA	--	--	NA	NA
Oxygenated	217	622	0	--	NA	--	--	NA	NA
Other	-120	6,449	236	--	NA	--	--	NA	NA
Finished Aviation Gasoline	--	20	(s)	--	1	--	--	0	19
Jet Fuel	--	1,432	92	--	-5	--	--	81	1,448
Naphtha-Type	--	128	7	--	-2	--	--	20	117
Kerosene-Type	--	1,304	86	--	-3	--	--	62	1,331
Kerosene	--	47	1	--	-9	--	--	8	49
Distillate Fuel Oil	--	2,918	200	--	-259	--	--	125	3,251
0.05 percent sulfur and under	--	280	69	--	NA	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	2,638	131	--	NA	--	--	NA	NA
Residual Fuel Oil	--	852	349	--	2	--	--	141	1,058
Naphtha For Petro. Feed. Use	--	131	45	--	7	--	--	0	169
Other Oils For Petro. Feed. Use	--	292	107	--	-3	--	--	0	402
Special Naphthas	--	52	5	--	2	--	--	4	51
Lubricants	--	157	11	--	-5	--	--	21	152
Waxes	--	20	2	--	1	--	--	2	20
Petroleum Coke	--	606	2	--	9	--	--	239	361
Asphalt and Road Oil	--	368	32	--	89	--	--	2	310
Still Gas	--	642	0	--	0	--	--	0	642
Miscellaneous Products	--	43	4	--	3	--	--	(s)	43
Total	8,980	15,240	8,218	311	341	(s)	14,475	916	17,017

^a Unaccounted for crude oil represents the difference between the supply and disposition of crude oil. Preliminary estimates of crude oil imports at the National level have historically understated final values by approximately 50,000 barrels per day. This causes the preliminary values of unaccounted for crude oil to overstate the final values by the same amount.

^b A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^c Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, minus stock change, minus crude losses, minus refinery inputs, minus exports.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 6. PAD District I—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products,
May 1993**
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	E 776	--	38,993	2,000	24	2,240	0	39,553	0	0	16,473
Natural Gas Liquids and LRGs	724	1,813	463	--	2,125	822	--	97	209	3,997	4,582
Pentane Plus	85	--	294	--	0	8	--	0	1	370	27
Liquefied Petroleum Gases	639	1,813	169	--	2,125	814	--	97	209	3,626	4,555
Ethane/Ethylene	261	0	0	--	0	0	--	0	0	261	0
Propane/Propylene	256	1,349	132	--	2,110	436	--	0	81	3,330	2,545
Normal Butane/Butylene	91	41	30	--	15	328	--	14	128	80	1,736
Isobutane/Isobutylene	31	50	7	--	0	50	--	83	0	-45	274
Other Liquids	1,747	--	3,821	--	357	24	--	7,862	(s)	-1,961	20,029
Other Hydrocarbons/Oxygenates ..	776	--	83	--	0	266	--	593	0	0	2,064
Unfinished Oils	--	--	3,321	--	298	200	--	5,379	0	-1,960	12,259
Motor Gasoline Blend. Comp.	971	--	417	--	59	-442	--	1,889	(s)	0	5,706
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	1	0	-1	0
Finished Petroleum Products	-882	47,539	24,957	--	65,397	9,610	--	--	1,093	126,308	134,381
Finished Motor Gasoline	-882	23,902	9,304	--	42,559	3,918	--	--	65	70,899	59,090
Reformulated	--	0	0	--	0	0	--	--	NA	NA	0
Oxygenated	890	1,018	0	--	324	-1,245	--	--	NA	NA	2,928
Other	-1,772	22,884	9,304	--	42,235	5,163	--	--	NA	NA	56,162
Finished Aviation Gasoline	--	19	0	--	130	-25	--	--	0	174	513
Jet Fuel	--	3,143	2,206	--	8,678	277	--	--	1	13,749	10,068
Naphtha-Type	--	110	185	--	185	62	--	--	0	418	275
Kerosene-Type	--	3,033	2,021	--	8,493	215	--	--	1	13,331	9,793
Kerosene	--	27	3	--	22	-63	--	--	1	114	1,279
Distillate Fuel Oil	--	9,984	4,287	--	12,851	2,643	--	--	139	24,340	37,103
0.05 percent sulfur and under	--	1,613	2,548	--	169	1,155	--	--	NA	NA	6,825
Greater than 0.05 percent sulfur ..	--	8,371	1,739	--	12,682	1,488	--	--	NA	NA	30,278
Residual Fuel Oil	--	3,917	7,779	--	183	3,536	--	--	482	7,861	15,598
Petrochemical Feedstocks ^e	--	460	68	--	-25	-81	--	--	0	584	227
Special Naphtha	--	31	9	--	74	-30	--	--	6	139	112
Lubricants	--	440	250	--	421	-209	--	--	192	1,128	2,934
Waxes	--	97	36	--	5	-8	--	--	10	136	170
Petroleum Coke	--	1,238	0	--	0	-157	--	--	183	1,212	826
Asphalt and Road Oil	--	2,390	687	--	385	-269	--	--	6	3,725	5,871
Still Gas	--	1,827	0	--	0	0	--	--	0	1,827	0
Miscellaneous Products	--	64	328	--	114	78	--	--	8	420	390
Total	2,365	49,352	68,234	2,000	67,903	12,696	0	47,512	1,303	128,343	175,465

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 7. PAD District I—Year-to-Date Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	E 3,848	--	181,275	-326	1	2,446	0	182,352	0	0	16,473
Natural Gas Liquids and LRGs	4,182	6,809	3,568	--	17,108	-392	--	1,453	312	30,294	4,582
Pentanes Plus	510	--	294	--	0	-22	--	0	8	818	27
Liquefied Petroleum Gases	3,672	6,809	3,274	--	17,108	-370	--	1,453	304	29,476	4,555
Ethane/Ethylene	1,193	0	1	--	0	0	--	0	0	1,194	0
Propane/Propylene	1,694	6,484	2,636	--	16,328	-1,148	--	0	144	28,146	2,545
Normal Butane/Butylene	579	462	582	--	545	634	--	956	160	418	1,736
Isobutane/Isobutylene	206	-137	55	--	235	144	--	497	0	-282	274
Other Liquids	8,995	--	23,937	--	1,381	1,061	--	36,402	37	-3,187	20,029
Other Hydrocarbons/Oxygenates	5,960	--	532	--	0	852	--	5,640	0	0	2,064
Unfinished Oils	--	--	20,227	--	900	1,115	--	23,197	0	-3,185	12,259
Motor Gasoline Blend. Comp.	3,035	--	3,178	--	481	-906	--	7,563	37	0	5,706
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	2	0	-2	0
Finished Petroleum Products	-2,557	223,605	125,414	--	367,964	-23,262	--	--	4,769	732,919	134,381
Finished Motor Gasoline	-2,557	113,153	33,513	--	218,286	4,560	--	--	250	357,584	59,090
Reformulated	--	0	0	--	0	NA	--	--	NA	NA	0
Oxygenated	1,639	27,675	0	--	29,533	NA	--	--	NA	NA	2,928
Other	-4,196	85,478	33,513	--	188,753	NA	--	--	NA	NA	56,162
Finished Aviation Gasoline	--	63	0	--	496	115	--	--	0	444	513
Jet Fuel	--	12,888	12,589	--	51,047	368	--	--	236	75,920	10,068
Naphtha-Type	--	1,000	499	--	1,231	-12	--	--	1	2,741	275
Kerosene-Type	--	11,888	12,090	--	49,816	380	--	--	234	73,180	9,793
Kerosene	--	739	148	--	2,155	-947	--	--	24	3,965	1,279
Distillate Fuel Oil	--	51,981	28,103	--	90,203	-27,901	--	--	280	197,908	37,103
0.05 percent sulfur and under	--	6,879	9,295	--	3,626	NA	--	--	NA	NA	6,825
Greater than 0.05 percent sulfur ...	--	45,102	18,808	--	86,577	NA	--	--	NA	NA	30,278
Residual Fuel Oil	--	16,152	43,662	--	1,609	-1,517	--	--	2,647	60,293	15,598
Petrochemical Feedstocks ^e	--	2,317	567	--	-175	6	--	--	0	2,703	227
Special Naphthas	--	58	46	--	448	-137	--	--	35	654	112
Lubricants	--	2,376	1,401	--	1,997	-410	--	--	695	5,489	2,934
Waxes	--	618	242	--	17	0	--	--	56	821	170
Petroleum Coke	--	6,943	0	--	0	-175	--	--	496	6,622	826
Asphalt and Road Oil	--	7,461	4,646	--	1,287	2,686	--	--	15	10,693	5,871
Still Gas	--	8,571	0	--	0	0	--	--	0	8,571	0
Miscellaneous Products	--	285	497	--	594	90	--	--	36	1,250	590
Total	14,467	230,414	334,194	-326	386,454	-20,147	0	220,207	5,118	760,025	175,465

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 8. PAD District I—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, May 1993

(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	E 25	--	1,258	65	1	72	0	1,276	0	0
Natural Gas Liquids and LRGs	23	58	15	--	69	27	--	3	7	129
Pentanes Plus	3	--	9	--	0	(s)	--	0	(s)	12
Liquefied Petroleum Gases	21	58	5	--	69	26	--	3	7	117
Ethane/Ethylene	8	0	0	--	0	0	--	0	0	8
Propane/Propylene	8	44	4	--	68	14	--	0	3	107
Normal Butane/Butylene	3	13	1	--	(s)	11	--	(s)	4	3
Isobutane/Isobutylene	1	2	(s)	--	0	2	--	3	0	-1
Other Liquids	56	--	123	--	12	1	--	254	(s)	-63
Other Hydrocarbons/Oxygenates	25	--	3	--	0	9	--	19	0	0
Unfinished Oils	--	--	107	--	10	6	--	174	0	-63
Motor Gasoline Blend. Comp.	31	--	13	--	2	-14	--	61	(s)	0
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	(s)	0	(s)
Finished Petroleum Products	-28	1,534	805	--	2,110	310	--	--	35	4,074
Finished Motor Gasoline	-28	771	300	--	1,373	126	--	--	2	2,287
Reformulated	--	0	0	--	0	0	--	--	NA	NA
Oxygenated	29	33	0	--	10	-40	--	--	NA	NA
Other	-57	738	300	--	1,362	167	--	--	NA	NA
Finished Aviation Gasoline	--	1	0	--	4	-1	--	--	0	6
Jet Fuel	--	101	71	--	280	9	--	--	(s)	444
Naphtha-Type	--	4	6	--	6	2	--	--	0	13
Kerosene-Type	--	98	65	--	274	7	--	--	(s)	430
Kerosene	--	1	(s)	--	1	-2	--	--	(s)	4
Distillate Fuel Oil	--	322	138	--	415	85	--	--	4	785
0.05 percent sulfur and under	--	52	82	--	5	37	--	--	NA	NA
Greater than 0.05 percent sulfur ..	--	270	56	--	409	48	--	--	NA	NA
Residual Fuel Oil	--	126	251	--	6	114	--	--	16	254
Petrochemical Feedstocks ^e	--	15	2	--	-1	-3	--	--	0	19
Special Naphthas	--	1	(s)	--	2	-1	--	--	(s)	4
Lubricants	--	14	8	--	14	-7	--	--	6	36
Waxes	--	3	1	--	(s)	(s)	--	--	(s)	4
Petroleum Coke	--	40	0	--	0	-5	--	--	6	39
Asphalt and Road Oil	--	77	22	--	12	-9	--	--	(s)	120
Still Gas	--	59	0	--	0	0	--	--	0	59
Miscellaneous Products	--	2	11	--	4	3	--	--	(s)	14
Total	76	1,592	2,201	65	2,190	410	0	1,533	42	4,140

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 9. PAD District I—Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	E 25	--	1,200	-2	(s)	16	0	1,208	0	0
Natural Gas Liquids and LRGs	28	45	24	--	113	-3	--	10	2	201
Pentanes Plus	3	--	2	--	0	(s)	--	0	(s)	5
Liquefied Petroleum Gases	24	45	22	--	113	-2	--	10	2	195
Ethane/Ethylene	8	0	(s)	--	0	0	--	0	0	8
Propane/Propylene	11	43	17	--	108	-8	--	0	1	186
Normal Butane/Butylene	4	3	4	--	4	4	--	6	1	3
Isobutane/Isobutylene	1	-1	(s)	--	2	1	--	3	0	-2
Other Liquids	60	--	159	--	9	7	--	241	(s)	-21
Other Hydrocarbons/Oxygenates	39	--	4	--	0	6	--	37	0	0
Unfinished Oils	--	--	134	--	6	7	--	154	0	-21
Motor Gasoline Blend. Comp.	20	--	21	--	3	-6	--	50	(s)	0
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	(s)	0	(s)
Finished Petroleum Products	-17	1,481	831	--	2,437	-154	--	--	32	4,854
Finished Motor Gasoline	-17	749	222	--	1,446	30	--	--	2	2,368
Reformulated	--	0	0	--	0	NA	--	--	NA	NA
Oxygenated	11	183	0	--	196	NA	--	--	NA	NA
Other	-28	566	222	--	1,250	NA	--	--	NA	NA
Finished Aviation Gasoline	--	(s)	0	--	3	1	--	--	0	3
Jet Fuel	--	85	83	--	338	2	--	--	2	503
Naphtha-Type	--	7	3	--	8	(s)	--	--	(s)	18
Kerosene-Type	--	79	80	--	330	3	--	--	2	485
Kerosene	--	5	1	--	14	-6	--	--	(s)	26
Distillate Fuel Oil	--	344	186	--	597	-185	--	--	2	1,311
0.05 percent sulfur and under	--	46	62	--	24	NA	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	299	125	--	573	NA	--	--	NA	NA
Residual Fuel Oil	--	107	289	--	11	-10	--	--	18	399
Petrochemical Feedstocks ^e	--	15	4	--	-1	(s)	--	--	0	18
Special Naphthas	--	(s)	(s)	--	3	-1	--	--	(s)	4
Lubricants	--	16	9	--	13	-3	--	--	5	36
Waxes	--	4	2	--	(s)	0	--	--	(s)	5
Petroleum Coke	--	46	0	--	0	-1	--	--	3	44
Asphalt and Road Oil	--	49	31	--	9	18	--	--	(s)	71
Still Gas	--	57	0	--	0	0	--	--	0	57
Miscellaneous Products	--	2	3	--	4	1	--	--	(s)	8
Total	96	1,526	2,213	-2	2,559	-133	0	1,458	34	5,033

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 10. PAD District II—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, May 1993
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	^E 19,704	--	19,841	2,797	57,456	1,935	0	97,829	34	0	78,355
Natural Gas Liquids and LRGs	9,335	4,132	1,722	--	1,015	3,470	--	2,755	169	9,810	29,432
Pentanes Plus	1,374	--	43	--	659	-12	--	791	(s)	1,297	3,435
Liquefied Petroleum Gases	7,961	4,132	1,679	--	356	3,482	--	1,964	169	8,513	25,997
Ethane/Ethylene	2,795	0	207	--	-1,262	-572	--	0	0	2,312	3,718
Propane/Propylene	3,368	3,113	1,263	--	910	2,849	--	0	106	5,699	12,703
Normal Butane/Butylene	1,048	966	119	--	169	1,348	--	468	63	423	6,549
Isobutane/Isobutylene	750	53	90	--	539	-143	--	1,496	0	79	3,027
Other Liquids	-1,338	--	30	--	1,048	1,275	--	-125	0	-1,410	26,571
Other Hydrocarbons/Oxygenates	342	--	0	--	0	44	--	298	0	0	1,544
Unfinished Oils	--	--	0	--	-20	2,183	--	-793	0	-1,410	17,441
Motor Gasoline Blend. Comp.	-1,680	--	30	--	1,068	-952	--	370	0	0	7,586
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	0	0	0	0
Finished Petroleum Products	3,033	100,498	435	--	24,650	255	--	--	251	128,110	110,933
Finished Motor Gasoline	3,033	52,508	69	--	17,090	1,028	--	--	14	71,658	50,387
Reformulated	--	0	0	--	0	0	--	--	NA	NA	0
Oxygenated	13,528	2,406	0	--	0	520	--	--	NA	NA	2,063
Other	-10,495	50,102	69	--	17,090	508	--	--	NA	NA	48,324
Finished Aviation Gasoline	--	92	5	--	42	-81	--	--	0	220	374
Jet Fuel	--	6,547	104	--	2,309	148	--	--	75	8,737	8,653
Naphtha-Type	--	601	65	--	188	-7	--	--	0	861	835
Kerosene-Type	--	5,946	39	--	2,121	155	--	--	75	7,876	7,818
Kerosene	--	174	0	--	-22	187	--	--	0	-35	1,346
Distillate Fuel Oil	--	22,727	122	--	5,160	-1,433	--	--	4	29,438	26,896
0.05 percent sulfur and under	--	230	44	--	-99	58	--	--	NA	NA	1,714
Greater than 0.05 percent sulfur ...	--	22,497	78	--	5,259	-1,491	--	--	NA	NA	25,182
Residual Fuel Oil	--	2,251	33	--	-326	31	--	--	1	1,926	2,831
Petrochemical Feedstocks ^e	--	1,152	27	--	25	-114	--	--	0	1,318	320
Special Naphthas	--	461	48	--	45	5	--	--	8	541	435
Lubricants	--	686	17	--	164	-13	--	--	46	834	1,867
Waxes	--	93	5	--	0	21	--	--	8	69	130
Petroleum Coke	--	3,626	0	--	0	-31	--	--	60	3,597	2,666
Asphalt and Road Oil	--	5,734	3	--	113	437	--	--	36	5,377	14,716
Still Gas	--	4,243	0	--	0	0	--	--	0	4,243	0
Miscellaneous Products	--	204	2	--	50	70	--	--	(s)	186	312
Total	30,734	104,630	22,028	2,797	84,169	6,935	0	100,459	454	136,509	245,291

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

¹ RG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 11. PAD District II—Year-to-Date Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	E 97,692	--	89,988	7,095	277,171	8,869	0	462,682	395	0	78,355
Natural Gas Liquids and LRGs	48,332	18,155	9,902	--	6,355	1,372	--	16,850	1,114	63,408	29,432
Pentanes Plus	6,590	--	210	--	3,608	345	--	3,846	97	6,120	3,435
Liquefied Petroleum Gases	41,742	18,155	9,692	--	2,747	1,027	--	13,004	1,018	57,287	25,997
Ethane/Ethylene	15,150	1	1,169	--	-7,162	-1,094	--	0	0	10,252	3,718
Propane/Propylene	17,479	15,643	6,532	--	7,173	1,107	--	0	661	45,059	12,703
Normal Butane/Butylene	5,582	2,094	1,576	--	695	767	--	6,430	356	2,394	6,549
Isobutane/Isobutylene	3,531	417	415	--	2,041	247	--	6,574	0	-417	3,027
Other Liquids	-2,660	--	647	--	4,021	4,234	--	4,075	2	-6,303	26,571
Other Hydrocarbons/Oxygenates	2,451	--	0	--	0	1,093	--	1,358	0	0	1,544
Unfinished Oils	--	--	370	--	190	3,135	--	3,739	0	-6,314	17,441
Motor Gasoline Blend. Comp.	-5,111	--	277	--	3,831	11	--	-1,016	2	0	7,586
Aviation Gasoline Blend. Comp.	--	--	0	--	0	-5	--	-6	0	11	0
Finished Petroleum Products	12,364	487,247	2,267	--	98,675	6,899	--	--	1,651	592,003	110,933
Finished Motor Gasoline	12,364	254,203	414	--	68,683	4,114	--	--	314	331,236	50,387
Reformulated	--	0	0	--	0	NA	--	--	NA	NA	0
Oxygenated	24,910	12,849	0	--	-146	NA	--	--	NA	NA	2,063
Other	-12,546	241,354	414	--	68,829	NA	--	--	NA	NA	48,324
Finished Aviation Gasoline	--	428	11	--	304	-6	--	--	0	749	374
Jet Fuel	--	31,395	383	--	10,450	-680	--	--	152	42,756	8,653
Naphtha-Type	--	2,389	344	--	456	-180	--	--	29	3,340	835
Kerosene-Type	--	29,006	39	--	9,994	-500	--	--	122	39,417	7,818
Kerosene	--	3,080	0	--	231	-140	--	--	5	3,446	1,346
Distillate Fuel Oil	--	110,434	874	--	19,494	-4,432	--	--	9	135,225	26,896
0.05 percent sulfur and under	--	4,592	400	--	-482	NA	--	--	NA	NA	1,714
Greater than 0.05 percent sulfur ...	--	105,842	474	--	19,976	NA	--	--	NA	NA	25,182
Residual Fuel Oil	--	11,616	74	--	-2,203	-182	--	--	51	9,618	2,831
Petrochemical Feedstocks ^e	--	6,645	100	--	175	119	--	--	0	6,801	320
Special Naphthas	--	2,104	283	--	144	0	--	--	40	2,491	435
Lubricants	--	3,446	74	--	889	-39	--	--	186	4,262	1,867
Waxes	--	344	31	--	0	5	--	--	21	349	130
Petroleum Coke	--	18,517	0	--	0	47	--	--	695	17,775	2,666
Asphalt and Road Oil	--	23,135	3	--	367	7,967	--	--	178	15,360	14,716
Still Gas	--	20,235	0	--	0	0	--	--	0	20,235	0
Miscellaneous Products	--	1,665	20	--	141	126	--	--	1	1,699	312
Total	155,728	505,402	102,804	7,095	386,222	21,374	0	483,607	3,162	649,108	245,291

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 12. PAD District II—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, May 1993
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	E 636	--	640	90	1,853	62	0	3,156	1	0
Natural Gas Liquids and LRGs	301	133	56	--	33	112	--	89	5	316
Pentanes Plus	44	--	1	--	21	(s)	--	26	(s)	42
Liquefied Petroleum Gases	257	133	54	--	11	112	--	63	5	275
Ethane/Ethylene	90	0	7	--	-41	-18	--	0	0	75
Propane/Propylene	109	100	41	--	29	92	--	0	3	184
Normal Butane/Butylene	34	31	4	--	5	43	--	15	2	14
Isobutane/Isobutylene	24	2	3	--	17	-5	--	48	0	3
Other Liquids	-43	--	1	--	34	41	--	-4	0	-45
Other Hydrocarbons/Oxygenates	11	--	0	--	0	1	--	10	0	0
Unfinished Oils	--	--	0	--	-1	70	--	-26	0	-45
Motor Gasoline Blend. Comp.	-54	--	1	--	34	-31	--	12	0	0
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	0	0	0
Finished Petroleum Products	98	3,242	14	--	795	8	--	--	8	4,133
Finished Motor Gasoline	98	1,694	2	--	551	33	--	--	(s)	2,312
Reformulated	--	0	0	--	0	0	--	--	NA	NA
Oxygenated	436	78	0	--	0	17	--	--	NA	NA
Other	-339	1,616	2	--	551	16	--	--	NA	NA
Finished Aviation Gasoline	--	3	(s)	--	1	-3	--	--	0	7
Jet Fuel	--	211	3	--	74	5	--	--	2	282
Naphtha-Type	--	19	2	--	6	(s)	--	--	0	28
Kerosene-Type	--	192	1	--	68	5	--	--	2	254
Kerosene	--	6	0	--	-1	6	--	--	0	-1
Distillate Fuel Oil	--	733	4	--	166	-46	--	--	(s)	950
0.05 percent sulfur and under	--	7	1	--	-3	2	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	726	3	--	170	-48	--	--	NA	NA
Residual Fuel Oil	--	73	1	--	-11	1	--	--	(s)	62
Petrochemical Feedstocks ^e	--	37	1	--	1	-4	--	--	0	43
Special Naphthas	--	15	2	--	1	(s)	--	--	(s)	17
Lubricants	--	22	1	--	5	(s)	--	--	1	27
Waxes	--	3	(s)	--	0	1	--	--	(s)	2
Petroleum Coke	--	117	0	--	0	-1	--	--	2	116
Asphalt and Road Oil	--	185	(s)	--	4	14	--	--	1	173
Still Gas	--	137	0	--	0	0	--	--	0	137
Miscellaneous Products	--	7	(s)	--	2	2	--	--	(s)	6
Total	991	3,375	711	90	2,715	224	0	3,241	15	4,404

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 13. PAD District II—Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	E 647	--	596	47	1,836	59	0	3,064	3	0
Natural Gas Liquids and LRGs	320	120	66	--	42	9	--	112	7	420
Pentanes Plus	44	--	1	--	24	2	--	25	1	41
Liquefied Petroleum Gases	276	120	64	--	18	7	--	86	7	379
Ethane/Ethylene	100	(s)	8	--	-47	-7	--	0	0	68
Propane/Propylene	116	104	43	--	48	7	--	0	4	298
Normal Butane/Butylene	37	14	10	--	5	5	--	43	2	16
Isobutane/Isobutylene	23	3	3	--	14	2	--	44	0	-3
Other Liquids	-18	--	4	--	27	28	--	27	(s)	-42
Other Hydrocarbons/Oxygenates	16	--	0	--	0	7	--	9	0	0
Unfinished Oils	--	--	2	--	1	21	--	25	0	-42
Motor Gasoline Blend. Comp.	-34	--	2	--	25	(s)	--	-7	(s)	0
Aviation Gasoline Blend. Comp.	--	--	0	--	0	(s)	--	(s)	0	(s)
Finished Petroleum Products	82	3,227	15	--	653	46	--	--	11	3,921
Finished Motor Gasoline	82	1,683	3	--	455	27	--	--	2	2,194
Reformulated	--	0	0	--	0	NA	--	--	NA	NA
Oxygenated	165	85	0	--	-1	NA	--	--	NA	NA
Other	-83	1,598	3	--	456	NA	--	--	NA	NA
Finished Aviation Gasoline	--	3	(s)	--	2	(s)	--	--	0	5
Jet Fuel	--	208	3	--	69	-5	--	--	1	283
Naphtha-Type	--	16	2	--	3	-1	--	--	(s)	22
Kerosene-Type	--	192	(s)	--	66	-3	--	--	1	261
Kerosene	--	20	0	--	2	-1	--	--	(s)	23
Distillate Fuel Oil	--	731	6	--	129	-29	--	--	(s)	896
0.05 percent sulfur and under	--	30	3	--	-3	NA	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	701	3	--	132	NA	--	--	NA	NA
Residual Fuel Oil	--	77	(s)	--	-15	-1	--	--	(s)	64
Petrochemical Feedstocks ^e	--	44	1	--	1	1	--	--	0	45
Special Naphthas	--	14	2	--	1	0	--	--	(s)	16
Lubricants	--	23	(s)	--	6	(s)	--	--	1	28
Waxes	--	2	(s)	--	0	(s)	--	--	(s)	2
Petroleum Coke	--	123	0	--	0	(s)	--	--	5	118
Asphalt and Road Oil	--	153	(s)	--	2	53	--	--	1	102
Still Gas	--	134	0	--	0	0	--	--	0	134
Miscellaneous Products	--	11	(s)	--	1	1	--	--	(s)	11
Total	1,031	3,347	681	47	2,558	142	0	3,203	21	4,299

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

**Table 14. PAD District III—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products,
May 1993**
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	^E 100,118	--	131,416	9,292	-50,004	-1,309	0	192,131	0	0	755,238
Natural Gas Liquids and LRGs	35,816	12,605	3,571	--	-124	12,046	--	6,864	757	32,201	68,887
Pentanes Plus	6,226	--	967	--	-297	557	--	2,559	0	3,780	6,566
Liquefied Petroleum Gases	29,590	12,605	2,604	--	173	11,489	--	4,305	757	28,421	62,321
Ethane/Ethylene	13,074	881	0	--	2,447	1,462	--	0	0	14,940	16,573
Propane/Propylene	10,335	7,733	1,482	--	-2,177	4,549	--	0	587	12,237	20,739
Normal Butane/Butylene	811	3,431	899	--	208	3,551	--	1,127	170	501	15,910
Isobutane/Isobutylene	5,370	560	223	--	-305	1,927	--	3,178	0	743	9,099
Other Liquids	1,921	--	11,429	--	-1,405	-1,222	--	15,635	81	-2,549	72,145
Other Hydrocarbons/Oxygenates	2,508	--	44	--	0	404	--	2,148	0	0	7,718
Unfinished Oils	--	--	11,385	--	-278	-1,340	--	14,997	0	-2,550	48,656
Motor Gasoline Blend. Comp.	-587	--	0	--	-1,127	-269	--	-1,526	81	0	15,730
Aviation Gasoline Blend. Comp.	--	--	0	--	0	-17	--	16	0	1	41
Finished Petroleum Products	730	213,967	7,291	--	-93,694	-734	--	--	10,866	118,162	126,063
Finished Motor Gasoline	730	102,077	53	--	-61,782	-2,441	--	--	2,311	41,208	48,387
Reformulated	--	0	0	--	0	0	--	--	NA	NA	0
Oxygenated	1,424	398	0	--	-324	-98	--	--	NA	NA	3,338
Other	-694	101,679	53	--	-61,458	-2,343	--	--	NA	NA	45,049
Finished Aviation Gasoline	--	463	0	--	-180	70	--	--	0	213	375
Jet Fuel	--	21,174	10	--	-11,819	1,292	--	--	505	7,568	14,175
Naphtha-Type	--	2,161	0	--	-412	182	--	--	11	1,556	1,574
Kerosene-Type	--	19,013	10	--	-11,407	1,110	--	--	494	6,012	12,601
Kerosene	--	507	0	--	0	87	--	--	232	188	1,393
Distillate Fuel Oil	--	39,699	174	--	-18,640	768	--	--	1,960	18,505	24,132
0.05 percent sulfur and under	--	2,353	174	--	-388	-298	--	--	NA	NA	2,568
Greater than 0.05 percent sulfur ...	--	37,346	0	--	-18,252	1,066	--	--	NA	NA	21,564
Residual Fuel Oil	--	12,688	1,685	--	143	-1,214	--	--	2,346	13,384	17,007
Petrochemical Feedstocks ^g	--	10,799	5,199	--	0	706	--	--	0	15,292	3,504
Special Naphthas	--	1,129	72	--	-119	102	--	--	26	954	1,851
Lubricants	--	3,025	0	--	-630	-274	--	--	758	1,911	5,906
Waxes	--	333	12	--	-5	102	--	--	20	219	535
Petroleum Coke	--	8,182	0	--	0	317	--	--	2,704	5,161	2,976
Asphalt and Road Oil	--	3,765	59	--	-498	-1	--	--	5	3,322	4,771
Still Gas	--	9,490	0	--	0	0	--	--	0	9,490	0
Miscellaneous Products	--	636	27	--	-164	-248	--	--	(s)	747	1,051
Total	138,585	226,572	153,707	9,292	-145,227	8,781	0	214,630	11,703	147,814	1,022,333

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 15. PAD District III—Year-to-Date Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	^E 493,659	--	654,261	32,676	-227,989	29,570	3	923,034	0	0	755,238
Natural Gas Liquids and LRGs	176,125	50,755	10,104	--	-10,699	8,750	--	36,286	4,262	176,987	68,887
Pentanes Plus	29,672	--	4,204	--	-2,078	1,037	--	11,989	1	18,771	6,566
Liquefied Petroleum Gases	146,453	50,755	5,900	--	-8,621	7,713	--	24,297	4,262	153,215	62,321
Ethane/Ethylene	65,483	4,034	46	--	12,823	2,836	--	0	0	79,550	16,573
Propane/Propylene	50,754	37,807	3,629	--	-20,512	-1,383	--	3	3,529	69,529	20,739
Normal Butane/Butylene	8,311	7,432	1,668	--	327	4,498	--	10,385	733	2,122	15,910
Isobutane/Isobutylene	21,905	1,482	557	--	-1,259	1,762	--	13,909	0	7,014	9,099
Other Liquids	15,448	--	50,310	--	-5,593	7,278	--	62,053	347	-9,513	72,145
Other Hydrocarbons/Oxygenates	16,673	--	102	--	0	5,180	--	11,595	0	0	7,718
Unfinished Oils	--	--	49,033	--	-1,188	2,259	--	55,103	0	-9,517	48,656
Motor Gasoline Blend. Comp.	-1,225	--	1,175	--	-4,405	-151	--	-4,651	347	0	15,730
Aviation Gasoline Blend. Comp.	--	--	0	--	0	-10	--	6	0	4	41
Finished Petroleum Products	1,988	1,028,064	30,378	--	-484,495	-3,643	--	--	57,413	522,165	126,063
Finished Motor Gasoline	1,988	485,044	555	--	-297,667	374	--	--	12,388	177,158	48,387
Reformulated	--	0	0	--	0	NA	--	--	NA	NA	0
Oxygenated	2,622	25,627	0	--	-29,418	NA	--	--	NA	NA	3,338
Other	-634	459,417	555	--	-268,249	NA	--	--	NA	NA	45,049
Finished Aviation Gasoline	--	1,740	0	--	-847	35	--	--	0	858	375
Jet Fuel	--	105,174	642	--	-65,965	-1,115	--	--	5,247	35,719	14,175
Naphtha-Type	--	10,187	141	--	-1,863	-171	--	--	576	8,060	1,574
Kerosene-Type	--	94,987	501	--	-64,102	-944	--	--	4,671	27,659	12,601
Kerosene	--	2,531	0	--	-2,328	-293	--	--	1,105	-609	1,393
Distillate Fuel Oil	--	196,798	354	--	-112,227	-6,636	--	--	6,551	85,010	24,132
0.05 percent sulfur and under	--	13,575	354	--	-4,718	NA	--	--	NA	NA	2,568
Greater than 0.05 percent sulfur ...	--	183,223	0	--	-107,509	NA	--	--	NA	NA	21,564
Residual Fuel Oil	--	56,532	5,782	--	594	1,780	--	--	11,337	49,791	17,007
Petrochemical Feedstocks ^e	--	54,074	22,225	--	0	480	--	--	0	75,819	3,504
Special Naphthas	--	5,428	343	--	-592	461	--	--	404	4,314	1,851
Lubricants	--	14,937	123	--	-3,057	-137	--	--	1,712	10,428	5,906
Waxes	--	1,632	22	--	-17	90	--	--	135	1,412	535
Petroleum Coke	--	41,346	181	--	0	401	--	--	18,498	22,628	2,976
Asphalt and Road Oil	--	15,817	124	--	-1,654	1,027	--	--	27	13,233	4,771
Still Gas	--	43,912	0	--	0	0	--	--	0	43,912	0
Miscellaneous Products	--	3,099	27	--	-735	-110	--	--	7	2,494	1,051
Total	687,220	1,078,819	745,053	32,676	-728,776	41,955	3	1,021,373	62,023	689,639	1,022,333

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 16. PAD District III—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, May 1993
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	E 3,230	--	4,239	300	-1,613	-42	0	6,198	0	0
Natural Gas Liquids and LRGs	1,155	407	115	--	-4	389	--	221	24	1,039
Pentanes Plus	201	--	31	--	-10	18	--	83	0	122
Liquefied Petroleum Gases	955	407	84	--	6	371	--	139	24	917
Ethane/Ethylene	422	28	0	--	79	47	--	0	0	482
Propane/Propylene	333	249	48	--	-70	147	--	0	19	395
Normal Butane/Butylene	26	111	29	--	7	115	--	36	5	16
Isobutane/Isobutylene	173	18	7	--	-10	62	--	103	0	24
Other Liquids	62	--	369	--	-45	-39	--	504	3	-82
Other Hydrocarbons/Oxygenates	81	--	1	--	0	13	--	69	0	0
Unfinished Oils	--	--	367	--	-9	-43	--	484	0	-82
Motor Gasoline Blend. Comp.	-19	--	0	--	-36	-9	--	-49	3	0
Aviation Gasoline Blend. Comp.	--	--	0	--	0	-1	--	1	0	(s)
Finished Petroleum Products	24	6,902	235	--	-3,022	-24	--	--	351	3,812
Finished Motor Gasoline	24	3,293	2	--	-1,993	-79	--	--	75	1,329
Reformulated	--	0	0	--	0	0	--	--	NA	NA
Oxygenated	46	13	0	--	-10	-3	--	--	NA	NA
Other	-22	3,280	2	--	-1,983	-76	--	--	NA	NA
Finished Aviation Gasoline	--	15	0	--	-6	2	--	--	0	7
Jet Fuel	--	683	(s)	--	-381	42	--	--	16	244
Naphtha-Type	--	70	0	--	-13	6	--	--	(s)	50
Kerosene-Type	--	613	(s)	--	-368	36	--	--	16	194
Kerosene	--	16	0	--	0	3	--	--	7	6
Distillate Fuel Oil	--	1,281	6	--	-601	25	--	--	63	597
0.05 percent sulfur and under	--	76	6	--	-13	-10	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	1,205	0	--	-589	34	--	--	NA	NA
Residual Fuel Oil	--	409	54	--	5	-39	--	--	76	432
Petrochemical Feedstocks ^e	--	348	168	--	0	23	--	--	0	493
Special Naphthas	--	36	2	--	-4	3	--	--	1	31
Lubricants	--	98	0	--	-20	-9	--	--	24	62
Waxes	--	11	(s)	--	(s)	3	--	--	1	7
Petroleum Coke	--	264	0	--	0	10	--	--	87	166
Asphalt and Road Oil	--	121	2	--	-16	(s)	--	--	(s)	107
Still Gas	--	306	0	--	0	0	--	--	0	306
Miscellaneous Products	--	21	1	--	-5	-8	--	--	(s)	24
Total	4,470	7,309	4,958	300	-4,685	283	0	6,924	378	4,768

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 17. PAD District III—Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	E 3,269	--	4,333	216	-1,510	196	(s)	6,113	0	0
Natural Gas Liquids and LRGs	1,166	336	67	--	-71	58	--	240	28	1,172
Pentanes Plus	197	--	28	--	-14	7	--	79	(s)	124
Liquefied Petroleum Gases	970	336	39	--	-57	51	--	161	28	1,048
Ethane/Ethylene	434	27	(s)	--	85	19	--	0	0	527
Propane/Propylene	336	250	24	--	-136	-9	--	(s)	23	460
Normal Butane/Butylene	55	49	11	--	2	30	--	69	5	14
Isobutane/Isobutylene	145	10	4	--	-8	12	--	92	0	46
Other Liquids	102	--	333	--	-37	48	--	411	2	-63
Other Hydrocarbons/Oxygenates	110	--	1	--	0	34	--	77	0	0
Unfinished Oils	--	--	325	--	-8	15	--	365	0	-63
Motor Gasoline Blend. Comp.	-8	--	8	--	-29	-1	--	-31	2	0
Aviation Gasoline Blend. Comp.	--	--	0	--	0	(s)	--	(s)	0	(s)
Finished Petroleum Products	13	6,808	201	--	-3,209	-24	--	--	380	3,458
Finished Motor Gasoline	13	3,212	4	--	-1,971	2	--	--	82	1,173
Reformulated	--	0	0	--	0	NA	--	--	NA	NA
Oxygenated	17	170	0	--	-195	NA	--	--	NA	NA
Other	-4	3,042	4	--	-1,776	NA	--	--	NA	NA
Finished Aviation Gasoline	--	12	0	--	-6	(s)	--	--	0	6
Jet Fuel	--	697	4	--	-437	-7	--	--	35	237
Naphtha-Type	--	67	1	--	-12	-1	--	--	4	53
Kerosene-Type	--	629	3	--	-425	-6	--	--	31	183
Kerosene	--	17	0	--	-15	-2	--	--	7	-4
Distillate Fuel Oil	--	1,303	2	--	-743	-44	--	--	43	563
0.05 percent sulfur and under	--	90	2	--	-31	NA	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	1,213	0	--	-712	NA	--	--	NA	NA
Residual Fuel Oil	--	374	38	--	4	12	--	--	75	330
Petrochemical Feedstocks ^e	--	358	147	--	0	3	--	--	0	502
Special Naphthas	--	36	2	--	-4	3	--	--	3	29
Lubricants	--	99	1	--	-20	-1	--	--	11	69
Waxes	--	11	(s)	--	(s)	1	--	--	1	9
Petroleum Coke	--	274	1	--	0	3	--	--	123	150
Asphalt and Road Oil	--	105	1	--	-11	7	--	--	(s)	88
Still Gas	--	291	0	--	0	0	--	--	0	291
Miscellaneous Products	--	21	(s)	--	-5	-1	--	--	(s)	17
Total	4,551	7,144	4,934	216	-4,826	278	(s)	6,764	111	4,567

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

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NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 18. PAD District IV—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, May 1993
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	E 13,186	--	2,606	1,005	-3,451	-735	0	14,081	0	0	12,899
Natural Gas Liquids and LRGs	4,176	275	139	--	-3,016	133	--	346	21	1,074	1,360
Pentanes Plus	960	--	30	--	-362	13	--	143	0	472	167
Liquefied Petroleum Gases	3,216	275	109	--	-2,654	120	--	203	21	602	1,193
Ethane/Ethylene	1,200	0	0	--	-1,185	-5	--	0	0	20	189
Propane/Propylene	1,273	249	86	--	-843	84	--	0	0	681	429
Normal Butane/Butylene	439	74	0	--	-392	33	--	130	21	-63	341
Isobutane/Isobutylene	304	-48	23	--	-234	8	--	73	0	-36	234
Other Liquids	73	--	0	--	0	-292	--	285	0	80	4,662
Other Hydrocarbons/Oxygenates	88	--	0	--	0	26	--	62	0	0	195
Unfinished Oils	--	--	0	--	0	-126	--	46	0	80	2,687
Motor Gasoline Blend. Comp.	-15	--	0	--	0	-192	--	177	0	0	1,780
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	0	0	0	0
Finished Petroleum Products	51	14,929	80	--	1,006	518	--	--	5	15,542	12,450
Finished Motor Gasoline	51	7,252	4	--	518	305	--	--	1	7,519	5,091
Reformulated	--	0	0	--	0	0	--	--	NA	NA	0
Oxygenated	356	28	0	--	0	-14	--	--	NA	NA	247
Other	-305	7,224	4	--	518	319	--	--	NA	NA	4,844
Finished Aviation Gasoline	--	21	0	--	8	-7	--	--	0	36	34
Jet Fuel	--	1,027	0	--	389	-52	--	--	0	1,468	973
Naphtha-Type	--	353	0	--	-175	-28	--	--	0	206	281
Kerosene-Type	--	674	0	--	564	-24	--	--	0	1,262	692
Kerosene	--	29	0	--	0	26	--	--	0	3	107
Distillate Fuel Oil	--	4,098	73	--	91	391	--	--	0	3,871	2,397
0.05 percent sulfur and under	--	366	42	--	318	107	--	--	NA	NA	357
Greater than 0.05 percent sulfur ...	--	3,732	31	--	-227	284	--	--	NA	NA	2,040
Residual Fuel Oil	--	345	0	--	0	-3	--	--	0	348	323
Petrochemical Feedstocks ^e	--	21	0	--	0	0	--	--	0	21	0
Special Naphthas	--	0	0	--	0	0	--	--	0	0	1
Lubricants	--	0	0	--	0	0	--	--	4	-4	0
Waxes	--	44	3	--	0	17	--	--	(s)	30	44
Petroleum Coke	--	470	0	--	0	95	--	--	0	375	466
Asphalt and Road Oil	--	900	0	--	0	-257	--	--	0	1,157	3,006
Still Gas	--	660	0	--	0	0	--	--	0	660	0
Miscellaneous Products	--	62	0	--	0	3	--	--	0	59	8
Total	17,486	15,204	2,825	1,005	-5,461	-376	0	14,712	27	16,696	31,371

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report." • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 19. PAD District IV—Year-to-Date Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	E 65,139	--	12,777	6,018	-18,620	1,492	0	63,822	0	0	12,899
Natural Gas Liquids and LRGs	21,073	921	1,150	--	-12,764	72	--	2,565	43	7,700	1,360
Pentanes Plus	4,679	--	275	--	-1,530	5	--	916	4	2,499	167
Liquefied Petroleum Gases	16,394	921	875	--	-11,234	67	--	1,649	40	5,200	1,193
Ethane/Ethylene	5,888	0	0	--	-5,661	11	--	0	0	216	189
Propane/Propylene	6,583	1,093	546	--	-2,989	-64	--	0	0	5,297	429
Normal Butane/Butylene	2,382	-86	270	--	-1,567	56	--	1,198	40	-295	341
Isobutane/Isobutylene	1,541	-86	59	--	-1,017	64	--	451	0	-18	234
Other Liquids	296	--	0	--	0	299	--	-23	0	20	4,662
Other Hydrocarbons/Oxygenates	556	--	0	--	0	93	--	463	0	0	195
Unfinished Oils	--	--	0	--	0	290	--	-310	0	20	2,687
Motor Gasoline Blend. Comp.	-260	--	0	--	0	-84	--	-176	0	0	1,780
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	0	0	0	0
Finished Petroleum Products	451	67,587	431	--	4,262	1,628	--	--	40	71,063	12,450
Finished Motor Gasoline	451	33,338	50	--	1,921	501	--	--	1	35,258	5,091
Reformulated	--	0	0	--	0	NA	--	--	NA	NA	0
Oxygenated	656	1,827	0	--	31	NA	--	--	NA	NA	247
Other	-205	31,511	50	--	1,890	NA	--	--	NA	NA	4,844
Finished Aviation Gasoline	--	80	0	--	47	-11	--	--	0	138	34
Jet Fuel	--	5,353	0	--	2,514	138	--	--	0	7,729	973
Naphtha-Type	--	1,597	0	--	-786	-16	--	--	0	827	281
Kerosene-Type	--	3,756	0	--	3,300	154	--	--	0	6,902	692
Kerosene	--	284	0	--	-58	90	--	--	0	136	107
Distillate Fuel Oil	--	17,123	367	--	-162	-318	--	--	1	17,645	2,397
0.05 percent sulfur and under	--	1,538	208	--	1,574	NA	--	--	NA	NA	357
Greater than 0.05 percent sulfur ...	--	15,585	159	--	-1,736	NA	--	--	NA	NA	2,040
Residual Fuel Oil	--	1,735	0	--	0	-34	--	--	0	1,769	323
Petrochemical Feedstocks ^e	--	108	0	--	0	-2	--	--	0	110	0
Special Naphthas	--	0	0	--	0	0	--	--	1	-1	1
Lubricants	--	0	0	--	0	0	--	--	20	-20	0
Waxes	--	148	14	--	0	0	--	--	(s)	162	44
Petroleum Coke	--	2,163	0	--	0	233	--	--	13	1,917	466
Asphalt and Road Oil	--	3,902	0	--	0	1,025	--	--	4	2,873	3,006
Still Gas	--	3,017	0	--	0	0	--	--	0	3,017	0
Miscellaneous Products	--	336	0	--	0	6	--	--	0	330	8
Total	86,959	68,508	14,358	6,018	-27,122	3,491	0	66,364	33	78,783	31,371

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 20. PAD District IV—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, May 1993
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	E 425	--	84	32	-111	-24	0	454	0	0
Natural Gas Liquids and LRGs	135	9	4	--	-97	4	--	11	1	35
Pentanes Plus	31	--	1	--	-12	(s)	--	5	0	15
Liquefied Petroleum Gases	104	9	4	--	-86	4	--	7	1	19
Ethane/Ethylene	39	0	0	--	-38	(s)	--	0	0	1
Propane/Propylene	41	8	3	--	-27	3	--	0	0	22
Normal Butane/Butylene	14	2	0	--	-13	1	--	4	1	-2
Isobutane/isobutylene	10	-2	1	--	-8	(s)	--	2	0	-1
Other Liquids	2	--	0	--	0	-9	--	9	0	3
Other Hydrocarbons/Oxygenates	3	--	0	--	0	1	--	2	0	0
Unfinished Crude	--	--	0	--	0	-4	--	1	0	3
Motor Gasoline Blend. Comp.	(s)	--	0	--	0	-6	--	6	0	0
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	0	0	0
Finished Petroleum Products	2	482	3	--	32	17	--	--	(s)	501
Finished Motor Gasoline	2	234	(s)	--	17	10	--	--	(s)	243
Reformulated	--	0	0	--	0	0	--	--	NA	NA
Oxygenated	11	1	0	--	0	(s)	--	--	NA	NA
Other	-10	233	(s)	--	17	10	--	--	NA	NA
Finished Aviation Gasoline	--	1	0	--	(s)	(s)	--	--	0	1
Jet Fuel	--	33	0	--	13	-2	--	--	0	47
Naphtha-Type	--	11	0	--	-6	-1	--	--	0	7
Kerosene-Type	--	22	0	--	18	-1	--	--	0	41
Kerosene	--	1	0	--	0	1	--	--	0	(s)
Distillate Fuel Oil	--	132	2	--	3	13	--	--	0	125
0.05 percent sulfur and under	--	12	1	--	10	3	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	120	1	--	-7	9	--	--	NA	NA
Residual Fuel Oil	--	11	0	--	0	(s)	--	--	0	11
Petrochemical Feedstocks ^e	--	1	0	--	0	0	--	--	0	1
Special Naphthas	--	0	0	--	0	0	--	--	0	0
Lubricants	--	0	0	--	0	0	--	--	(s)	(s)
Waxes	--	1	(s)	--	0	1	--	--	(s)	1
Petroleum Coke	--	15	0	--	0	3	--	--	0	12
Asphalt and Road Oil	--	29	0	--	0	-8	--	--	0	37
Still Gas	--	21	0	--	0	0	--	--	0	21
Miscellaneous Products	--	2	0	--	0	(s)	--	--	0	2
Total	564	490	91	32	-176	-12	0	475	1	539

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 21. PAD District IV—Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	^E 431	--	85	40	-123	10	0	423	0	0
Natural Gas Liquids and LRGs	140	6	8	--	-85	(s)	--	17	(s)	51
Pentanes Plus	31	--	2	--	-10	(s)	--	6	(s)	17
Liquefied Petroleum Gases	109	6	6	--	-74	(s)	--	11	(s)	34
Ethane/Ethylene	39	0	0	--	-37	(s)	--	0	0	1
Propane/Propylene	44	7	4	--	-20	(s)	--	0	0	35
Normal Butane/Butylene	16	-1	2	--	-10	(s)	--	8	(s)	-2
Isobutane/Isobutylene	10	-1	(s)	--	-7	(s)	--	3	0	(s)
Other Liquids	2	--	0	--	0	2	--	(s)	0	(s)
Other Hydrocarbons/Oxygenates	4	--	0	--	0	1	--	3	0	0
Unfinished Oils	--	--	0	--	0	2	--	-2	0	(s)
Motor Gasoline Blend. Comp.	-2	--	0	--	0	-1	--	-1	0	0
Aviation Gasoline Blend. Comp.	--	--	0	--	0	0	--	0	0	0
Finished Petroleum Products	3	448	3	--	28	11	--	--	(s)	471
Finished Motor Gasoline	3	221	(s)	--	13	3	--	--	(s)	233
Reformulated	--	0	0	--	0	NA	--	--	NA	NA
Oxygenated	4	12	0	--	(s)	NA	--	--	NA	NA
Other	-1	209	(s)	--	13	NA	--	--	NA	NA
Finished Aviation Gasoline	--	1	0	--	(s)	(s)	--	--	0	1
Jet Fuel	--	35	0	--	17	1	--	--	0	51
Naphtha-Type	--	11	0	--	-5	(s)	--	--	0	5
Kerosene-Type	--	25	0	--	22	1	--	--	0	46
Kerosene	--	2	0	--	(s)	1	--	--	0	1
Distillate Fuel Oil	--	113	2	--	-1	-2	--	--	(s)	117
0.05 percent sulfur and under	--	10	1	--	10	NA	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	103	1	--	-11	NA	--	--	NA	NA
Residual Fuel Oil	--	11	0	--	0	(s)	--	--	0	12
Petrochemical Feedstocks ^e	--	1	0	--	0	(s)	--	--	0	1
Special Naphthas	--	0	0	--	0	0	--	--	(s)	(s)
Lubricants	--	0	0	--	0	0	--	--	(s)	(s)
Waxes	--	1	(s)	--	0	0	--	--	(s)	1
Petroleum Coke	--	14	0	--	0	2	--	--	(s)	13
Asphalt and Road Oil	--	26	0	--	0	7	--	--	(s)	19
Still Gas	--	20	0	--	0	0	--	--	0	20
Miscellaneous Products	--	2	0	--	0	(s)	--	--	0	2
Total	576	454	95	40	-180	23	0	439	1	522

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report." • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 22. PAD District V—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, May 1993
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	E 78,045	--	10,151	2,736	-4,025	2,002	0	81,135	3,445	325	71,999
Natural Gas Liquids and LRGs	3,248	3,007	17	--	0	746	--	2,698	391	2,437	3,235
Pentanes Plus	1,666	--	0	--	0	-13	--	1,260	0	419	41
Liquefied Petroleum Gases	1,582	3,007	17	--	0	759	--	1,438	391	2,018	3,194
Ethane/Ethylene	1	0	0	--	0	0	--	0	0	1	0
Propane/Propylene	302	1,222	7	--	0	202	--	0	162	1,167	521
Normal Butane/Butylene	816	1,664	0	--	0	495	--	870	229	886	2,063
Isobutane/Isobutylene	463	121	10	--	0	62	--	568	0	-36	610
Other Liquids	1,058	--	1,500	--	0	1,735	--	1,954	62	-1,193	34,926
Other Hydrocarbons/Oxygenates	1,394	--	393	--	0	600	--	1,187	0	0	5,181
Unfinished Oils	--	--	1,069	--	0	1,533	--	729	0	-1,193	23,334
Motor Gasoline Blend. Comp.	-336	--	38	--	0	-409	--	49	62	0	6,399
Aviation Gasoline Blend. Comp.	--	--	0	--	0	11	--	-11	0	0	12
Finished Petroleum Products	496	87,723	322	--	2,641	-581	--	--	11,100	80,664	58,655
Finished Motor Gasoline	496	40,038	117	--	1,615	-318	--	--	409	42,175	22,457
Reformulated	--	0	0	--	0	0	--	--	NA	NA	0
Oxygenated	1,602	4	0	--	0	-288	--	--	NA	NA	1,579
Other	-1,106	40,034	117	--	1,615	-30	--	--	NA	NA	20,878
Finished Aviation Gasoline	--	175	8	--	0	-54	--	--	0	237	378
Jet Fuel	--	12,312	14	--	443	-516	--	--	1,278	12,007	8,602
Naphtha-Type	--	681	0	--	214	-10	--	--	387	518	1,277
Kerosene-Type	--	11,631	14	--	229	-506	--	--	891	11,489	7,325
Kerosene	--	67	0	--	0	0	--	--	2	65	45
Distillate Fuel Oil	--	14,313	73	--	538	846	--	--	3,847	10,231	11,028
0.05 percent sulfur and under	--	3,689	0	--	0	325	--	--	NA	NA	2,659
Greater than 0.05 percent sulfur ...	--	10,624	73	--	538	521	--	--	NA	NA	8,369
Residual Fuel Oil	--	8,562	47	--	0	-713	--	--	1,410	7,912	7,287
Petrochemical Feedstocks ^e	--	132	45	--	0	5	--	--	0	172	197
Special Naphthas	--	60	5	--	0	-1	--	--	5	61	57
Lubricants	--	648	0	--	45	23	--	--	143	527	1,796
Waxes	--	52	0	--	0	-10	--	--	13	49	123
Petroleum Coke	--	4,920	0	--	0	74	--	--	3,973	873	3,896
Asphalt and Road Oil	--	1,431	13	--	0	-18	--	--	18	1,444	2,381
Still Gas	--	4,762	0	--	0	0	--	--	0	4,762	0
Miscellaneous Products	--	251	0	--	0	101	--	--	1	149	408
Total	82,847	90,730	11,990	2,736	-1,384	3,902	0	85,787	14,998	82,233	168,815

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 23. PAD District V—Year-to-Date Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d	
Crude Oil	E 386,707	--	34,983	1,566	-30,563	-186	3	373,136	18,205	1,536	71,999
Natural Gas Liquids and LRGs	15,918	12,470	101	--	0	106	--	13,698	2,172	12,513	3,235
Pentanes Plus	8,148	--	0	--	0	-39	--	6,143	0	2,044	41
Liquefied Petroleum Gases	7,770	12,470	101	--	0	145	--	7,555	2,172	10,469	3,194
Ethane/Ethylene	8	0	0	--	0	0	--	0	0	8	0
Propane/Propylene	1,521	6,212	47	--	0	-424	--	26	777	7,401	521
Normal Butane/Butylene	3,976	6,146	6	--	0	307	--	4,627	1,394	3,800	2,063
Isobutane/Isobutylene	2,265	112	48	--	0	262	--	2,902	0	-739	610
Other Liquids	6,492	--	3,830	--	191	4,094	--	7,395	666	-1,642	34,926
Other Hydrocarbons/Oxygenates	8,056	--	1,364	--	0	2,602	--	6,818	0	0	5,181
Unfinished Oils	--	--	2,392	--	98	2,249	--	1,883	0	-1,642	23,334
Motor Gasoline Blend. Comp.	-1,564	--	74	--	93	-766	--	-1,297	666	0	6,399
Aviation Gasoline Blend. Comp.	--	--	0	--	0	9	--	-9	0	0	12
Finished Petroleum Products	2,423	405,682	5,580	--	13,594	847	--	--	46,877	379,555	58,655
Finished Motor Gasoline	2,423	181,997	1,099	--	8,777	-1,719	--	--	3,720	192,295	22,457
Reformulated	--	0	0	--	0	NA	--	--	NA	NA	0
Oxygenated	2,950	25,927	0	--	0	NA	--	--	NA	NA	1,579
Other	-527	156,070	1,099	--	8,777	NA	--	--	NA	NA	20,878
Finished Aviation Gasoline	--	741	15	--	0	2	--	--	0	754	378
Jet Fuel	--	61,355	340	--	1,954	476	--	--	6,625	56,548	8,602
Naphtha-Type	--	4,157	0	--	962	45	--	--	2,358	2,716	1,277
Kerosene-Type	--	57,198	340	--	992	431	--	--	4,267	53,832	7,325
Kerosene	--	404	19	--	0	-18	--	--	6	435	45
Distillate Fuel Oil	--	64,219	512	--	2,692	209	--	--	12,090	55,124	11,028
0.05 percent sulfur and under	--	15,657	119	--	0	NA	--	--	NA	NA	2,659
Greater than 0.05 percent sulfur ..	--	48,562	393	--	2,692	NA	--	--	NA	NA	8,369
Residual Fuel Oil	--	42,658	3,215	--	0	290	--	--	7,282	38,301	7,287
Petrochemical Feedstocks ^e	--	727	128	--	0	55	--	--	0	800	197
Special Naphthas	--	283	28	--	0	-4	--	--	106	209	57
Lubricants	--	2,909	31	--	171	-222	--	--	568	2,765	1,796
Waxes	--	297	10	--	0	-2	--	--	59	250	123
Petroleum Coke	--	22,579	57	--	0	799	--	--	16,332	5,505	3,896
Asphalt and Road Oil	--	5,293	126	--	0	682	--	--	85	4,652	2,381
Still Gas	--	21,178	0	--	0	0	--	--	0	21,178	0
Miscellaneous Products	--	1,042	0	--	0	299	--	--	4	739	408
Total	411,541	418,152	44,494	1,566	-16,778	4,861	3	394,229	67,919	391,963	168,815

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 24. PAD District V — Daily Average Supply and Disposition of Crude Oil and Petroleum Products, May 1993
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	E 2,518	--	327	88	-130	65	0	2,617	111	10
Natural Gas Liquids and LRGs	105	97	1	--	0	24	--	87	13	79
Pentanes Plus	54	--	0	--	0	(s)	--	41	0	14
Liquefied Petroleum Gases	51	97	1	--	0	24	--	46	13	65
Ethane/Ethylene	(s)	0	0	--	0	0	--	0	0	(s)
Propane/Propylene	10	39	(s)	--	0	7	--	0	5	38
Normal Butane/Butylene	26	54	0	--	0	16	--	28	7	29
Isobutane/Isobutylene	15	4	(s)	--	0	2	--	18	0	-1
Other Liquids	34	--	48	--	0	56	--	63	2	-38
Other Hydrocarbons/Oxygenates	45	--	13	--	0	19	--	38	0	0
Unfinished Oils	--	--	34	--	0	49	--	24	0	-38
Motor Gasoline Blend. Comp.	-11	--	1	--	0	-13	--	2	2	0
Aviation Gasoline Blend. Comp.	--	--	0	--	0	(s)	--	(s)	0	0
Finished Petroleum Products	16	2,830	10	--	85	-19	--	--	358	2,602
Finished Motor Gasoline	16	1,292	4	--	52	-10	--	--	13	1,360
Reformulated	--	0	0	--	0	0	--	--	NA	NA
Oxygenated	52	(s)	0	--	0	-9	--	--	NA	NA
Other	-36	1,291	4	--	52	-1	--	--	NA	NA
Finished Aviation Gasoline	--	6	(s)	--	0	-2	--	--	0	8
Jet Fuel	--	397	(s)	--	14	-17	--	--	41	387
Naphtha-Type	--	22	0	--	7	(s)	--	--	12	17
Kerosene-Type	--	375	(s)	--	7	-16	--	--	29	371
Kerosene	--	2	0	--	0	0	--	--	(s)	2
Distillate Fuel Oil	--	462	2	--	17	27	--	--	124	330
0.05 percent sulfur and under	--	119	0	--	0	10	--	--	NA	NA
Greater than 0.05 percent sulfur ...	--	343	2	--	17	17	--	--	NA	NA
Residual Fuel Oil	--	276	2	--	0	-23	--	--	45	255
Petrochemical Feedstocks ^e	--	4	1	--	0	(s)	--	--	0	6
Special Naphthas	--	2	(s)	--	0	(s)	--	--	(s)	2
Lubricants	--	21	0	--	1	1	--	--	5	17
Waxes	--	2	0	--	0	(s)	--	--	(s)	2
Petroleum Coke	--	159	0	--	0	2	--	--	128	28
Asphalt and Road Oil	--	46	(s)	--	0	-1	--	--	1	47
Still Gas	--	154	0	--	0	0	--	--	0	154
Miscellaneous Products	--	8	0	--	0	3	--	--	(s)	5
Total	2,672	2,927	387	88	-45	126	0	2,767	484	2,653

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 25. PAD District V — Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January-May 1993
(Thousand Barrels per Day)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports by PAD District of Entry ^a	Unaccounted For Crude Oil ^b	Net Receipts	Stock Change ^c	Crude Losses	Refinery Inputs	Exports	Products Supplied ^d
Crude Oil	E 2,561	--	232	10	-202	-1	(s)	2,471	121	10
Natural Gas Liquids and LRGs	105	83	1	--	0	1	--	91	14	83
Pentanes Plus	54	--	0	--	0	(s)	--	41	0	14
Liquefied Petroleum Gases	51	83	1	--	0	1	--	50	14	69
Ethane/Ethylene	(s)	0	0	--	0	0	--	0	0	(s)
Propane/Propylene	10	41	(s)	--	0	-3	--	(s)	5	49
Normal Butane/Butylene	26	41	(s)	--	0	2	--	31	9	25
Isobutane/Isobutylene	15	1	(s)	--	0	2	--	19	0	-5
Other Liquids	43	--	25	--	1	27	--	49	4	-11
Other Hydrocarbons/Oxygenates	53	--	9	--	0	17	--	45	0	0
Unfinished Oils	--	--	16	--	1	15	--	12	0	-11
Motor Gasoline Blend, Comp.	-10	--	(s)	--	1	-5	--	-9	4	0
Aviation Gasoline Blend, Comp.	--	--	0	--	0	(s)	--	(s)	0	0
Finished Petroleum Products	16	2,687	37	--	90	6	--	--	310	2,514
Finished Motor Gasoline	16	1,205	7	--	58	-11	--	--	25	1,273
Reformulated	--	0	0	--	0	NA	--	--	NA	NA
Oxygenated	20	172	0	--	0	NA	--	--	NA	NA
Other	-3	1,034	7	--	58	NA	--	--	NA	NA
Finished Aviation Gasoline	--	5	(s)	--	0	(s)	--	--	0	5
Jet Fuel	--	406	2	--	13	3	--	--	44	374
Naphtha-Type	--	28	0	--	6	(s)	--	--	16	18
Kerosene-Type	--	379	2	--	7	3	--	--	28	357
Kerosene	--	3	(s)	--	0	(s)	--	--	(s)	3
Distillate Fuel Oil	--	425	3	--	18	1	--	--	80	365
0.05 percent sulfur and under	--	104	1	--	0	NA	--	--	NA	NA
Greater than 0.05 percent sulfur ..	--	322	3	--	18	NA	--	--	NA	NA
Residual Fuel Oil	--	283	21	--	0	2	--	--	48	254
Petrochemical Feedstocks ^e	--	5	1	--	0	(s)	--	--	0	5
Special Naphthas	--	2	(s)	--	0	(s)	--	--	1	1
Lubricants	--	19	(s)	--	1	-1	--	--	4	18
Waxes	--	2	(s)	--	0	(s)	--	--	(s)	2
Petroleum Coke	--	150	(s)	--	0	5	--	--	108	36
Asphalt and Road Oil	--	35	1	--	0	5	--	--	1	31
Still Gas	--	140	0	--	0	0	--	--	0	140
Miscellaneous Products	--	7	0	--	0	2	--	--	(s)	5
Total	2,725	2,769	295	10	-111	32	(s)	2,611	450	2,596

^a Represents the PAD District in which the material entered the United States and not necessarily where the crude oil or product is processed and/or consumed.

^b Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

^c A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

^d Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, plus net receipts, minus stock change, minus crude losses, minus refinery inputs, minus exports.

^e Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

(s) = Less than 500 barrels per day.

E = Estimated.

LRG = Liquefied Refinery Gas.

NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.

Sources: • Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," EIA-814, "Monthly Imports Report," EIA-816, "Monthly Natural Gas Liquids Report," EIA-817, "Monthly Tanker and Barge Movement Report," and EIA-819M, "Monthly Oxygenate Telephone Report". • Domestic crude oil production estimates based on historical statistics from State conservation agencies and the Minerals Management Service of the U.S. Department of the Interior. • Export data from the Bureau of the Census and Form EIA-810, "Monthly Refinery Report."

Table 26. Production of Crude Oil by PAD District and State
(Thousand Barrels)

PAD District and State	March 1993		January-March 1993	
	Total	Daily Average	Total	Daily Average
PAD District I	E 732	E 24	E 2,319	E 26
Florida	E 374	E 12	E 1,242	E 14
New York	E 28	E 1	E 82	E 1
Pennsylvania	E 167	E 5	E 481	E 5
Virginia	(s)	(s)	E 2	E (s)
West Virginia	173	6	E 509	E 6
Adjustment ^a	-11	(s)	2	(s)
PAD District II	E 20,455	E 660	E 58,224	E 647
Illinois	1,610	52	4,785	53
Indiana	129	4	585	7
Kansas	4,365	141	12,053	134
Kentucky	368	12	1,140	13
Michigan	E 1,153	E 37	E 3,254	E 36
Missouri	7	(s)	E 28	E (s)
Nebraska	424	14	1,228	14
North Dakota	2,693	87	7,796	87
Ohio	E 712	E 23	E 2,044	E 23
Oklahoma	8,732	282	24,229	269
South Dakota	130	4	372	4
Tennessee	34	1	101	1
Adjustment ^a	98	3	609	7
PAD District III	E 101,897	E 3,287	E 296,032	E 3,289
Alabama	1,506	49	4,559	51
Arkansas	E 882	E 28	E 2,602	E 29
Louisiana ^b	E 11,631	E 375	E 34,207	E 380
Mississippi	1,942	63	E 5,543	E 62
New Mexico	5,912	191	17,120	190
Texas ^b	53,310	1,720	155,158	1,724
Federal Offshore PAD District III	24,585	793	E 72,785	E 809
Adjustment ^a	2,129	69	4,059	45
PAD District IV	E 13,200	E 426	E 38,959	E 433
Colorado	E 2,395	E 77	E 6,783	E 75
Montana	1,497	48	E 4,337	E 48
Utah	1,869	60	5,392	60
Wyoming	7,566	244	21,627	240
Adjustment ^a	-126	-4	819	9
PAD District V	E 79,974	E 2,580	E 232,763	E 2,586
Alaska ^b	E 50,811	E 1,639	E 147,676	E 1,641
South Alaska	1,228	40	3,571	40
North Slope	49,583	1,599	144,108	1,601
Adjustment for Alaska ^a	(s)	(s)	-3	(s)
Arizona	6	(s)	18	(s)
California ^b	24,825	801	72,226	803
Nevada	185	6	585	7
Federal Offshore PAD District V	4,254	137	11,697	130
Adjustment excluding Alaska ^a	-107	-3	558	6
U.S. Total^b	E 216,258	E 6,976	E 628,297	E 6,981

^a These adjustments are used to reconcile the national and PAD District level sums of the State data with the independently estimated U.S. and Alaskan figures shown in the Summary Statistics portion of this issue and with the PAD District level figures published in a previous issue. Revised data at the State, PAD District, and national levels will be published without adjustments in the *Petroleum Supply Annual*.

^b Includes the following current month offshore production (thousand barrels): Alaska: State - 4,656; California: State - 1,716; Louisiana: State - E1,833; Texas: State -172; U.S. Total, including Federal offshore - E37,215.

(s) = Less than 500 barrels or less than 500 barrels per day.

E = Estimated.

Note: Totals may not equal sum of components due to independent rounding.

Sources: State government agencies, U.S. Department of the Interior, Minerals Management Service and the Conservation Committee of California Oil Producers.

Table 27. Natural Gas Plant Net Production and Stocks of Petroleum Products by PAD and Refining Districts, May 1993
(Thousand Barrels)

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wis., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
Net Production							
Natural Gas Liquids	187	537	724	571	388	8,376	9,335
Pentanes Plus	27	58	85	101	105	1,168	1,374
Liquefied Petroleum Gases	160	479	639	470	283	7,208	7,961
Ethane	56	205	261	79	1	2,715	2,795
Propane	61	195	256	231	171	2,966	3,368
Normal Butane	37	54	91	85	111	852	1,048
Isobutane	6	25	31	75	0	675	750
Stocks							
Natural Gas Liquids	126	42	168	107	53	2,104	2,264
Pentanes Plus	5	1	6	17	15	203	235
Liquefied Petroleum Gases	121	41	162	90	38	1,901	2,029
Ethane	0	0	0	11	0	605	616
Propane	57	23	80	43	25	703	771
Normal Butane	62	5	67	20	13	451	484
Isobutane	2	13	15	16	0	142	158

Commodity	PAD District III						PAD Dist. IV	PAD Dist. V	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast	
Net Production									
Natural Gas Liquids	19,147	3,861	7,185	610	5,013	35,816	4,176	3,248	53,299
Pentanes Plus	3,431	728	1,220	173	674	6,226	960	1,666	10,311
Liquefied Petroleum Gases	15,716	3,133	5,965	437	4,339	29,590	3,216	1,582	42,988
Ethane	6,627	1,650	2,620	100	2,077	13,074	1,200	1	17,331
Propane	5,721	930	2,069	178	1,437	10,335	1,273	302	15,534
Normal Butane	2,384	-2,647	430	107	537	811	439	816	3,205
Isobutane	984	3,200	846	52	288	5,370	304	463	6,918
Stocks									
Natural Gas Liquids	343	6,049	1,470	159	130	8,151	298	76	10,957
Pentanes Plus	159	803	350	23	16	1,351	93	14	1,699
Liquefied Petroleum Gases	184	5,246	1,120	136	114	6,800	205	62	9,258
Ethane	20	1,743	211	97	6	2,077	2	0	2,695
Propane	111	1,309	317	17	68	1,822	129	40	2,842
Normal Butane	40	1,575	358	15	27	2,015	62	8	2,636
Isobutane	13	619	234	7	13	886	12	14	1,085

Note: Refer to Appendix A for Refining District descriptions.

Source: Energy Information Administration (EIA) Form EIA-816, "Monthly Natural Gas Liquids Report."

**Table 28. Refinery Input of Crude Oil and Petroleum Products by PAD and Refining Districts,
May 1993**
(Thousand Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wis., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
Crude Oil	36,551	3,002	39,553	65,504	10,575	21,750	97,829
Natural Gas Liquids	97	0	97	1,516	422	817	2,755
Pentanes Plus	0	0	0	296	26	469	791
Liquefied Petroleum Gases	97	0	97	1,220	396	348	1,964
Ethane	0	0	0	0	0	0	0
Propane	0	0	0	0	0	0	0
Normal Butane	14	0	14	133	299	36	468
Isobutane	83	0	83	1,087	97	312	1,496
Other Liquids	7,842	20	7,862	761	307	-1,193	-125
Other Hydrocarbons/Hydrogen/Oxygenates	590	3	593	127	115	56	298
Other Hydrocarbons/Hydrogen	0	3	3	12	0	0	12
Oxygenates	W	W	590	115	115	56	286
Fuel Ethanol	W	W	W	W	W	W	183
Methanol	W	W	W	W	W	W	W
MTBE	W	W	579	W	W	W	W
Other Oxygenates ^a	W	W	W	W	W	W	W
Unfinished Oils (net)	5,342	37	5,379	481	-33	-1,241	-793
Motor Gasoline Blend. Comp. (net)	1,909	-20	1,889	153	225	-8	370
Aviation Gasoline Blend. Comp. (net)	1	0	1	0	0	0	0
Total Input to Refineries	44,490	3,022	47,512	67,781	11,304	21,374	100,459
Atmospheric Crude Oil Distillation							
Gross Input (daily average)	1,179	97	1,276	2,174	340	710	3,224
Operable Capacity (daily average)	1,442	97	1,539	2,324	358	724	3,406
Operable Utilization Rate (percent) ^{b,c}	81.8	100.3	82.9	93.5	94.9	98.0	94.6
Downstream Processing							
Fresh Feed Input (daily average)							
Catalytic Cracking	557	20	577	810	115	198	1,123
Catalytic Hydrocracking	53	4	57	110	0	6	115
Delayed and Fluid Coking	42	0	42	134	54	62	250
Crude Oil Qualities							
Sulfur Content, Weighted Average (percent)	1.03	0.84	1.01	1.04	1.77	0.72	1.05
API Gravity, Weighted Average (degrees)	31.37	36.43	31.74	33.86	30.09	36.23	33.98
Operable Capacity (daily average)	1,442	97	1,539	2,324	358	724	3,406
Operating	1,414	97	1,511	2,315	358	693	3,367
Idle	28	0	28	9	0	30	40
Alaskan Crude Oil Receipts	0	0	0	650	0	0	650

See footnotes at end of table.

**Table 28. Refinery Input of Crude Oil and Petroleum Products by PAD and Refining Districts,
May 1993 (Continued)**
(Thousand Barrels, Except Where Noted)

Commodity	PAD District III						PAD Dist. IV	PAD Dist. V	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast	
Crude Oil	16,448	93,470	72,847	6,382	2,984	192,131	14,081	81,135	424,729
Natural Gas Liquids	1,038	3,479	1,859	237	251	6,864	346	2,698	12,760
Pentanes Plus	523	1,353	390	150	143	2,559	143	1,260	4,753
Liquefied Petroleum Gases	515	2,126	1,469	87	108	4,305	203	1,438	8,007
Ethane	0	0	0	0	0	0	0	0	0
Propane	0	0	0	0	0	0	0	0	0
Normal Butane	352	365	410	0	0	1,127	130	870	2,609
Isobutane	163	1,761	1,059	87	108	3,178	73	568	5,398
Other Liquids	220	11,111	4,226	-20	98	15,635	285	1,954	25,611
Other Hydrocarbons/Hydrogen/Oxygenates	133	1,052	948	0	15	2,148	62	1,187	4,288
Other Hydrocarbons/Hydrogen	109	126	392	0	0	627	0	314	956
Oxygenates	24	926	556	W	W	1,521	62	873	3,332
Fuel Ethanol	W	W	W	W	W	W	W	W	277
Methanol	W	W	W	W	W	W	W	W	124
MTBE	W	911	W	W	W	1,390	W	748	2,818
Other Oxygenates ^a	W	W	W	W	W	W	W	W	113
Unfinished Oils (net)	65	11,142	3,659	98	33	14,997	46	729	20,358
Motor Gasoline Blend. Comp. (net)	22	-1,082	-398	-118	50	-1,526	177	49	959
Aviation Gasoline Blend. Comp. (net)	0	-1	17	0	0	16	0	-11	6
Total Input to Refineries	17,706	108,060	78,932	6,599	3,333	214,630	14,712	85,787	463,100
Atmospheric Crude Oil Distillation									
Gross Input (daily average)	535	3,041	2,406	206	96	6,284	462	2,712	13,957
Operable Capacity (daily average)	552	3,218	2,663	249	98	6,779	519	2,912	15,156
Operable Utilization Rate (percent) ^{b,c}	96.8	94.5	90.4	82.8	98.4	92.7	88.9	93.1	92.1
Downstream Processing									
Fresh Feed Input (daily average)									
Catalytic Cracking	186	1,313	881	30	33	2,442	143	749	5,035
Catalytic Hydrocracking	23	239	201	0	0	463	8	443	1,087
Delayed and Fluid Coking	4	250	294	11	0	559	39	500	1,390
Crude Oil Qualities									
Sulfur Content, Weighted Average (percent)	1.04	1.11	1.27	1.42	1.15	1.18	1.14	1.18	1.13
API Gravity, Weighted Average (degrees)	37.85	32.42	30.26	32.77	36.56	32.13	35.16	25.24	31.27
Operable Capacity (daily average)	552	3,218	2,663	249	98	6,779	519	2,912	15,156
Operating	552	3,191	2,663	219	98	6,722	476	2,855	14,931
Idle	0	27	0	30	0	57	44	57	225
Alaskan Crude Oil Receipts	0	3	339	4	0	346	0	43,860	44,856

^a Includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

^b Represents gross input divided by operable capacity.

^c See Table H2 in the Highlights Section for additional information concerning utilization rates.

W = Withheld to avoid disclosure of individual company data.

Note: * Totals may not equal sum of components due to independent rounding. * Refer to Appendix A for Refining District descriptions.

Source: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report."

**Table 29. Refinery Net Production of Finished Petroleum Products by PAD and Refining Districts,
May 1993**
(Thousand Barrels)

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wis., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
Liquefied Refinery Gases	1,745	68	1,813	3,061	301	770	4,132
Ethane/Ethylene	0	0	0	0	0	0	0
Ethane	W	W	W	W	W	W	W
Ethylene	W	W	W	W	W	W	W
Propane/Propylene	1,312	37	1,349	2,324	243	546	3,113
Propane	W	W	W	W	W	W	W
Propylene	W	W	W	W	W	W	W
Normal Butane/Butylene	374	40	414	680	34	252	966
Normal Butane	W	W	W	W	W	W	W
Butylene	W	W	W	W	W	W	W
Isobutane/Isobutylene	59	-9	50	57	24	-28	53
Isobutane	W	W	W	W	W	W	W
Isobutylene	W	W	W	W	W	W	W
Finished Motor Gasoline	22,773	1,129	23,902	35,593	6,128	10,787	52,508
Reformulated	0	0	0	0	0	0	0
Oxygenated	1,018	0	1,018	469	0	1,937	2,406
Other	21,755	1,129	22,884	35,124	6,128	8,850	50,102
Finished Aviation Gasoline	19	0	19	45	40	7	92
Jet Fuel	3,143	0	3,143	4,290	637	1,620	6,547
Naphtha-Type	110	0	110	328	5	268	601
Kerosene-Type	3,033	0	3,033	3,962	632	1,352	5,946
Commercial	2,836	0	2,836	3,889	632	1,352	5,873
Military	197	0	197	73	0	0	73
Kerosene	-22	49	27	140	-19	53	174
Distillate Fuel Oil	9,133	851	9,984	14,142	2,890	5,695	22,727
0.05 percent sulfur and under	1,348	265	1,613	192	0	38	230
Greater than 0.05 percent sulfur	7,785	586	8,371	13,950	2,890	5,657	22,497
Residual Fuel Oil	3,843	74	3,917	1,863	240	148	2,251
Less than 0.31 percent sulfur	277	21	298	0	0	25	25
0.31 to 1.00 percent sulfur	2,571	53	2,624	321	0	27	348
Greater than 1.00 percent sulfur	995	0	995	1,542	240	96	1,878
Naphtha for Petrochemical Feedstock Use	444	0	444	494	0	15	509
Other Oils for Petrochemical Feedstock Use	16	0	16	576	0	67	643
Special Naphthas	0	31	31	340	0	121	461
Lubricants	211	229	440	445	0	241	686
Naphthenic	0	0	0	0	0	0	0
Paraffinic	211	229	440	445	0	241	686
Waxes	0	97	97	66	0	27	93
Petroleum Coke	1,213	25	1,238	2,272	563	791	3,626
Marketable	361	0	361	1,177	405	533	2,115
Catalyst	852	25	877	1,095	158	258	1,511
Asphalt and Road Oil	2,078	312	2,390	4,161	728	845	5,734
Still Gas	1,688	139	1,827	2,798	363	1,082	4,243
Miscellaneous Products	22	42	64	99	46	59	204
Fuel Use	0	0	0	0	0	0	0
Nonfuel Use	22	42	64	99	46	59	204
Total	46,306	3,046	49,352	70,385	11,917	22,328	104,630
Processing Gain(-) or Loss(+) ^a	-1,816	-24	-1,840	-2,604	-613	-954	-4,171

See footnotes at end of table.

**Table 29. Refinery Net Production of Finished Petroleum Products by PAD and Refining Districts,
May 1993 (Continued)**
(Thousand Barrels)

Commodity	PAD District III						PAD Dist. IV	PAD Dist. V	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast	
Liquefied Refinery Gases	869	7,963	3,506	142	125	12,605	275	3,007	21,832
Ethane/Ethylene	3	651	226	1	0	881	0	0	881
Ethane	W	W	W	W	W	W	W	W	657
Ethylene	W	W	W	W	W	W	W	W	224
Propane/Propylene	613	4,464	2,507	79	70	7,733	249	1,222	13,666
Propane	W	W	W	W	W	W	W	W	9,841
Propylene	W	W	W	W	W	W	W	W	3,825
Normal Butane/Butylene	114	2,604	618	51	44	3,431	74	1,664	6,549
Normal Butane	W	W	W	W	W	W	W	W	6,168
Butylene	W	W	W	W	W	W	W	W	381
Isobutane/Isobutylene	139	244	155	11	11	560	-48	121	736
Isobutane	W	W	W	W	W	W	W	W	736
Isobutylene	W	W	W	W	W	W	W	W	0
Finished Motor Gasoline	9,124	51,034	38,220	1,914	1,785	102,077	7,252	40,038	225,777
Reformulated	0	0	0	0	0	0	0	0	0
Oxygenated	37	48	313	0	0	398	28	4	3,854
Other	9,087	50,986	37,907	1,914	1,785	101,679	7,224	40,034	221,923
Finished Aviation Gasoline	97	212	154	0	0	463	21	175	770
Jet Fuel	1,704	10,225	8,497	385	363	21,174	1,027	12,312	44,203
Naphtha-Type	403	365	778	267	348	2,161	353	681	3,906
Kerosene-Type	1,301	9,860	7,719	118	15	19,013	674	11,631	40,297
Commercial	1,196	9,171	7,332	118	15	17,832	674	10,888	38,103
Military	105	689	387	0	0	1,181	0	743	2,194
Kerosene	12	376	112	7	0	507	29	67	804
Distillate Fuel Oil	4,063	18,341	14,813	1,672	810	39,699	4,098	14,313	90,821
0.05 percent sulfur and under	16	648	1,614	75	0	2,353	366	3,689	8,251
Greater than 0.05 percent sulfur	4,047	17,693	13,199	1,597	810	37,346	3,732	10,624	82,570
Residual Fuel Oil	347	6,097	5,936	292	16	12,688	345	8,562	27,763
Less than 0.31 percent sulfur	111	4	592	67	0	774	113	1,030	2,240
0.31 to 1.00 percent sulfur	120	1,170	519	146	16	1,971	41	619	5,603
Greater than 1.00 percent sulfur	116	4,923	4,825	79	0	9,943	191	6,913	19,920
Naphtha for Petrochemical Feedstock Use	99	2,872	418	0	6	3,395	0	-111	4,237
Other Oils for Petrochemical Feedstock Use	156	5,172	2,076	0	0	7,404	21	243	8,327
Special Naphthas	100	810	75	144	0	1,129	0	60	1,681
Lubricants	35	1,696	735	559	0	3,025	0	648	4,799
Naphthenic	35	281	0	423	0	739	0	229	968
Paraffinic	0	1,415	735	136	0	2,286	0	419	3,831
Waxes	7	171	75	80	0	333	44	52	619
Petroleum Coke	335	4,163	3,543	117	24	8,182	470	4,920	18,436
Marketable	37	2,328	2,463	72	0	4,900	308	3,785	11,469
Catalyst	298	1,835	1,080	45	24	3,282	162	1,135	6,967
Asphalt and Road Oil	507	739	1,251	1,106	162	3,765	900	1,431	14,220
Still Gas	711	5,228	3,207	244	100	9,490	660	4,762	20,982
Miscellaneous Products	48	289	299	0	0	636	62	251	1,217
Fuel Use	18	0	69	0	0	87	0	0	87
Nonfuel Use	30	289	230	0	0	549	62	251	1,130
Total	18,214	115,388	82,917	6,662	3,391	226,572	15,204	90,730	486,488
Processing Gain(-) or Loss(+) ^a	-508	-7,328	-3,985	-63	-58	-11,942	-492	-4,943	-23,388

^a Represents the arithmetic difference between input and production.

W = Withheld to avoid disclosure of individual company data.

Note: Refer to Appendix A for refining District descriptions.

Source: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report."

**Table 30. Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining Districts,
May 1993
(Thousand Barrels)**

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wla., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
Crude Oil	14,900	570	15,470	10,412	1,629	2,602	14,643
Petroleum Products	44,268	2,943	47,211	42,647	7,079	15,431	65,157
Pentanes Plus	0	0	0	106	57	217	380
Liquefied Petroleum Gases	1,700	15	1,715	2,361	249	1,028	3,638
Ethane/Ethylene	0	0	0	1	0	1	2
Propane/Propylene	350	7	357	1,199	41	201	1,441
Normal Butane/Butylene	1,141	6	1,147	903	79	706	1,688
Isobutane/Isobutylene	209	2	211	258	129	120	507
Other Hydrocarbons/Hydrogen/Oxygenates	1,500	18	1,518	249	110	26	385
Other Hydrocarbons/Hydrogen	0	14	14	47	0	0	47
Oxygenates	W	W	1,504	202	110	26	338
Fuel Ethanol	W	W	W	W	W	W	180
Methanol	W	W	W	W	W	W	W
MTBE	W	W	1,395	W	W	W	W
Other Oxygenates ^a	W	W	W	W	W	W	W
Unfinished Oils	11,634	625	12,259	12,484	483	4,474	17,441
Naphthas and Lighter	2,724	172	2,896	3,926	168	1,510	5,604
Kerosene and Light Gas Oils	2,238	5	2,243	2,010	66	224	2,300
Heavy Gas Oils	5,761	351	6,112	4,125	243	1,545	5,913
Residuum	911	97	1,008	2,423	6	1,195	3,624
Motor Gasoline Blending Components	5,295	73	5,368	4,313	345	1,523	6,181
Aviation Gasoline Blending Components	0	0	0	0	0	0	0
Finished Motor Gasoline	10,420	315	10,735	6,798	1,338	2,960	11,096
Reformulated	0	0	0	0	0	0	0
Oxygenated	339	0	339	113	0	117	230
Other	10,081	315	10,396	6,685	1,338	2,843	10,866
Finished Aviation Gasoline	20	0	20	51	24	15	90
Jet Fuel	1,904	0	1,904	2,211	239	615	3,065
Naphtha-Type	40	0	40	159	15	189	363
Kerosene-Type	1,864	0	1,864	2,052	224	426	2,702
Kerosene	34	49	83	361	20	235	616
Distillate Fuel Oil	5,566	250	5,816	4,620	938	2,150	7,708
0.05 percent sulfur and under	378	177	555	184	0	13	197
Greater than 0.05 percent sulfur	5,188	73	5,261	4,436	938	2,137	7,511
Residual Fuel Oil	2,972	67	3,039	1,547	203	86	1,836
Less than 0.31 percent sulfur	505	42	547	3	0	12	15
0.31 to 1.00 percent sulfur	1,515	25	1,540	256	0	1	257
Greater than 1.00 percent sulfur	852	0	852	1,288	203	73	1,564
Naphtha for Petrochemical Feedstock Use	224	0	224	295	0	24	319
Other Oils for Petrochemical Feedstock Use	3	0	3	1	0	0	1
Special Naphthas	11	26	37	218	0	141	359
Lubricants	246	503	749	837	0	0	837
Waxes	0	170	170	100	0	30	130
Petroleum Coke (Marketable)	826	0	826	921	1,405	340	2,666
Asphalt and Road Oil	1,883	797	2,680	5,105	1,662	1,542	8,309
Miscellaneous Products	30	35	65	69	6	25	100
Total Stocks, All Oils	59,168	3,513	62,681	53,059	8,708	18,033	79,800

See footnotes at end of table.

**Table 30. Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining Districts,
May 1993 (Continued)**
(Thousand Barrels)

Commodity	PAD District III						PAD Dist. IV	PAD Dist. V	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast	
Crude Oil	1,022	28,587	18,048	1,616	395	49,668	2,593	22,500	104,874
Petroleum Products	9,746	75,148	49,815	7,052	1,436	143,197	12,725	64,327	332,617
Pentanes Plus	79	90	44	8	25	246	6	8	640
Liquefied Petroleum Gases	1,604	3,740	4,630	56	53	10,083	458	1,428	17,322
Ethane/Ethylene	127	555	0	0	0	682	0	0	684
Propane/Propylene	714	1,031	1,185	11	6	2,947	73	131	4,949
Normal Butane/Butylene	501	1,261	2,292	29	25	4,108	230	903	8,076
Isobutane/Isobutylene	262	893	1,153	16	22	2,346	155	394	3,613
Other Hydrocarbons/Hydrogen/Oxygenates	219	1,345	456	1	19	2,040	56	3,590	7,589
Other Hydrocarbons/Hydrogen	0	0	1	0	0	1	0	8	70
Oxygenates	219	1,345	455	W	W	2,039	56	3,582	7,519
Fuel Ethanol	W	W	W	W	W	W	W	W	267
Methanol	W	W	W	W	W	W	W	W	576
MTBE	W	1,021	W	W	W	1,583	W	3,467	6,617
Other Oxygenates ^a	W	W	W	W	W	W	W	W	59
Unfinished Oils	2,074	26,009	18,759	1,526	288	48,656	2,687	23,334	104,377
Naphthas and Lighter	802	6,413	4,309	334	57	11,915	490	4,109	25,014
Kerosene and Light Gas Oils	190	4,570	2,714	263	37	7,774	620	3,649	16,586
Heavy Gas Oils	688	9,779	8,312	863	194	19,836	1,230	12,122	45,213
Residuum	394	5,247	3,424	66	0	9,131	347	3,454	17,564
Motor Gasoline Blending Components	1,296	7,830	5,253	217	243	14,839	1,780	5,883	34,051
Aviation Gasoline Blending Components	0	0	41	0	0	41	0	12	53
Finished Motor Gasoline	1,531	11,800	5,273	912	163	19,684	2,329	7,994	51,838
Reformulated	0	0	0	0	0	0	0	0	0
Oxygenated	0	957	53	0	0	1,010	26	0	1,605
Other	1,531	10,843	5,220	912	168	18,674	2,303	7,994	50,233
Finished Aviation Gasoline	82	133	108	0	0	323	23	111	567
Jet Fuel	574	3,680	2,572	275	173	7,274	457	4,137	16,837
Naphtha-Type	130	137	421	195	159	1,042	187	422	2,054
Kerosene-Type	444	3,543	2,151	80	14	6,232	270	3,715	14,783
Kerosene	30	746	148	13	16	953	93	32	1,777
Distillate Fuel Oil	991	7,202	3,605	990	125	12,913	1,145	4,990	32,572
0.05 percent sulfur and under	11	186	330	345	2	874	89	1,317	3,032
Greater than 0.05 percent sulfur	980	7,016	3,275	645	123	12,039	1,056	3,673	29,540
Residual Fuel Oil	251	3,514	3,860	130	10	7,765	323	5,409	18,372
Less than 0.31 percent sulfur	63	1	960	4	0	1,028	113	682	2,485
0.31 to 1.00 percent sulfur	22	339	470	68	10	909	89	548	3,343
Greater than 1.00 percent sulfur	166	3,174	2,430	58	0	5,828	121	4,179	12,544
Naphtha for Petrochemical Feedstock Use	27	1,583	525	0	13	2,148	0	55	2,746
Other Oils for Petrochemical Feedstock Use	55	1,195	106	0	0	1,356	0	142	1,502
Special Naphthas	78	1,495	60	107	0	1,740	1	57	2,194
Lubricants	13	2,971	1,439	803	0	5,226	0	877	7,689
Waxes	5	213	283	34	0	535	44	123	1,002
Petroleum Coke (Marketable)	0	551	1,858	567	0	2,976	466	3,896	10,830
Asphalt and Road Oil	817	844	606	1,413	303	3,983	2,857	2,159	19,988
Miscellaneous Products	20	207	189	0	0	416	0	90	671
Total Stocks, All Oils	10,768	103,735	67,863	8,668	1,831	192,865	15,318	86,827	437,491

^a Includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

W = Withheld to avoid disclosure of individual company data.

Notes: • Stocks are reported as of the last day of the month. • Refer to Appendix A for Refining District descriptions.

Source: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report."

**Table 31. Percent Refinery Yield of Petroleum Products by PAD and Refining Districts,^a
May 1993**

Commodity	PAD District I			PAD District II			
	East Coast	Appalachian No. 1	Total	Ind., Ill., Ky.	Minn., Wis., N. Dak., S. Dak.	Okla., Kans., Mo.	Total
Liquefied Refinery Gases	4.2	2.2	4.0	4.6	2.9	3.8	4.3
Finished Motor Gasoline ^b	48.2	37.7	47.5	51.2	50.9	48.4	50.6
Finished Aviation Gasoline ^c	0.0	0.0	0.0	0.1	0.4	0.0	0.1
Naphtha-Type Jet Fuel	0.3	0.0	0.2	0.5	0.1	1.3	0.6
Kerosene-Type Jet Fuel	7.2	0.0	6.8	6.0	6.0	6.6	6.1
Kerosene	-0.1	1.6	0.1	0.2	-0.2	0.3	0.2
Distillate Fuel Oil	21.8	28.0	22.2	21.4	27.4	27.8	23.4
Residual Fuel Oil	9.2	2.4	8.7	2.8	2.3	0.7	2.3
Naphtha for Petrochemical Feedstock Use	1.1	0.0	1.0	0.8	0.0	0.1	0.5
Other Oils for Petrochemical Feedstock Use	0.0	0.0	0.0	0.9	0.0	0.3	0.7
Special Naphthas	0.0	1.0	0.1	0.5	0.0	0.6	0.5
Lubricants	0.5	7.5	1.0	0.7	0.0	1.2	0.7
Waxes	0.0	3.2	0.2	0.1	0.0	0.1	0.1
Petroleum Coke	2.9	0.8	2.8	3.4	5.3	3.9	3.7
Asphalt and Road Oil	5.0	10.3	5.3	6.3	6.9	4.1	5.9
Still Gas	4.0	4.6	4.1	4.2	3.4	5.3	4.4
Miscellaneous Products	0.1	1.4	0.1	0.2	0.4	0.3	0.2
Processing Gain(-) or Loss(+) ^d	-4.3	-0.8	-4.1	-4.0	-5.8	-4.7	-4.3

Commodity	PAD District III						PAD Dist. IV	PAD Dist. V	U.S. Total
	Texas Inland	Texas Gulf Coast	La. Gulf Coast	N. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast	
Liquefied Refinery Gases	5.3	7.6	4.6	2.2	4.1	6.1	2.0	3.7	4.9
Finished Motor Gasoline ^b	48.0	45.5	46.8	27.7	48.7	45.7	47.2	44.1	46.7
Finished Aviation Gasoline ^c	0.6	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.2
Naphtha-Type Jet Fuel	2.4	0.4	1.0	4.1	11.5	1.0	2.5	0.8	0.9
Kerosene-Type Jet Fuel	7.9	9.4	10.1	1.8	0.5	9.2	4.8	14.2	9.1
Kerosene	0.1	0.4	0.2	0.1	0.0	0.2	0.2	0.1	0.2
Distillate Fuel Oil	24.6	17.5	19.4	25.8	26.9	19.2	29.0	17.5	20.4
Residual Fuel Oil	2.1	5.8	7.5	4.5	0.5	6.1	2.4	10.5	6.2
Naphtha for Petrochemical Feedstock Use	0.6	2.8	0.6	0.0	0.2	1.6	0.0	-0.1	1.0
Other Oils for Petrochemical Feedstock Use	0.9	4.9	2.7	0.0	0.0	3.6	0.2	0.3	1.9
Special Naphthas	0.6	0.8	0.1	2.2	0.0	0.6	0.0	0.1	0.4
Lubricants	0.2	1.6	1.0	8.6	0.0	1.5	0.0	0.8	1.1
Waxes	0.0	0.2	0.1	1.2	0.0	0.2	0.3	0.1	0.1
Petroleum Coke	2.0	4.0	4.6	1.8	0.8	4.0	3.3	6.0	4.1
Asphalt and Road Oil	3.1	0.7	1.6	17.1	5.4	1.8	6.4	1.8	3.2
Still Gas	4.3	5.0	4.2	3.8	3.3	4.6	4.7	5.8	4.7
Miscellaneous Products	0.3	0.3	0.4	0.0	0.0	0.3	0.4	0.3	0.3
Processing Gain(-) or Loss(+) ^d	-3.1	-7.0	-5.2	-1.0	-1.9	-5.8	-3.5	-6.0	-5.3

^a Based on crude oil input and net reruns of unfinished oils.

^b Based on total finished motor gasoline output minus net input of motor gasoline blending components, minus input of natural gas plant liquids, other hydrocarbons and oxygenates.

^c Based on finished aviation gasoline output minus net input of aviation gasoline blending components.

^d Represents the difference between input and production.

Notes: • Totals may not equal sum of components due to independent rounding. • Refer to Appendix A for Refining District descriptions.

Sources: Calculated from data on Tables 28 and 29.

**Table 32. Imports of Residual Fuel Oil by Sulfur Content and by PAD District and State of Entry,
May 1993**
(Thousand Barrels)

PAD District and State of Entry	Residual Fuel Oil			
	Less than 0.31% Sulfur	0.31 to 1.00% Sulfur	Greater than 1.00% Sulfur	Total
PAD District I	449	1,606	5,724	7,779
Florida	0	118	609	727
Georgia	0	0	240	240
Maine	91	0	351	442
Maryland	0	0	501	501
Massachusetts	0	218	538	756
New Jersey	0	418	1,801	2,219
New York	259	524	517	1,300
North Carolina	0	0	321	321
Pennsylvania	99	328	328	755
South Carolina	0	0	240	240
Vermont	0	0	1	1
Virginia	0	0	277	277
PAD District II	0	33	0	33
Michigan	0	33	0	33
PAD District III	0	0	1,685	1,685
Texas	0	0	1,685	1,685
PAD District V	0	0	47	47
Washington	0	0	47	47
U.S. Total	449	1,639	7,456	9,544

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 33. Imports of Crude Oil and Petroleum Products by PAD District,
May 1993
(Thousand Barrels)**

Commodity	Petroleum Administration for Defense Districts						Daily Average
	I	II	III	IV	V	U.S. Total	
Crude Oil^{a,b}	38,993	39,403	111,854	2,606	10,151	203,007	6,549
Natural Gas Liquids	463	1,722	3,571	139	17	5,912	191
Pentanes Plus	294	43	967	30	0	1,334	43
Liquefied Petroleum Gases	169	1,679	2,604	109	17	4,578	148
Ethane	0	207	0	0	0	207	7
Ethylene	0	0	0	0	0	0	0
Propane	132	1,149	1,482	86	7	2,856	92
Propylene	0	114	0	0	0	114	4
Normal Butane	30	119	899	0	0	1,048	34
Butylene	0	0	0	0	0	0	0
Isobutane	7	90	215	23	10	345	11
Isobutylene	0	0	8	0	0	8	(s)
Other Liquids	3,821	30	11,429	0	1,500	16,780	541
Other Hydrocarbons/Hydrogen/Oxygenates	83	0	44	0	393	520	17
Other Hydrocarbons/Hydrogen	0	0	0	0	0	0	0
Oxygenates	83	0	44	0	393	520	17
Fuel Ethanol	0	0	0	0	0	0	0
MTBE	83	0	44	0	393	520	17
Other Oxygenates ^c	0	0	0	0	0	0	0
Unfinished Oils ^a	3,321	0	11,385	0	1,069	15,775	509
Naphthas and Lighter	470	0	2,296	0	0	2,766	89
Kerosene and Light Gas Oils	0	0	0	0	0	0	0
Heavy Gas Oils	2,851	0	2,127	0	320	5,298	171
Residuum	0	0	6,962	0	749	7,711	249
Motor Gasoline Blending Components	417	30	0	0	38	485	16
Aviation Gasoline Blending Components	0	0	0	0	0	0	0
Finished Petroleum Products	24,957	435	7,291	80	322	33,085	1,067
Finished Motor Gasoline	9,304	69	53	4	117	9,547	308
Reformulated	0	0	0	0	0	0	0
Oxygenated	0	0	0	0	0	0	0
Other	9,304	69	53	4	117	9,547	308
Finished Aviation Gasoline	0	5	0	0	8	13	(s)
Jet Fuel	2,206	104	10	0	14	2,334	75
Naphtha-Type	185	65	0	0	0	250	8
Kerosene-Type	2,021	39	10	0	14	2,084	67
Bonded Aircraft Fuel	1,365	0	0	0	14	1,379	44
Other	656	39	10	0	0	705	23
Kerosene	3	0	0	0	0	3	(s)
Distillate Fuel Oil	4,287	122	174	73	73	4,729	153
Bonded Ship Bunkers	0	0	0	1	72	73	2
0.05 percent sulfur and under	0	0	0	1	0	1	(s)
Greater than 0.05 percent sulfur	0	0	0	0	72	72	2
Other	4,287	122	174	72	1	4,656	150
0.05 percent sulfur and under	2,548	44	174	41	0	2,807	91
Greater than 0.05 percent sulfur	1,739	78	0	31	1	1,849	60
Residual Fuel Oil	7,779	33	1,685	0	47	9,544	308
Bonded Ship Bunkers	0	0	0	0	0	0	0
Less than 0.31 percent sulfur	0	0	0	0	0	0	0
0.31 to 1.00 percent sulfur	0	0	0	0	0	0	0
Greater than 1.00 percent sulfur	0	0	0	0	0	0	0
Other	7,779	33	1,685	0	47	9,544	308
Less than 0.31 percent sulfur	449	0	0	0	0	449	14
0.31 to 1.00 percent sulfur	1,606	33	0	0	0	1,639	53
Greater than 1.00 percent sulfur	5,724	0	1,685	0	47	7,456	241
Naphtha for Petrochemical Feedstock Use	68	27	2,889	0	45	3,029	98
Other Oils for Petrochemical Feedstock Use	0	0	2,310	0	0	2,310	75
Special Naphthas	9	48	72	0	5	134	4
Lubricants	250	17	0	0	0	267	9
Waxes	36	5	12	3	0	56	2
Petroleum Coke	0	0	0	0	0	0	0
Asphalt and Road Oil	687	3	59	0	13	762	25
Miscellaneous Products	328	2	27	0	0	357	12
Total	68,234	41,590	134,145	2,825	11,990	258,784	8,348

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 34. Year-to-Date Imports of Crude Oil and Petroleum Products by PAD District,
January-May 1993
(Thousand Barrels)**

Commodity	Petroleum Administration for Defense Districts						Daily Average
	I	II	III	IV	V	U.S. Total	
Crude Oil^{a,b}	181,275	192,218	552,031	12,777	34,983	973,284	6,446
Natural Gas Liquids	3,568	9,902	10,104	1,150	101	24,825	164
Pentanes Plus	294	210	4,204	275	0	4,983	33
Liquefied Petroleum Gases	3,274	9,692	5,900	875	101	19,842	131
Ethane	1	1,169	0	0	0	1,170	8
Ethylene	0	0	46	0	0	46	(s)
Propane	2,636	5,909	3,629	546	47	12,767	85
Propylene	0	623	0	0	0	623	4
Normal Butane	582	1,576	1,668	270	6	4,102	27
Butylene	0	0	0	0	0	0	0
Isobutane	55	415	549	59	48	1,126	7
Isobutylene	0	0	8	0	0	8	(s)
Other Liquids	23,937	647	50,310	0	3,830	78,724	521
Other Hydrocarbons/Hydrogen/Oxygenates	532	0	102	0	1,364	1,998	13
Other Hydrocarbons/Hydrogen	0	0	0	0	0	0	0
Oxygenates	532	0	102	0	1,364	1,998	13
Fuel Ethanol	0	0	0	0	46	46	(s)
MTBE	498	0	102	0	1,318	1,918	13
Other Oxygenates ^c	34	0	0	0	0	34	(s)
Unfinished Oils ^a	20,227	370	49,033	0	2,392	72,022	477
Naphthas and Lighter	1,147	370	12,573	0	0	14,090	93
Kerosene and Light Gas Oils	0	0	0	0	0	0	0
Heavy Gas Oils	14,822	0	7,186	0	320	22,328	148
Residuum	4,258	0	29,274	0	2,072	35,604	236
Motor Gasoline Blending Components	3,178	277	1,175	0	74	4,704	31
Aviation Gasoline Blending Components	0	0	0	0	0	0	0
Finished Petroleum Products	125,414	2,267	30,378	431	5,580	164,070	1,087
Finished Motor Gasoline	33,513	414	555	50	1,099	35,631	236
Reformulated	0	0	0	0	0	0	0
Oxygenated	0	0	0	0	0	0	0
Other	33,513	414	555	50	1,099	35,631	236
Finished Aviation Gasoline	0	11	0	0	15	26	(s)
Jet Fuel	12,589	383	642	0	340	13,954	92
Naphtha-Type	499	344	141	0	0	984	7
Kerosene-Type	12,090	39	501	0	340	12,970	86
Bonded Aircraft Fuel	7,459	0	0	0	227	7,686	51
Other	4,631	39	501	0	113	5,284	35
Kerosene	148	0	0	0	19	167	1
Distillate Fuel Oil	28,103	874	354	367	512	30,210	200
Bonded Ship Bunkers	0	0	0	6	324	330	2
0.05 percent sulfur and under	0	0	0	6	0	6	(s)
Greater than 0.05 percent sulfur	0	0	0	0	324	324	2
Other	28,103	874	354	361	188	29,880	198
0.05 percent sulfur and under	9,295	400	354	202	119	10,370	69
Greater than 0.05 percent sulfur	18,808	474	0	159	69	19,510	129
Residual Fuel Oil	43,662	74	5,782	0	3,215	52,733	349
Bonded Ship Bunkers	0	0	0	0	0	0	0
Less than 0.31 percent sulfur	0	0	0	0	0	0	0
0.31 to 1.00 percent sulfur	0	0	0	0	0	0	0
Greater than 1.00 percent sulfur	0	0	0	0	0	0	0
Other	43,662	74	5,782	0	3,215	52,733	349
Less than 0.31 percent sulfur	4,577	0	365	0	100	5,042	33
0.31 to 1.00 percent sulfur	9,888	57	0	0	413	10,358	69
Greater than 1.00 percent sulfur	29,197	17	5,417	0	2,702	37,333	247
Naphtha for Petrochemical Feedstock Use	567	100	6,050	0	128	6,845	45
Other Oils for Petrochemical Feedstock Use	0	0	16,175	0	0	16,175	107
Special Naphthas	46	283	343	0	28	700	5
Lubricants	1,401	74	123	0	31	1,629	11
Waxes	242	31	22	14	10	319	2
Petroleum Coke	0	0	181	0	57	238	2
Asphalt and Road Oil	4,646	3	124	0	126	4,899	32
Miscellaneous Products	497	20	27	0	0	544	4
Total	334,194	205,034	642,823	14,358	44,494	1,240,903	8,218

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

Table 35. Imports of Crude Oil and Petroleum Products into the United States by Country of Origin,^a
May 1993
(Thousand Barrels)

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	51,014	2,302	4,722	0	298	60	0	0	0	0
Algeria	103	1,294	1,134	0	0	0	0	0	0	0
Kuwait	6,875	0	0	0	0	0	0	0	0	0
Saudi Arabia	42,199	1,008	3,588	0	298	60	0	0	0	0
United Arab Emirates	1,837	0	0	0	0	0	0	0	0	0
Other OPEC	61,510	0	1,710	99	1,074	1,365	1,528	2,357	0	0
Ecuador	1,723	0	0	0	0	0	0	0	0	0
Gabon	5,253	0	0	0	0	0	0	0	0	0
Indonesia	2,547	0	0	0	0	0	0	0	0	0
Nigeria	22,408	0	0	0	0	0	0	574	0	0
Venezuela	29,579	0	1,710	99	1,074	1,365	1,528	1,783	0	0
Non OPEC	90,483	2,276	9,343	386	8,175	909	3,201	7,187	3	134
Angola	8,907	0	0	0	0	0	0	0	0	0
Argentina	371	0	0	0	0	0	0	0	0	0
Australia	407	0	0	0	0	0	0	0	0	0
Bahama Islands	0	0	0	0	0	0	0	252	0	0
Belgium	0	0	257	123	690	0	0	0	0	0
Benin	241	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	1,216	0	0	0	0	0
Cameroon	0	0	0	0	0	0	0	170	0	0
Canada	27,100	1,974	486	30	1,906	118	1,264	786	3	134
China, People's Republic of	1,226	0	0	0	0	0	0	0	0	0
Colombia	2,778	0	0	0	0	0	0	1,785	0	0
Congo	436	0	0	0	0	0	0	163	0	0
Egypt	1,360	0	0	0	0	0	0	152	0	0
France	0	0	0	0	1,071	0	0	0	0	0
Germany, FR	0	0	708	0	0	0	0	0	0	0
Guatemala	187	0	0	0	0	0	0	0	0	0
India	0	0	390	0	0	0	0	0	0	0
Italy	0	0	0	0	536	0	0	0	0	0
Ivory Coast	0	0	0	0	0	0	0	116	0	0
Japan	0	8	0	0	0	0	0	0	0	0
Korea, Republic of	0	0	0	38	0	0	0	0	0	0
Malaysia	304	0	0	0	333	0	0	0	0	0
Mexico	26,241	275	893	0	0	10	0	0	0	0
Netherlands	0	0	309	0	0	0	0	0	0	0
Netherlands Antilles	0	0	1,446	0	0	0	0	682	0	0
New Zealand	273	0	0	0	0	0	0	0	0	0
Norway	2,026	0	0	0	0	0	0	0	0	0
Oman	0	0	834	0	0	0	0	0	0	0
Portugal	0	19	0	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	185	0	0	0	0
Singapore	0	0	502	0	0	0	0	0	0	0
Spain	0	0	783	0	278	0	0	0	0	0
Syria	1,083	0	0	0	0	0	0	0	0	0
Trinidad and Tobago	1,591	0	0	0	220	0	0	84	0	0
Tunisia	0	0	0	0	0	0	0	155	0	0
United Kingdom	14,213	0	581	0	279	0	0	0	0	0
Russia	990	0	0	0	0	0	0	0	0	0
Virgin Islands	0	0	2,154	195	1,646	596	1,937	2,132	0	0
Yemen	0	0	0	0	0	0	0	710	0	0
Zaire	749	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	203,007	4,578	15,775	485	9,547	2,334	4,729	9,544	3	134
Persian Gulf^d	50,911	1,008	3,588	0	298	60	0	0	0	0

See footnotes at end of table

Table 35. Imports of Crude Oil and Petroleum Products into the United States by Country of Origin,^a
May 1993 (Continued)
(Thousand Barrels)

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products ^c	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
Arab OPEC	1,617	1,964	0	0	1,063	12,026	63,040	1,646	388	2,034
Algeria	1,617	1,964	0	0	967	6,976	7,079	3	225	228
Kuwait	0	0	0	0	0	0	6,875	222	0	222
Saudi Arabia	0	0	0	0	96	5,050	47,249	1,361	163	1,524
United Arab Emirates	0	0	0	0	0	0	1,837	59	0	59
Other OPEC	456	0	0	424	0	9,013	70,523	1,984	291	2,275
Ecuador	0	0	0	0	0	0	1,723	56	0	56
Gabon	0	0	0	0	0	0	5,253	169	0	169
Indonesia	0	0	0	0	0	0	2,547	82	0	82
Nigeria	0	0	0	0	0	574	22,982	723	19	741
Venezuela	456	0	0	424	0	8,439	38,018	954	272	1,226
Non OPEC	956	346	267	338	1,217	34,738	125,221	2,919	1,121	4,039
Angola	0	0	0	0	0	0	8,907	287	0	287
Argentina	0	188	0	0	0	188	559	12	6	18
Australia	0	0	0	0	0	0	407	13	0	13
Bahama Islands	0	0	0	0	0	252	252	0	8	8
Belgium	0	0	0	0	0	1,070	1,070	0	35	35
Benin	0	0	0	0	0	0	241	8	0	8
Brazil	0	0	0	0	59	1,275	1,275	0	41	41
Cameroon	0	0	0	0	0	170	170	0	5	5
Canada	77	0	47	252	505	7,582	34,682	874	245	1,119
China, People's Republic of	0	0	0	0	0	0	1,226	40	0	40
Colombia	0	0	0	0	1	1,786	4,564	90	58	147
Congo	0	0	0	0	0	163	599	14	5	19
Egypt	0	0	0	0	0	152	1,512	44	5	49
France	0	0	0	0	0	1,071	1,071	0	35	35
Germany, FR	0	0	0	0	5	713	713	0	23	23
Guatemala	0	0	0	0	0	0	187	6	0	6
India	0	0	0	0	0	390	390	0	13	13
Italy	0	0	0	0	22	558	558	0	18	18
Ivory Coast	0	0	0	0	0	116	116	0	4	4
Japan	0	0	0	0	2	10	10	0	(s)	(s)
Korea, Republic of	45	0	0	0	0	83	83	0	3	3
Malaysia	0	0	0	0	0	333	637	10	11	21
Mexico	397	0	0	0	294	1,869	28,110	846	60	907
Netherlands	0	0	0	0	0	309	309	0	10	10
Netherlands Antilles	0	158	0	86	0	2,372	2,372	0	77	77
New Zealand	0	0	0	0	0	0	273	9	0	9
Norway	0	0	0	0	0	0	2,026	65	0	65
Oman	0	0	0	0	0	834	834	0	27	27
Portugal	0	0	0	0	0	19	19	0	1	1
Puerto Rico	437	0	220	0	328	1,170	1,170	0	38	38
Singapore	0	0	0	0	0	502	502	0	16	16
Spain	0	0	0	0	0	1,061	1,061	0	34	34
Syria	0	0	0	0	0	0	1,083	35	0	35
Trinidad and Tobago	0	0	0	0	0	304	1,895	51	10	61
Tunisia	0	0	0	0	0	155	155	0	5	5
United Kingdom	0	0	0	0	0	860	15,073	458	28	486
Russia	0	0	0	0	0	0	990	32	0	32
Virgin Islands	0	0	0	0	0	8,660	8,660	0	279	279
Yemen	0	0	0	0	0	710	710	0	23	23
Zaire	0	0	0	0	0	0	749	24	0	24
Other	0	0	0	0	1	1	1	0	(s)	(s)
Total	3,029	2,310	267	762	2,280	55,777	258,784	6,549	1,799	8,348
Persian Gulf^d	0	0	0	0	96	5,050	55,961	1,642	163	1,805

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 36. PAD District I—Imports of Crude Oil and Petroleum Products by Country of Origin,^a
May 1993
(Thousand Barrels)**

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	7,435	0	0	0	298	60	0	0	0	0
Kuwait	443	0	0	0	0	0	0	0	0	0
Saudi Arabia	6,992	0	0	0	298	60	0	0	0	0
Other OPEC	18,371	0	232	99	1,074	1,365	1,528	2,093	0	0
Gabon	1,853	0	0	0	0	0	0	0	0	0
Nigeria	12,219	0	0	0	0	0	0	574	0	0
Venezuela	4,299	0	232	99	1,074	1,365	1,528	1,519	0	0
Non OPEC	13,187	169	3,089	318	7,932	781	2,759	5,686	3	9
Angola	5,098	0	0	0	0	0	0	0	0	0
Bahama Islands	0	0	0	0	0	0	0	252	0	0
Belgium	0	0	257	123	690	0	0	0	0	0
Brazil	0	0	0	0	1,216	0	0	0	0	0
Cameroon	0	0	0	0	0	0	0	170	0	0
Canada	2,003	169	0	0	1,716	0	996	706	3	9
Colombia	0	0	0	0	0	0	0	1,536	0	0
Congo	0	0	0	0	0	0	0	163	0	0
Egypt	705	0	0	0	0	0	0	0	0	0
France	0	0	0	0	1,071	0	0	0	0	0
Germany, FR	0	0	0	0	0	0	0	0	0	0
Italy	0	0	0	0	536	0	0	0	0	0
Ivory Coast	0	0	0	0	0	0	0	116	0	0
Japan	0	0	0	0	0	0	0	0	0	0
Malaysia	0	0	0	0	333	0	0	0	0	0
Mexico	3,074	0	0	0	0	0	0	0	0	0
Netherlands Antilles	0	0	238	0	0	0	0	527	0	0
Puerto Rico	0	0	0	0	0	185	0	0	0	0
Spain	0	0	440	0	278	0	0	0	0	0
Trinidad and Tobago	500	0	0	0	220	0	0	84	0	0
United Kingdom	1,807	0	0	0	279	0	0	0	0	0
Virgin Islands	0	0	2,154	195	1,593	596	1,763	2,132	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	38,993	169	3,321	417	9,304	2,206	4,287	7,779	3	9
Persian Gulf^d	7,435	0	0	0	298	60	0	0	0	0

See footnotes at end of table.

**Table 36. PAD District I—Imports of Crude Oil and Petroleum Products by Country of Origin,^a
May 1993 (Continued)
(Thousand Barrels)**

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products ^c	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
Arab OPEC	0	0	0	0	52	410	7,845	240	13	253
Kuwait	0	0	0	0	0	0	443	14	0	14
Saudi Arabia	0	0	0	0	52	410	7,402	226	13	239
Other OPEC	0	0	0	365	0	6,756	25,127	593	218	811
Gabon	0	0	0	0	0	0	1,853	60	0	60
Nigeria	0	0	0	0	0	574	12,793	394	19	413
Venezuela	0	0	0	365	0	6,182	10,481	139	199	338
Non OPEC	68	0	250	322	689	22,075	35,262	425	712	1,137
Angola	0	0	0	0	0	0	5,098	164	0	164
Bahama Islands	0	0	0	0	0	252	252	0	8	8
Belgium	0	0	0	0	0	1,070	1,070	0	35	35
Brazil	0	0	0	0	32	1,248	1,248	0	40	40
Cameroon	0	0	0	0	0	170	170	0	5	5
Canada	8	0	30	236	16	3,889	5,892	65	125	190
Colombia	0	0	0	0	0	1,536	1,536	0	50	50
Congo	0	0	0	0	0	163	163	0	5	5
Egypt	0	0	0	0	0	0	705	23	0	23
France	0	0	0	0	0	1,071	1,071	0	35	35
Germany, FR	0	0	0	0	4	4	4	0	(s)	(s)
Italy	0	0	0	0	12	548	548	0	18	18
Ivory Coast	0	0	0	0	0	116	116	0	4	4
Japan	0	0	0	0	2	2	2	0	(s)	(s)
Malaysia	0	0	0	0	0	333	333	0	11	11
Mexico	0	0	0	0	294	294	3,368	99	9	109
Netherlands Antilles	0	0	0	86	0	851	851	0	27	27
Puerto Rico	60	0	220	0	328	793	793	0	26	26
Spain	0	0	0	0	0	718	718	0	23	23
Trinidad and Tobago	0	0	0	0	0	304	804	16	10	26
United Kingdom	0	0	0	0	0	279	2,086	58	9	67
Virgin Islands	0	0	0	0	0	8,433	8,433	0	272	272
Other	0	0	0	0	1	1	1	0	(s)	(s)
Total	68	0	250	687	741	29,241	68,234	1,258	943	2,201
Persian Gulf^d	0	0	0	0	52	410	7,845	240	13	253

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

Table 37. PAD District II—Imports of Crude Oil and Petroleum Products by Country of Origin,^a
May 1993
(Thousand Barrels)

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	2,521	0	0	0	0	0	0	0	0	0
Kuwait	525	0	0	0	0	0	0	0	0	0
Saudi Arabia	1,996	0	0	0	0	0	0	0	0	0
Other OPEC	6,209	0	0	0	0	0	0	0	0	0
Nigeria	1,601	0	0	0	0	0	0	0	0	0
Venezuela	4,608	0	0	0	0	0	0	0	0	0
Non OPEC	30,673	1,679	0	30	69	104	122	33	0	48
Canada	19,841	1,679	0	30	69	104	122	33	0	48
Colombia	694	0	0	0	0	0	0	0	0	0
Mexico	4,076	0	0	0	0	0	0	0	0	0
Norway	521	0	0	0	0	0	0	0	0	0
Syria	536	0	0	0	0	0	0	0	0	0
Trinidad and Tobago	546	0	0	0	0	0	0	0	0	0
United Kingdom	4,459	0	0	0	0	0	0	0	0	0
Total	39,403	1,679	0	30	69	104	122	33	0	48
Persian Gulf^d	2,521	0	0	0	0	0	0	0	0	0

See footnotes at end of table.

**Table 37. PAD District II—Imports of Crude Oil and Petroleum Products by Country of Origin,^a
May 1993 (Continued)
(Thousand Barrels)**

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products ^c	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
Arab OPEC	0	0	0	0	0	0	2,521	81	0	81
Kuwait	0	0	0	0	0	0	525	17	0	17
Saudi Arabia	0	0	0	0	0	0	1,996	64	0	64
Other OPEC	0	0	0	0	0	0	6,209	200	0	200
Nigeria	0	0	0	0	0	0	1,601	52	0	52
Venezuela	0	0	0	0	0	0	4,608	149	0	149
Non OPEC	27	0	17	3	55	2,187	32,860	989	71	1,060
Canada	27	0	17	3	55	2,187	22,028	640	71	711
Colombia	0	0	0	0	0	0	694	22	0	22
Mexico	0	0	0	0	0	0	4,076	131	0	131
Norway	0	0	0	0	0	0	521	17	0	17
Syria	0	0	0	0	0	0	536	17	0	17
Trinidad and Tobago	0	0	0	0	0	0	546	18	0	18
United Kingdom	0	0	0	0	0	0	4,459	144	0	144
Total	27	0	17	3	55	2,187	41,590	1,271	71	1,342
Persian Gulf^d	0	0	0	0	0	0	2,521	81	0	81

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 38. PAD District III—Imports of Crude Oil and Petroleum Products by Country of Origin,^a
May 1993
(Thousand Barrels)**

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	40,545	2,302	4,722	0	0	0	0	0	0	0
Algeria	103	1,294	1,134	0	0	0	0	0	0	0
Kuwait	5,394	0	0	0	0	0	0	0	0	0
Saudi Arabia	33,211	1,008	3,588	0	0	0	0	0	0	0
United Arab Emirates	1,837	0	0	0	0	0	0	0	0	0
Other OPEC	31,960	0	1,478	0	0	0	0	264	0	0
Gabon	3,400	0	0	0	0	0	0	0	0	0
Nigeria	8,588	0	0	0	0	0	0	0	0	0
Venezuela	19,972	0	1,478	0	0	0	0	264	0	0
Non OPEC	39,349	302	5,185	0	53	10	174	1,421	0	72
Angola	3,809	0	0	0	0	0	0	0	0	0
Argentina	371	0	0	0	0	0	0	0	0	0
Benin	241	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0
Canada	0	0	486	0	0	0	0	0	0	72
China, People's Republic of	659	0	0	0	0	0	0	0	0	0
Colombia	2,084	0	0	0	0	0	0	249	0	0
Congo	436	0	0	0	0	0	0	0	0	0
Egypt	655	0	0	0	0	0	0	152	0	0
Germany, FR	0	0	708	0	0	0	0	0	0	0
Guatemala	187	0	0	0	0	0	0	0	0	0
India	0	0	390	0	0	0	0	0	0	0
Italy	0	0	0	0	0	0	0	0	0	0
Japan	0	8	0	0	0	0	0	0	0	0
Malaysia	100	0	0	0	0	0	0	0	0	0
Mexico	18,524	275	33	0	0	10	0	0	0	0
Netherlands	0	0	309	0	0	0	0	0	0	0
Netherlands Antilles	0	0	1,208	0	0	0	0	155	0	0
Norway	1,505	0	0	0	0	0	0	0	0	0
Oman	0	0	834	0	0	0	0	0	0	0
Portugal	0	19	0	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0
Singapore	0	0	293	0	0	0	0	0	0	0
Spain	0	0	343	0	0	0	0	0	0	0
Syria	547	0	0	0	0	0	0	0	0	0
Trinidad and Tobago	545	0	0	0	0	0	0	0	0	0
Tunisia	0	0	0	0	0	0	0	155	0	0
United Kingdom	7,947	0	581	0	0	0	0	0	0	0
Russia	990	0	0	0	0	0	0	0	0	0
Virgin Islands	0	0	0	0	53	0	174	0	0	0
Yemen	0	0	0	0	0	0	0	710	0	0
Zaire	749	0	0	0	0	0	0	0	0	0
Total	111,854	2,604	11,385	0	53	10	174	1,685	0	72
Persian Gulf^d	40,442	1,008	3,588	0	0	0	0	0	0	0

See footnotes at end of table.

**Table 38. PAD District III—Imports of Crude Oil and Petroleum Products by Country of Origin,^a
May 1993 (Continued)
(Thousand Barrels)**

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products ^c	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
Arab OPEC	1,617	1,964	0	0	1,011	11,616	52,161	1,308	375	1,683
Algeria	1,617	1,964	0	0	967	6,976	7,079	3	225	228
Kuwait	0	0	0	0	0	0	5,394	174	0	174
Saudi Arabia	0	0	0	0	44	4,640	37,851	1,071	150	1,221
United Arab Emirates	0	0	0	0	0	0	1,837	59	0	59
Other OPEC	456	0	0	59	0	2,257	34,217	1,031	73	1,104
Gabon	0	0	0	0	0	0	3,400	110	0	110
Nigeria	0	0	0	0	0	0	8,588	277	0	277
Venezuela	456	0	0	59	0	2,257	22,229	644	73	717
Non OPEC	816	346	0	0	39	8,418	47,767	1,269	272	1,541
Angola	0	0	0	0	0	0	3,809	123	0	123
Argentina	0	188	0	0	0	188	559	12	6	18
Benin	0	0	0	0	0	0	241	8	0	8
Brazil	0	0	0	0	27	27	27	0	1	1
Canada	42	0	0	0	0	600	600	0	19	19
China, People's Republic of	0	0	0	0	0	0	659	21	0	21
Colombia	0	0	0	0	1	250	2,334	67	8	75
Congo	0	0	0	0	0	0	436	14	0	14
Egypt	0	0	0	0	0	152	807	21	5	26
Germany, FR	0	0	0	0	1	709	709	0	23	23
Guatemala	0	0	0	0	0	0	187	6	0	6
India	0	0	0	0	0	390	390	0	13	13
Italy	0	0	0	0	10	10	10	0	(s)	(s)
Japan	0	0	0	0	0	8	8	0	(s)	(s)
Malaysia	0	0	0	0	0	0	100	3	0	3
Mexico	397	0	0	0	0	715	19,239	598	23	621
Netherlands	0	0	0	0	0	309	309	0	10	10
Netherlands Antilles	0	158	0	0	0	1,521	1,521	0	49	49
Norway	0	0	0	0	0	0	1,505	49	0	49
Oman	0	0	0	0	0	834	834	0	27	27
Portugal	0	0	0	0	0	19	19	0	1	1
Puerto Rico	377	0	0	0	0	377	377	0	12	12
Singapore	0	0	0	0	0	293	293	0	9	9
Spain	0	0	0	0	0	343	343	0	11	11
Syria	0	0	0	0	0	0	547	18	0	18
Trinidad and Tobago	0	0	0	0	0	0	545	18	0	18
Tunisia	0	0	0	0	0	155	155	0	5	5
United Kingdom	0	0	0	0	0	581	8,528	256	19	275
Russia	0	0	0	0	0	0	990	32	0	32
Virgin Islands	0	0	0	0	0	227	227	0	7	7
Yemen	0	0	0	0	0	710	710	0	23	23
Zaire	0	0	0	0	0	0	749	24	0	24
Total	2,889	2,310	0	59	1,050	22,291	134,145	3,608	719	4,327
Persian Gulf^d	0	0	0	0	44	4,640	45,082	1,305	150	1,454

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 39. PAD Districts IV and V—Imports of Crude Oil and Petroleum Products by Country of Origin,^a
May 1993
(Thousand Barrels)**

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
PAD District IV										
Non OPEC	2,606	109	0	0	4	0	73	0	0	0
Canada	2,606	109	0	0	4	0	73	0	0	0
Total	2,606	109	0	0	4	0	73	0	0	0
PAD District V										
Arab OPEC	513	0	0	0	0	0	0	0	0	0
Kuwait	513	0	0	0	0	0	0	0	0	0
Other OPEC	4,970	0	0	0	0	0	0	0	0	0
Ecuador	1,723	0	0	0	0	0	0	0	0	0
Indonesia	2,547	0	0	0	0	0	0	0	0	0
Venezuela	700	0	0	0	0	0	0	0	0	0
Non OPEC	4,668	17	1,069	38	117	14	73	47	0	5
Australia	407	0	0	0	0	0	0	0	0	0
Canada	2,650	17	0	0	117	14	73	47	0	5
China, People's Republic of	507	0	0	0	0	0	0	0	0	0
Korea, Republic of	0	0	0	38	0	0	0	0	0	0
Malaysia	204	0	0	0	0	0	0	0	0	0
Mexico	567	0	860	0	0	0	0	0	0	0
New Zealand	273	0	0	0	0	0	0	0	0	0
Singapore	0	0	209	0	0	0	0	0	0	0
Total	10,151	17	1,069	38	117	14	73	47	0	5
Persian Gulf ^d	513	0	0	0	0	0	0	0	0	0

See footnotes at end of table.

**Table 39. PAD Districts IV and V—Imports of Crude Oil and Petroleum Products by Country of Origin,^a
May 1993 (Continued)
(Thousand Barrels)**

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use					Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
PAD District IV										
Non OPEC	0	0	0	0	33	219	2,825	84	7	91
Canada	0	0	0	0	33	219	2,825	84	7	91
Total	0	0	0	0	33	219	2,825	84	7	91
PAD District V										
Arab OPEC	0	0	0	0	0	0	513	17	0	17
Kuwait	0	0	0	0	0	0	513	17	0	17
Other OPEC	0	0	0	0	0	0	4,970	160	0	160
Ecuador	0	0	0	0	0	0	1,723	56	0	56
Indonesia	0	0	0	0	0	0	2,547	82	0	82
Venezuela	0	0	0	0	0	0	700	23	0	23
Non OPEC	45	0	0	13	401	1,839	6,507	151	59	210
Australia	0	0	0	0	0	0	407	13	0	13
Canada	0	0	0	13	401	687	3,337	85	22	108
China, People's Republic of	0	0	0	0	0	0	567	18	0	18
Korea, Republic of	45	0	0	0	0	83	83	0	3	3
Malaysia	0	0	0	0	0	0	204	7	0	7
Mexico	0	0	0	0	0	860	1,427	18	28	46
New Zealand	0	0	0	0	0	0	273	9	0	9
Singapore	0	0	0	0	0	209	209	0	7	7
Total	45	0	0	13	401	1,839	11,990	327	59	387
Persian Gulf ^d	0	0	0	0	0	0	513	17	0	17

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

Table 40. Year-to-Date Imports of Crude Oil and Petroleum Products into the United States by Country of Origin,^a January-May 1993
(Thousand Barrels)

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	257,247	5,616	21,007	0	2,190	468	0	3,814	0	0
Algeria	1,946	3,502	5,730	0	0	0	0	2,240	0	0
Kuwait	34,465	0	0	0	0	0	0	1,574	0	0
Qatar	0	0	197	0	0	0	0	0	0	0
Saudi Arabia	218,476	2,114	15,080	0	2,190	468	0	0	0	0
United Arab Emirates	2,360	0	0	0	0	0	0	0	0	0
Other OPEC	302,897	341	7,490	1,568	7,708	7,459	12,422	13,699	0	9
Ecuador	7,940	0	0	0	0	0	0	567	0	0
Gabon	18,083	0	0	0	0	0	0	165	0	0
Indonesia	9,386	0	0	0	0	0	0	133	0	9
Nigeria	124,345	0	293	0	0	0	241	2,188	0	0
Venezuela	143,143	341	7,197	1,538	7,708	7,459	12,181	10,646	0	0
Non OPEC	413,140	13,885	43,525	3,136	25,733	6,027	17,788	35,220	167	691
Angola	51,928	0	0	0	0	0	0	0	0	0
Argentina	3,488	0	0	241	0	0	0	316	0	0
Australia	407	0	0	0	0	0	0	0	0	0
Bahama Islands	0	0	0	0	0	0	0	2,753	0	0
Belgium	0	0	1,089	123	690	0	0	329	0	0
Benin	241	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	4	4,102	0	0	221	0	0
Brunei	155	0	0	0	0	0	0	0	0	0
Cameroon	0	0	0	0	0	0	0	491	0	0
Canada	121,834	12,632	2,001	277	8,246	421	9,333	2,492	148	672
China, People's Republic of	6,608	0	0	0	162	0	0	0	0	0
Colombia	19,945	0	0	0	0	0	0	4,127	0	0
Congo	9,152	0	0	0	0	0	0	1,747	0	0
Egypt	5,895	0	141	0	0	141	0	152	0	0
France	0	20	529	213	1,318	0	0	0	0	0
Germany, FR	0	0	2,440	0	0	0	0	373	0	0
Greece	0	0	324	0	0	0	0	0	0	0
Guatemala	566	0	0	0	0	0	0	0	0	0
India	0	0	868	0	0	0	0	0	0	0
Italy	0	0	2,626	0	1,987	0	0	0	0	19
Ivory Coast	0	0	237	0	0	0	0	116	0	0
Japan	0	8	0	0	0	0	0	0	0	0
Korea, Republic of	0	0	3,055	74	0	0	0	954	0	0
Malaysia	874	4	0	0	333	0	0	0	0	0
Mexico	122,427	977	1,452	1,079	190	233	187	1,280	0	0
Netherlands	0	0	1,429	0	0	0	0	0	0	0
Netherlands Antilles	0	0	4,890	92	250	229	0	4,688	19	0
New Zealand	273	0	0	0	0	0	0	0	0	0
Norway	12,758	0	229	0	0	0	0	0	0	0
Oman	0	0	2,199	0	0	0	0	0	0	0
Peru	0	0	0	0	0	0	0	627	0	0
Portugal	0	19	0	0	0	0	0	725	0	0
Puerto Rico	0	0	0	0	0	499	50	0	0	0
Singapore	0	0	2,345	0	0	0	0	0	0	0
Spain	0	0	3,009	0	778	0	0	138	0	0
Syria	2,239	0	697	0	0	0	0	0	0	0
Thailand	458	0	0	0	0	0	0	0	0	0
Trinidad and Tobago	8,585	0	221	0	220	0	0	1,895	0	0
Tunisia	0	0	0	0	0	0	0	155	0	0
Turkey	0	0	0	0	0	0	0	0	0	0
United Kingdom	41,141	225	4,415	0	1,361	0	0	0	0	0
Russia	1,462	0	0	0	0	0	0	0	0	0
Virgin Islands	0	0	8,760	1,033	5,638	4,504	8,218	10,086	0	0
Yemen	0	0	569	0	0	0	0	1,415	0	0
Zaire	2,470	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	458	0	0	140	0	0
Total	973,284	19,842	72,022	4,704	35,631	13,954	30,210	52,733	167	700
Persian Gulf^c	255,301	2,114	15,277	0	2,190	468	0	1,574	0	0

See footnotes at end of table.

Table 40. Year-to-Date Imports of Crude Oil and Petroleum Products into the United States by Country of Origin,^a January-May 1993 (Continued)
(Thousand Barrels)

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products ^c	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
Arab OPEC	2,163	14,506	0	0	3,685	53,449	310,696	1,704	354	2,058
Algeria	1,617	14,506	0	0	3,418	31,013	32,959	13	205	218
Kuwait	0	0	0	0	0	1,574	36,039	228	10	239
Qatar	0	0	0	0	0	197	197	0	1	1
Saudi Arabia	546	0	0	0	267	20,665	239,141	1,447	137	1,584
United Arab Emirates	0	0	0	0	0	0	2,360	16	0	16
Other OPEC	456	230	0	2,249	251	53,882	356,779	2,006	357	2,363
Ecuador	0	0	0	0	0	567	8,507	53	4	56
Gabon	0	0	0	0	0	165	18,248	120	1	121
Indonesia	0	0	0	0	0	142	9,528	62	1	63
Nigeria	0	0	0	0	0	2,722	127,067	823	18	842
Venezuela	456	230	0	2,249	251	50,286	193,429	948	333	1,281
Non OPEC	4,226	1,439	1,629	2,650	4,172	160,288	573,428	2,736	1,062	3,798
Angola	0	0	0	0	0	0	51,928	344	0	344
Argentina	128	368	0	0	181	1,234	4,722	23	8	31
Australia	0	0	0	0	0	0	407	3	0	3
Bahama Islands	0	0	0	0	0	2,753	2,753	0	18	18
Belgium	22	361	0	0	0	2,614	2,614	0	17	17
Benin	0	0	0	0	0	0	241	2	0	2
Brazil	35	0	0	0	142	4,504	4,504	0	30	30
Brunei	0	0	0	0	0	0	155	1	0	1
Cameroon	0	0	0	0	0	491	491	0	3	3
Canada	326	0	234	631	1,830	39,243	161,077	807	260	1,067
China, People's Republic of	0	0	0	0	15	177	6,785	44	1	45
Colombia	0	0	0	0	1	4,128	24,073	132	27	159
Congo	0	0	0	0	0	1,747	10,899	61	12	72
Egypt	0	0	0	0	2	436	6,331	39	3	42
France	49	0	28	0	254	2,411	2,411	0	16	16
Germany, FR	0	0	0	0	19	2,832	2,832	0	19	19
Greece	0	0	0	0	0	324	324	0	2	2
Guatemala	0	0	0	0	0	0	566	4	0	4
India	0	283	0	0	0	1,151	1,151	0	8	8
Italy	12	0	95	0	43	4,782	4,782	0	32	32
Ivory Coast	0	0	0	0	0	353	353	0	2	2
Japan	25	0	31	0	13	77	77	0	1	1
Korea, Republic of	250	0	0	0	0	4,333	4,333	0	29	29
Malaysia	0	0	0	0	0	337	1,211	6	2	8
Mexico	397	0	0	0	1,088	6,883	129,310	811	46	856
Netherlands	28	0	0	0	55	1,512	1,512	0	10	10
Netherlands Antilles	609	158	0	378	0	11,313	11,313	0	75	75
New Zealand	0	0	0	0	0	0	273	2	0	2
Norway	0	0	0	0	0	229	12,987	84	2	86
Oman	0	0	0	0	0	2,199	2,199	0	15	15
Peru	0	0	0	0	0	627	627	0	4	4
Portugal	0	0	0	0	0	744	744	0	5	5
Puerto Rico	2,061	0	1,190	0	475	4,275	4,275	0	28	28
Singapore	0	0	0	0	0	2,345	2,345	0	16	16
Spain	0	0	41	1,641	0	5,607	5,607	0	37	37
Syria	0	0	0	0	0	697	2,936	15	5	19
Thailand	0	0	0	0	0	0	458	3	0	3
Trinidad and Tobago	0	0	10	0	0	2,346	10,931	57	16	72
Tunisia	0	0	0	0	0	155	155	0	1	1
Turkey	71	0	0	0	0	71	71	0	(s)	(s)
United Kingdom	22	0	0	0	0	6,023	47,164	272	40	312
Russia	0	0	0	0	0	0	1,462	10	0	10
Virgin Islands	0	0	0	0	0	38,239	38,239	0	253	253
Yemen	191	0	0	0	0	2,175	2,175	0	14	14
Zaire	0	0	0	0	0	0	2,470	16	0	16
Other	0	269	0	0	54	921	921	0	6	6
Total	6,845	16,175	1,629	4,899	8,108	267,619	1,240,903	6,446	1,772	8,218
Persian Gulf^d	546	269	0	0	267	22,705	278,006	1,691	150	1,841

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 41. PAD District I—Year-to-Date Imports of Crude Oil and Petroleum Products by Country of Origin,^a
January-May 1993
(Thousand Barrels)**

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	25,609	934	1,089	0	2,190	467	0	2,066	0	0
Algeria	0	236	1,089	0	0	0	0	1,875	0	0
Kuwait	1,045	0	0	0	0	0	0	191	0	0
Saudi Arabia	24,564	698	0	0	2,190	467	0	0	0	0
Other OPEC	88,948	170	629	1,568	7,708	7,459	12,422	12,312	0	0
Ecuador	722	0	0	0	0	0	0	567	0	0
Gabon	3,777	0	0	0	0	0	0	165	0	0
Nigeria	64,318	0	180	0	0	0	241	1,896	0	0
Venezuela	20,131	170	449	1,568	7,708	7,459	12,181	9,684	0	0
Non OPEC	66,718	2,170	18,509	1,610	23,615	4,663	15,681	29,284	148	46
Angola	22,658	0	0	0	0	0	0	0	0	0
Argentina	0	0	0	241	0	0	0	316	0	0
Bahama Islands	0	0	0	0	0	0	0	2,753	0	0
Belgium	0	0	257	123	690	0	0	329	0	0
Brazil	0	0	0	0	4,102	0	0	221	0	0
Cameroon	0	0	0	0	0	0	0	491	0	0
Canada	9,438	1,964	622	0	6,845	5	7,580	2,199	148	42
China, People's Republic of	1,331	0	0	0	0	0	0	0	0	0
Colombia	1,512	0	0	0	0	0	0	3,878	0	0
Congo	0	0	0	0	0	0	0	1,747	0	0
Egypt	2,792	0	0	0	0	0	0	0	0	0
France	0	0	417	213	1,318	0	0	0	0	0
Germany, FR	0	0	353	0	0	0	0	0	0	0
India	0	0	222	0	0	0	0	0	0	0
Italy	0	0	1,131	0	1,987	0	0	0	0	4
Ivory Coast	0	0	0	0	0	0	0	116	0	0
Japan	0	0	0	0	0	0	0	0	0	0
Malaysia	0	0	0	0	333	0	0	0	0	0
Mexico	10,782	0	0	0	190	0	187	0	0	0
Netherlands	0	0	306	0	0	0	0	0	0	0
Netherlands Antilles	0	0	839	0	250	117	0	4,533	0	0
Norway	5,018	0	0	0	0	0	0	0	0	0
Peru	0	0	0	0	0	0	0	627	0	0
Portugal	0	0	0	0	0	0	0	256	0	0
Puerto Rico	0	0	0	0	0	499	50	0	0	0
Spain	0	0	2,447	0	778	0	0	138	0	0
Syria	0	0	455	0	0	0	0	0	0	0
Trinidad and Tobago	1,046	0	0	0	220	0	0	1,895	0	0
United Kingdom	10,420	206	2,700	0	1,361	0	0	0	0	0
Virgin Islands	0	0	8,760	1,033	5,083	4,042	7,864	9,785	0	0
Zaire	1,721	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	458	0	0	0	0	0
Total	181,275	3,274	20,227	3,178	33,513	12,589	28,103	43,662	148	46
Persian Gulf^d	25,609	698	0	0	2,190	467	0	191	0	0

See footnotes at end of table.

**Table 41. PAD District I—Year-to-Date Imports of Crude Oil and Petroleum Products by Country of Origin,^a
January-May 1993 (Continued)
(Thousand Barrels)**

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products ^c	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
Arab OPEC	0	0	0	0	165	6,911	32,520	170	46	215
Algeria	0	0	0	0	0	3,200	3,200	0	21	21
Kuwait	0	0	0	0	0	191	1,236	7	1	8
Saudi Arabia	0	0	0	0	165	3,520	28,084	163	23	186
Other OPEC	0	0	0	2,125	0	44,393	133,341	589	294	883
Ecuador	0	0	0	0	0	567	1,289	5	4	9
Gabon	0	0	0	0	0	165	3,942	25	1	26
Nigeria	0	0	0	0	0	2,317	66,635	426	15	441
Venezuela	0	0	0	2,125	0	41,344	61,475	133	274	407
Non OPEC	567	0	1,401	2,521	1,400	101,615	168,333	442	673	1,115
Angola	0	0	0	0	0	0	22,658	150	0	150
Argentina	0	0	0	0	0	557	557	0	4	4
Bahama Islands	0	0	0	0	0	2,753	2,753	0	18	18
Belgium	0	0	0	0	0	1,399	1,399	0	9	9
Brazil	0	0	0	0	115	4,438	4,438	0	29	29
Cameroon	0	0	0	0	0	491	491	0	3	3
Canada	46	0	160	572	128	20,311	29,749	63	135	197
China, People's Republic of	0	0	0	0	15	15	1,346	9	(s)	9
Colombia	0	0	0	0	0	3,878	5,390	10	26	36
Congo	0	0	0	0	0	1,747	1,747	0	12	12
Egypt	0	0	0	0	0	0	2,792	18	0	18
France	9	0	0	0	254	2,211	2,211	0	15	15
Germany, FR	0	0	0	0	13	366	366	0	2	2
India	0	0	0	0	0	222	222	0	1	1
Italy	0	0	28	0	33	3,183	3,183	0	21	21
Ivory Coast	0	0	0	0	0	116	116	0	1	1
Japan	11	0	0	0	13	24	24	0	(s)	(s)
Malaysia	0	0	0	0	0	333	333	0	2	2
Mexico	0	0	0	0	294	671	11,453	71	4	76
Netherlands	0	0	0	0	55	361	361	0	2	2
Netherlands Antilles	0	0	0	378	0	6,117	6,117	0	41	41
Norway	0	0	0	0	0	0	5,018	33	0	33
Peru	0	0	0	0	0	627	627	0	4	4
Portugal	0	0	0	0	0	256	256	0	2	2
Puerto Rico	501	0	1,190	0	475	2,715	2,715	0	18	18
Spain	0	0	23	1,571	0	4,957	4,957	0	33	33
Syria	0	0	0	0	0	455	455	0	3	3
Trinidad and Tobago	0	0	0	0	0	2,115	3,161	7	14	21
United Kingdom	0	0	0	0	0	4,267	14,687	69	28	97
Virgin Islands	0	0	0	0	0	36,567	36,567	0	242	242
Zaire	0	0	0	0	0	0	1,721	11	0	11
Other	0	0	0	0	5	463	463	0	3	3
Total	567	0	1,401	4,646	1,565	152,919	334,194	1,200	1,013	2,213
Persian Gulf^d	0	0	0	0	165	3,711	29,320	170	25	194

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 42. PAD District II—Year-to-Date Imports of Crude Oil and Petroleum Products by Country of Origin,^a
January-May 1993
(Thousand Barrels)**

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	18,085	0	0	0	0	0	0	0	0	0
Kuwait	3,566	0	0	0	0	0	0	0	0	0
Saudi Arabia	13,996	0	0	0	0	0	0	0	0	0
United Arab Emirates	523	0	0	0	0	0	0	0	0	0
Other OPEC	38,584	0	0	0	0	0	0	0	0	0
Ecuador	1,821	0	0	0	0	0	0	0	0	0
Gabon	437	0	0	0	0	0	0	0	0	0
Nigeria	14,843	0	0	0	0	0	0	0	0	0
Venezuela	21,483	0	0	0	0	0	0	0	0	0
Non OPEC	135,549	9,692	370	277	414	383	874	74	0	283
Angola	3,044	0	0	0	0	0	0	0	0	0
Canada	89,988	9,692	370	277	414	383	874	74	0	283
Colombia	2,172	0	0	0	0	0	0	0	0	0
Congo	1,800	0	0	0	0	0	0	0	0	0
Mexico	22,110	0	0	0	0	0	0	0	0	0
Norway	3,119	0	0	0	0	0	0	0	0	0
Syria	1,092	0	0	0	0	0	0	0	0	0
Trinidad and Tobago	1,757	0	0	0	0	0	0	0	0	0
United Kingdom	10,467	0	0	0	0	0	0	0	0	0
Total	192,218	9,692	370	277	414	383	874	74	0	283
Persian Gulf^d	18,085	0	0	0	0	0	0	0	0	0

See footnotes at end of table.

**Table 42. PAD District II—Year-to-Date Imports of Crude Oil and Petroleum Products by Country of Origin,^a
January-May 1993 (Continued)
(Thousand Barrels)**

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products ^c	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
Arab OPEC	0	0	0	0	0	0	18,085	120	0	120
Kuwait	0	0	0	0	0	0	3,566	24	0	24
Saudi Arabia	0	0	0	0	0	0	13,996	93	0	93
United Arab Emirates	0	0	0	0	0	0	523	3	0	3
Other OPEC	0	0	0	0	0	0	38,584	256	0	256
Ecuador	0	0	0	0	0	0	1,821	12	0	12
Gabon	0	0	0	0	0	0	437	3	0	3
Nigeria	0	0	0	0	0	0	14,843	98	0	98
Venezuela	0	0	0	0	0	0	21,483	142	0	142
Non OPEC	100	0	74	3	272	12,816	148,365	898	85	983
Angola	0	0	0	0	0	0	3,044	20	0	20
Canada	100	0	74	3	272	12,816	102,804	596	85	681
Colombia	0	0	0	0	0	0	2,172	14	0	14
Congo	0	0	0	0	0	0	1,800	12	0	12
Mexico	0	0	0	0	0	0	22,110	146	0	146
Norway	0	0	0	0	0	0	3,119	21	0	21
Syria	0	0	0	0	0	0	1,092	7	0	7
Trinidad and Tobago	0	0	0	0	0	0	1,757	12	0	12
United Kingdom	0	0	0	0	0	0	10,467	69	0	69
Total	100	0	74	3	272	12,816	205,034	1,273	85	1,358
Persian Gulf^d	0	0	0	0	0	0	18,085	120	0	120

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 43. PAD District III—Year-to-Date Imports of Crude Oil and Petroleum Products by Country of Origin,^a
January-May 1993
(Thousand Barrels)**

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	210,918	4,682	19,918	0	0	0	0	1,250	0	0
Algeria	1,946	3,266	4,641	0	0	0	0	365	0	0
Kuwait	27,219	0	0	0	0	0	0	885	0	0
Qatar	0	0	197	0	0	0	0	0	0	0
Saudi Arabia	179,916	1,416	15,080	0	0	0	0	0	0	0
United Arab Emirates	1,837	0	0	0	0	0	0	0	0	0
Other OPEC	159,392	171	6,515	0	0	0	0	1,123	0	9
Ecuador	359	0	0	0	0	0	0	0	0	0
Gabon	13,869	0	0	0	0	0	0	0	0	0
Indonesia	543	0	0	0	0	0	0	0	0	9
Nigeria	45,184	0	113	0	0	0	0	292	0	0
Venezuela	99,437	171	6,402	0	0	0	0	831	0	0
Non OPEC	181,721	1,047	22,600	1,175	555	642	354	3,409	0	334
Angola	26,226	0	0	0	0	0	0	0	0	0
Argentina	3,488	0	0	0	0	0	0	0	0	0
Belgium	0	0	832	0	0	0	0	0	0	0
Benin	241	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	4	0	0	0	0	0	0
Canada	0	0	1,009	0	0	0	0	0	0	319
China, People's Republic of	1,965	0	0	0	0	0	0	0	0	0
Colombia	15,139	0	0	0	0	0	0	249	0	0
Congo	7,352	0	0	0	0	0	0	0	0	0
Egypt	3,103	0	141	0	0	141	0	152	0	0
France	0	20	112	0	0	0	0	0	0	0
Germany, FR	0	0	2,087	0	0	0	0	373	0	0
Greece	0	0	324	0	0	0	0	0	0	0
Guatemala	566	0	0	0	0	0	0	0	0	0
India	0	0	646	0	0	0	0	0	0	0
Italy	0	0	1,495	0	0	0	0	0	0	15
Ivory Coast	0	0	237	0	0	0	0	0	0	0
Japan	0	8	0	0	0	0	0	0	0	0
Korea, Republic of	0	0	3,055	0	0	0	0	0	0	0
Malaysia	424	4	0	0	0	0	0	0	0	0
Mexico	88,968	977	592	1,079	0	39	0	0	0	0
Netherlands	0	0	1,123	0	0	0	0	0	0	0
Netherlands Antilles	0	0	4,051	92	0	0	0	155	0	0
Norway	4,621	0	229	0	0	0	0	0	0	0
Oman	0	0	2,199	0	0	0	0	0	0	0
Portugal	0	19	0	0	0	0	0	469	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0
Singapore	0	0	1,159	0	0	0	0	0	0	0
Spain	0	0	562	0	0	0	0	0	0	0
Syria	1,147	0	242	0	0	0	0	0	0	0
Trinidad and Tobago	5,782	0	221	0	0	0	0	0	0	0
Tunisia	0	0	0	0	0	0	0	155	0	0
Turkey	0	0	0	0	0	0	0	0	0	0
United Kingdom	20,254	19	1,715	0	0	0	0	0	0	0
Russia	1,462	0	0	0	0	0	0	0	0	0
Virgin Islands	0	0	0	0	555	462	354	301	0	0
Yemen	0	0	569	0	0	0	0	1,415	0	0
Zaire	749	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	140	0	0
Total	552,031	5,900	49,033	1,175	555	642	354	5,782	0	343
Persian Gulf^d	208,972	1,416	15,277	0	0	0	0	885	0	0

See footnotes at end of table.

**Table 43. PAD District III—Year-to-Date Imports of Crude Oil and Petroleum Products by Country of Origin,^a
January-May 1993 (Continued)
(Thousand Barrels)**

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use	Lubricants	Asphalt and Road Oil	Other Products ^c	Total Products	Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
Arab OPEC	2,163	14,506	0	0	3,520	46,039	256,957	1,397	305	1,702
Algeria	1,617	14,506	0	0	3,418	27,813	29,759	13	184	197
Kuwait	0	0	0	0	0	885	28,104	180	6	186
Qatar	0	0	0	0	0	197	197	0	1	1
Saudi Arabia	546	0	0	0	102	17,144	197,060	1,191	114	1,305
United Arab Emirates	0	0	0	0	0	0	1,837	12	0	12
Other OPEC	456	230	0	124	0	8,628	168,020	1,056	57	1,113
Ecuador	0	0	0	0	0	0	359	2	0	2
Gabon	0	0	0	0	0	0	13,869	92	0	92
Indonesia	0	0	0	0	0	9	552	4	(s)	4
Nigeria	0	0	0	0	0	405	45,589	299	3	302
Venezuela	456	230	0	124	0	8,214	107,651	659	54	713
Non OPEC	3,431	1,439	123	0	1,016	36,125	217,846	1,203	239	1,443
Angola	0	0	0	0	0	0	26,226	174	0	174
Argentina	128	368	0	0	181	677	4,165	23	4	28
Belgium	22	361	0	0	0	1,215	1,215	0	8	8
Benin	0	0	0	0	0	0	241	2	0	2
Brazil	35	0	0	0	27	66	66	0	(s)	(s)
Canada	180	0	0	0	0	1,508	1,508	0	10	10
China, People's Republic of	0	0	0	0	0	0	1,965	13	0	13
Colombia	0	0	0	0	1	250	15,389	100	2	102
Congo	0	0	0	0	0	0	7,352	49	0	49
Egypt	0	0	0	0	2	436	3,539	21	3	23
France	40	0	28	0	0	200	200	0	1	1
Germany, FR	0	0	0	0	6	2,466	2,466	0	16	16
Greece	0	0	0	0	0	324	324	0	2	2
Guatemala	0	0	0	0	0	0	566	4	0	4
India	0	283	0	0	0	929	929	0	6	6
Italy	12	0	67	0	10	1,599	1,599	0	11	11
Ivory Coast	0	0	0	0	0	237	237	0	2	2
Japan	14	0	0	0	0	22	22	0	(s)	(s)
Korea, Republic of	122	0	0	0	0	3,177	3,177	0	21	21
Malaysia	0	0	0	0	0	4	428	3	(s)	3
Mexico	397	0	0	0	786	3,870	92,838	589	26	615
Netherlands	28	0	0	0	0	1,151	1,151	0	8	8
Netherlands Antilles	609	158	0	0	0	5,065	5,065	0	34	34
Norway	0	0	0	0	0	229	4,850	31	2	32
Oman	0	0	0	0	0	2,199	2,199	0	15	15
Portugal	0	0	0	0	0	488	488	0	3	3
Puerto Rico	1,560	0	0	0	0	1,560	1,560	0	10	10
Singapore	0	0	0	0	0	1,159	1,159	0	8	8
Spain	0	0	18	0	0	580	580	0	4	4
Syria	0	0	0	0	0	242	1,389	8	2	9
Trinidad and Tobago	0	0	10	0	0	231	6,013	38	2	40
Tunisia	0	0	0	0	0	155	155	0	1	1
Turkey	71	0	0	0	0	71	71	0	(s)	(s)
United Kingdom	22	0	0	0	0	1,756	22,010	134	12	146
Russia	0	0	0	0	0	0	1,462	10	0	10
Virgin Islands	0	0	0	0	0	1,672	1,672	0	11	11
Yemen	191	0	0	0	0	2,175	2,175	0	14	14
Zaire	0	0	0	0	0	0	749	5	0	5
Other	0	269	0	0	3	412	412	0	3	3
Total	6,050	16,175	123	124	4,536	90,792	642,823	3,656	601	4,257
Persian Gulf^d	546	269	0	0	102	18,495	227,467	1,384	122	1,506

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

Table 44. PAD Districts IV and V—Year-to-Date Imports of Crude Oil and Petroleum Products by Country of Origin,^a January-May 1993
(Thousand Barrels)

Country of Origin	Crude Oil ^b	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
PAD District IV										
Non OPEC	12,777	875	0	0	50	0	367	0	0	0
Canada	12,777	875	0	0	50	0	367	0	0	0
Total	12,777	875	0	0	50	0	367	0	0	0
PAD District V										
Arab OPEC	2,635	0	0	0	0	1	0	498	0	0
Kuwait	2,635	0	0	0	0	0	0	498	0	0
Saudi Arabia	0	0	0	0	0	1	0	0	0	0
Other OPEC	15,973	0	346	0	0	0	0	264	0	0
Ecuador	5,038	0	0	0	0	0	0	0	0	0
Indonesia	8,843	0	0	0	0	0	0	133	0	0
Venezuela	2,092	0	346	0	0	0	0	131	0	0
Non OPEC	16,375	101	2,046	74	1,099	339	512	2,453	19	28
Australia	407	0	0	0	0	0	0	0	0	0
Brunei	155	0	0	0	0	0	0	0	0	0
Canada	9,631	101	0	0	937	33	512	219	0	28
China, People's Republic of	3,312	0	0	0	162	0	0	0	0	0
Colombia	1,122	0	0	0	0	0	0	0	0	0
Japan	0	0	0	0	0	0	0	0	0	0
Korea, Republic of	0	0	0	74	0	0	0	954	0	0
Malaysia	450	0	0	0	0	0	0	0	0	0
Mexico	567	0	860	0	0	194	0	1,280	0	0
Netherlands Antilles	0	0	0	0	0	112	0	0	19	0
New Zealand	273	0	0	0	0	0	0	0	0	0
Singapore	0	0	1,186	0	0	0	0	0	0	0
Spain	0	0	0	0	0	0	0	0	0	0
Thailand	458	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	34,983	101	2,392	74	1,099	340	512	3,215	19	28
Persian Gulf ^d	2,635	0	0	0	0	1	0	498	0	0

See footnotes at end of table.

Table 44. PAD Districts IV and V—Year-to-Date Imports of Crude Oil and Petroleum Products by Country of Origin,^a January-May 1993 (Continued)
(Thousand Barrels)

Country of Origin	Naphtha for Petrochemical Feedstock Use	Other Oils for Petrochemical Feedstock Use					Total Crude Oil and Products	Daily Average		
								Crude Oil	Products	Total
PAD District IV										
Non OPEC	0	0	0	0	289	1,581	14,358	85	10	95
Canada	0	0	0	0	289	1,581	14,358	85	10	95
Total	0	0	0	0	289	1,581	14,358	85	10	95
PAD District V										
Arab OPEC	0	0	0	0	0	499	3,134	17	3	21
Kuwait	0	0	0	0	0	498	3,133	17	3	21
Saudi Arabia	0	0	0	0	0	1	1	0	(s)	(s)
Other OPEC	0	0	0	0	251	861	16,834	106	6	111
Ecuador	0	0	0	0	0	0	5,038	33	0	33
Indonesia	0	0	0	0	0	133	8,976	59	1	59
Venezuela	0	0	0	0	251	728	2,820	14	5	19
Non OPEC	128	0	31	126	1,195	8,151	24,526	108	54	162
Australia	0	0	0	0	0	0	407	3	0	3
Brunei	0	0	0	0	0	0	155	1	0	1
Canada	0	0	0	56	1,141	3,027	12,658	64	20	84
China, People's Republic of	0	0	0	0	0	162	3,474	22	1	23
Colombia	0	0	0	0	0	0	1,122	7	0	7
Japan	0	0	31	0	0	31	31	0	(s)	(s)
Korea, Republic of	128	0	0	0	0	1,156	1,156	0	8	8
Malaysia	0	0	0	0	0	0	450	3	0	3
Mexico	0	0	0	0	8	2,342	2,909	4	16	19
Netherlands Antilles	0	0	0	0	0	131	131	0	1	1
New Zealand	0	0	0	0	0	0	273	2	0	2
Singapore	0	0	0	0	0	1,186	1,186	0	8	8
Spain	0	0	0	70	0	70	70	0	(s)	(s)
Thailand	0	0	0	0	0	0	458	3	0	3
Other	0	0	0	0	46	46	46	0	(s)	(s)
Total	128	0	31	126	1,446	9,511	44,494	232	63	295
Persian Gulf ^d	0	0	0	0	0	499	3,134	17	3	21

^a Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

^b Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^c Includes aviation gasoline, aviation gasoline blending components, miscellaneous products, other hydrocarbons and oxygenates, pentanes plus, petroleum coke, and waxes.

^d Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

**Table 45. Exports of Crude Oil and Petroleum Products by PAD District,
May 1993
(Thousand Barrels)**

Commodity	Petroleum Administration for Defense Districts						Daily Average
	I	II	III	IV	V	U.S. Total	
Crude Oil^a	0	34	0	0	3,445	3,479	112
Natural Gas Liquids	209	169	757	21	391	1,548	50
Pentanes Plus	1	(s)	0	0	0	1	(s)
Liquefied Petroleum Gases	209	169	757	21	391	1,547	50
Ethane/Ethylene	0	0	0	0	0	0	0
Propane/Propylene	81	106	587	0	162	935	30
Normal Butane/Butylene	128	63	170	21	229	612	20
Isobutane/isobutylene	0	0	0	0	0	0	0
Other Liquids	(s)	0	81	0	62	143	5
Other Hydrocarbons/Oxygenates	0	0	0	0	0	0	0
Motor Gasoline Blend. Comp.	(s)	0	81	0	62	143	5
Finished Petroleum Products	1,093	251	10,866	5	11,100	23,314	752
Finished Motor Gasoline	65	14	2,311	1	409	2,800	90
Naphtha-Type Jet Fuel	0	0	11	0	387	398	13
Kerosene-Type Jet Fuel	1	75	494	0	891	1,460	47
Kerosene	1	0	232	0	2	235	8
Distillate Fuel Oil	139	4	1,960	0	3,847	5,950	192
Residual Fuel Oil	482	1	2,346	0	1,410	4,238	137
Special Naphthas	6	8	26	0	5	45	1
Lubricants	192	46	758	4	143	1,143	37
Waxes	10	8	20	(s)	13	51	2
Petroleum Coke	183	60	2,704	0	3,973	6,920	223
Asphalt and Road Oil	6	36	5	0	18	64	2
Miscellaneous Products	8	(s)	(s)	0	1	10	(s)
Total	1,303	454	11,703	27	14,998	28,484	919

^a Crude oil exports are restricted to: (1) crude oil derived from fields under the State waters of Alaska's Cook Inlet; (2) certain domestically produced crude oil destined for Canada; and (3) shipments to U.S. territories, and California crude oil to Pacific Rim countries. On December 6, 1991, the U.S. Department of Commerce approved a license to export 25,000 barrels per day of California heavy crude oil (less than 20 degrees API gravity) to Pacific Rim countries for one year.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report" and the U.S. Bureau of the Census.

**Table 46. Year-to-Date Exports of Crude Oil and Petroleum Products by PAD District,
January-May 1993
(Thousand Barrels)**

Commodity	Petroleum Administration for Defense Districts						Daily Average
	I	II	III	IV	V	U.S. Total	
Crude Oil^a	0	395	0	0	18,205	18,600	123
Natural Gas Liquids	312	1,114	4,262	43	2,172	7,904	52
Pentanes Plus	8	97	1	4	0	109	1
Liquefied Petroleum Gases	304	1,018	4,262	40	2,172	7,795	52
Ethane/Ethylene	0	0	0	0	0	0	0
Propane/Propylene	144	661	3,529	0	777	5,112	34
Normal Butane/Butylene	160	356	733	40	1,394	2,684	18
Isobutane/isobutylene	0	0	0	0	0	0	0
Other Liquids	37	2	347	0	666	1,052	7
Other Hydrocarbons/Oxygenates	0	0	0	0	0	0	0
Motor Gasoline Blend. Comp.	37	2	347	0	666	1,052	7
Finished Petroleum Products	4,769	1,651	57,413	40	46,877	110,749	733
Finished Motor Gasoline	250	314	12,388	1	3,720	16,673	110
Naphtha-Type Jet Fuel	1	29	576	0	2,358	2,965	20
Kerosene-Type Jet Fuel	234	122	4,671	0	4,267	9,294	62
Kerosene	24	5	1,105	0	6	1,140	8
Distillate Fuel Oil	280	9	6,551	1	12,090	18,931	125
Residual Fuel Oil	2,647	51	11,337	0	7,282	21,318	141
Special Naphthas	35	40	404	1	106	585	4
Lubricants	695	186	1,712	20	568	3,181	21
Waxes	56	21	135	(s)	59	272	2
Petroleum Coke	496	695	18,498	13	16,332	36,033	239
Asphalt and Road Oil	15	178	27	4	85	309	2
Miscellaneous Products	36	1	7	0	4	47	(s)
Total	5,118	3,162	62,023	83	67,919	138,306	916

^a Crude oil exports are restricted to: (1) crude oil derived from fields under the State waters of Alaska's Cook Inlet; (2) certain domestically produced crude oil destined for Canada; and (3) shipments to U.S. territories, and California crude oil to Pacific Rim countries. On December 6, 1991, the U.S. Department of Commerce approved a license to export 25,000 barrels per day of California heavy crude oil (less than 20 degrees API gravity) to Pacific Rim countries for one year.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report" and the U.S. Bureau of the Census.

Table 47. Exports of Crude Oil and Petroleum Products by Destination, May 1993
(Thousand Barrels)

Destination	Crude Oil ^a	Pentanes Plus	Liquefied Petroleum Gases	Finished Motor Gasoline	Jet Fuel	Kerosene	Distillate Fuel Oil	Residual Fuel Oil
Argentina	0	0	0	(s)	0	0	(s)	0
Australia	0	0	(s)	0	0	0	0	0
Bahama Islands	0	0	53	41	13	0	3	132
Bahrain	0	0	0	0	0	0	0	0
Belgium & Luxembourg	0	0	0	0	0	0	(s)	0
Brazil	0	0	0	0	0	0	207	0
Cameroon	0	0	0	0	0	0	0	0
Canada	34	1	252	107	165	1	5	546
Chile	0	0	97	0	0	219	0	0
China, People's Republic of	0	0	0	0	259	0	891	0
China, Taiwan	0	0	218	0	0	0	740	0
Colombia	0	0	56	0	0	0	0	0
Costa Rica	0	0	0	95	11	0	0	(s)
Denmark	0	0	0	0	0	0	0	0
Dominican Republic	0	0	0	64	0	0	1	0
Ecuador	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	1	0
El Salvador	0	0	16	45	13	0	0	0
Finland	0	0	0	0	0	0	0	0
France	0	0	0	15	0	0	(s)	0
French Pacific Islands	0	0	0	0	0	0	0	(s)
Greece	0	0	0	0	0	0	0	0
Guatemala	0	0	80	152	8	7	0	72
Guinea	0	0	0	0	(s)	0	(s)	0
Honduras	0	0	0	90	20	0	2	0
Hong Kong	0	0	0	0	0	0	0	302
India	0	0	0	0	0	0	0	273
Indonesia	0	0	0	0	0	0	90	0
Ireland	0	0	0	0	0	0	0	0
Israel	0	0	0	0	241	0	0	0
Italy	0	0	1	0	0	0	0	732
Jamaica	0	0	25	0	0	0	0	434
Japan	0	0	0	0	929	(s)	120	0
Korea, Republic of	0	0	(s)	0	0	0	1,394	108
Malaysia	0	0	0	0	0	0	0	0
Mexico	0	0	646	1,724	0	1	35	758
Netherlands	0	0	1	0	0	0	505	0
Netherlands Antilles	0	0	0	248	0	0	560	0
New Zealand	0	0	0	0	0	(s)	(s)	0
Nigeria	0	0	0	0	0	0	215	0
Norway	0	0	0	0	0	0	0	0
Panama	0	0	0	0	0	0	(s)	396
Peru	0	0	0	0	0	0	125	0
Philippines	0	0	0	0	0	0	0	0
Poland	0	0	0	0	0	0	0	0
Portugal	0	0	0	0	0	0	0	0
Puerto Rico	0	0	2	0	199	0	10	0
Russia	0	0	0	0	0	0	0	(s)
Saudi Arabia	0	0	0	(s)	0	0	1	0
Singapore	0	0	0	149	0	0	833	404
South Africa	0	0	0	0	0	0	0	0
Spain	0	0	0	0	0	0	0	(s)
Sweden	0	0	0	0	0	0	(s)	0
Switzerland	0	0	0	0	0	0	0	0
Thailand	0	0	0	0	0	0	(s)	0
Trinidad and Tobago	0	0	(s)	0	0	0	(s)	0
Turkey	0	0	0	0	0	0	0	0
United Arab Emirates	0	0	0	0	0	0	(s)	0
United Kingdom	0	0	(s)	0	0	(s)	0	0
Uruguay	0	0	0	0	0	0	0	0
Venezuela	0	0	(s)	0	0	0	(s)	0
Virgin Islands	3,445	0	0	0	0	(s)	120	0
Other	0	0	43	71	0	(s)	89	0
Total	3,479	1	1,547	2,800	1,858	235	5,950	4,238

See footnotes at end of table.

Table 47. Exports of Crude Oil and Petroleum Products by Destination, May 1993 (Continued)
(Thousand Barrels)

Destination	Special Naphthas	Lubricants	Waxes	Petroleum Coke	Asphalt and Road Oil	Other Products ^b	Crude Oil and Products	
							Total	Daily Average
Argentina	(s)	21	(s)	0	(s)	1	22	1
Australia	0	2	(s)	425	0	0	428	14
Bahama Islands	(s)	8	0	0	(s)	0	251	8
Bahrain	0	(s)	0	98	0	0	98	3
Belgium & Luxembourg	0	6	(s)	277	(s)	0	284	9
Brazil	0	1	(s)	130	(s)	(s)	338	11
Cameroon	0	(s)	0	0	0	0	(s)	(s)
Canada	12	106	17	435	41	2	1,724	56
Chile	0	10	(s)	0	(s)	(s)	325	10
China, People's Republic of	0	38	1	0	0	0	1,188	38
China, Taiwan	2	17	(s)	1	2	1	981	32
Colombia	0	3	(s)	0	(s)	(s)	60	2
Costa Rica	3	16	(s)	0	0	0	126	4
Denmark	0	(s)	(s)	0	0	0	(s)	(s)
Dominican Republic	1	3	0	0	0	(s)	69	2
Ecuador	0	(s)	(s)	0	(s)	0	2	(s)
Egypt	0	1	0	0	1	0	2	(s)
El Salvador	1	1	0	0	0	(s)	76	2
Finland	0	1	0	0	1	0	2	(s)
France	7	1	2	0	1	0	26	1
French Pacific Islands	0	(s)	0	0	0	0	(s)	(s)
Greece	0	(s)	0	80	0	(s)	80	3
Guatemala	4	6	1	0	(s)	0	330	11
Guinea	0	1	0	0	0	0	2	(s)
Honduras	1	5	0	0	0	0	117	4
Hong Kong	(s)	4	2	0	0	(s)	308	10
India	0	22	1	0	0	1	297	10
Indonesia	(s)	232	(s)	0	0	0	322	10
Ireland	0	(s)	(s)	0	0	(s)	(s)	(s)
Israel	0	(s)	(s)	0	0	(s)	242	8
Italy	0	(s)	1	414	1	(s)	1,147	37
Jamaica	1	(s)	(s)	0	0	(s)	460	15
Japan	4	29	3	1,632	1	2	2,721	88
Korea, Republic of	1	8	1	270	(s)	(s)	1,783	58
Malaysia	0	1	(s)	0	(s)	(s)	2	(s)
Mexico	4	111	9	147	7	0	3,441	111
Netherlands	0	2	1	597	(s)	0	1,106	36
Netherlands Antilles	0	293	0	0	0	0	1,100	35
New Zealand	0	1	1	101	(s)	0	103	3
Nigeria	0	87	0	0	(s)	0	302	10
Norway	0	1	0	0	0	0	1	(s)
Panama	0	2	0	0	0	61	473	15
Peru	0	2	(s)	0	0	(s)	128	4
Philippines	0	6	1	30	0	(s)	38	1
Poland	0	1	0	0	0	0	1	(s)
Portugal	(s)	0	(s)	79	0	0	79	3
Puerto Rico	(s)	16	2	0	(s)	(s)	228	7
Russia	0	4	0	0	0	0	5	(s)
Saudi Arabia	(s)	2	(s)	46	0	(s)	50	2
Singapore	0	17	(s)	0	(s)	(s)	1,484	48
South Africa	0	(s)	(s)	0	0	0	1	(s)
Spain	0	(s)	(s)	371	(s)	(s)	372	12
Sweden	0	2	(s)	(s)	0	81	83	3
Switzerland	(s)	(s)	0	58	(s)	0	58	2
Thailand	(s)	2	(s)	(s)	0	(s)	4	(s)
Trinidad and Tobago	(s)	(s)	0	0	(s)	(s)	1	(s)
Turkey	0	(s)	0	846	0	0	846	27
United Arab Emirates	0	6	0	58	0	(s)	64	2
United Kingdom	0	15	1	158	2	(s)	176	6
Uruguay	0	1	0	0	0	0	1	(s)
Venezuela	3	(s)	(s)	134	(s)	1	139	4
Virgin Islands	(s)	(s)	0	0	0	0	3,566	115
Other	(s)	26	(s)	215	2	(s)	446	14
Total	45	1,143	51	6,920	64	153	28,484	919

^a Crude oil exports are restricted to: (1) crude oil derived from fields under the State waters of Alaska's Cook Inlet; (2) certain domestically produced crude oil destined for Canada; and (3) shipments to U.S. territories, and California crude oil to Pacific Rim countries. On December 6, 1991, the U.S. Department of Commerce approved a license to export 25,000 barrels per day of California heavy crude oil (less than 20 degrees API gravity) to Pacific Rim countries for one year.

^b Includes miscellaneous products, motor gasoline blending components, and other hydrocarbons and oxygenates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report" and the U.S. Bureau of the Census.

**Table 48. Year-to-Date Exports of Crude Oil and Petroleum Products by Destination,
January-May 1993
(Thousand Barrels)**

Destination	Crude Oil ^a	Pentanes Plus	Liquefied Petroleum Gases	Finished Motor Gasoline	Jet Fuel	Kerosene	Distillate Fuel Oil	Residual Fuel Oil
Argentina	0	0	0	(s)	0	0	1	0
Australia	0	0	4	299	0	0	265	0
Bahama Islands	0	0	89	194	56	0	110	596
Bahrain	0	0	0	0	0	0	(s)	0
Belgium & Luxembourg	0	0	9	1	0	0	10	0
Brazil	0	0	77	0	140	(s)	433	0
Cameroon	0	0	0	0	0	0	0	0
Canada	395	108	1,253	1,146	783	20	48	3,051
Chile	0	0	97	0	0	219	0	0
China, People's Republic of	0	0	0	212	715	0	1,252	0
China, Taiwan	0	0	501	1,338	0	(s)	2,390	530
Colombia	0	0	465	0	0	0	4	0
Costa Rica	0	0	1	183	31	0	69	(s)
Denmark	0	0	1	0	0	0	0	0
Dominican Republic	0	0	182	153	0	(s)	1	157
Ecuador	0	0	775	0	0	0	1	0
Egypt	0	0	0	0	0	5	10	0
El Salvador	0	0	103	166	13	0	0	31
Finland	0	0	0	0	0	0	0	0
France	0	0	0	15	0	0	(s)	0
French Pacific Islands	0	0	16	0	0	0	0	143
Ghana	0	0	0	0	0	0	0	0
Greece	0	0	0	0	0	(s)	0	0
Guatemala	0	0	151	685	46	12	0	456
Guinea	0	0	0	0	(s)	0	(s)	0
Honduras	0	0	66	364	71	0	2	0
Hong Kong	0	0	1	0	0	0	0	303
India	0	0	0	0	555	0	1	273
Indonesia	0	0	205	0	0	0	889	3
Ireland	0	0	0	0	0	0	(s)	154
Israel	0	(s)	0	0	645	(s)	1	0
Italy	0	1	1	0	0	0	(s)	2,538
Jamaica	0	0	57	0	0	(s)	23	2,621
Japan	0	0	4	194	5,821	310	290	532
Korea, Republic of	400	0	5	271	2,095	544	5,728	1,405
Malaysia	0	0	2	0	0	0	0	0
Mexico	0	0	3,087	9,254	55	4	529	2,987
Netherlands	0	0	1	0	21	1	698	195
Netherlands Antilles	0	0	9	921	0	0	1,456	229
New Zealand	0	0	0	0	0	(s)	(s)	0
Nigeria	0	0	0	0	478	0	215	0
Norway	0	0	(s)	0	0	0	0	0
Panama	0	0	106	15	30	6	374	932
Peru	0	0	0	10	0	0	593	85
Philippines	0	0	0	9	0	0	263	0
Poland	0	0	0	0	0	0	0	0
Portugal	0	0	0	0	(s)	0	267	0
Puerto Rico	0	0	7	869	450	0	201	1
Russia	0	0	0	0	0	0	(s)	1
Saudi Arabia	0	0	(s)	(s)	0	(s)	2	0
Singapore	0	0	(s)	149	226	0	1,745	2,750
South Africa	0	0	0	0	0	0	151	26
Spain	0	0	0	0	1	0	417	57
Suriname	0	0	11	0	0	0	0	0
Sweden	0	0	(s)	0	0	0	(s)	0
Switzerland	0	0	(s)	0	0	1	0	0
Thailand	0	0	155	0	0	(s)	(s)	306
Trinidad and Tobago	0	0	1	0	0	0	2	0
Turkey	0	0	0	0	0	0	0	0
United Arab Emirates	0	0	0	0	0	0	(s)	1,883
United Kingdom	0	0	27	3	1	16	1	0
Uruguay	0	0	0	0	0	0	0	0
Venezuela	0	0	1	(s)	0	0	4	1
Virgin Islands	17,805	0	2	0	0	(s)	120	0
Yugoslavia	0	0	0	0	0	0	1	0
Other	0	0	215	223	27	1	364	14
Total	18,600	109	7,795	16,673	12,260	1,140	18,931	21,318

See footnotes at end of table.

**Table 48. Year-to-Date Exports of Crude Oil and Petroleum Products by Destination,
January-May 1993 (Continued)**
(Thousand Barrels)

Destination	Special Naphthas	Lubricants	Waxes	Petroleum Coke	Asphalt and Road Oil	Other Products ^b	Crude Oil and Products	
							Total	Daily Average
Argentina	1	42	1	0	(s)	3	47	(s)
Australia	2	25	4	1,220	1	(s)	1,820	12
Bahama Islands	1	16	0	0	1	0	1,063	7
Bahrain	(s)	(s)	0	196	(s)	0	197	1
Belgium & Luxembourg	11	24	5	3,225	3	(s)	3,289	22
Brazil	301	23	(s)	190	(s)	1	1,166	8
Cameroon	0	2	0	37	0	0	39	(s)
Canada	36	472	57	2,066	192	13	9,639	64
Chile	(s)	37	1	(s)	(s)	2	356	2
China, People's Republic of	0	139	2	0	0	0	2,320	15
China, Taiwan	13	86	2	3	6	517	5,384	36
Colombia	(s)	26	7	151	(s)	2	655	4
Costa Rica	10	51	1	0	0	(s)	347	2
Denmark	0	1	1	366	(s)	0	369	2
Dominican Republic	1	20	0	0	0	1	515	3
Ecuador	(s)	3	1	0	1	(s)	782	5
Egypt	(s)	1	0	0	1	0	18	(s)
El Salvador	2	42	1	0	0	(s)	358	2
Finland	0	4	(s)	357	1	(s)	363	2
France	15	4	10	996	3	0	1,043	7
French Pacific Islands	0	1	0	0	0	0	160	1
Ghana	0	(s)	0	0	0	0	(s)	(s)
Greece	(s)	4	(s)	683	0	(s)	688	5
Guatemala	13	31	3	0	(s)	(s)	1,397	9
Guinea	(s)	6	0	0	0	0	6	(s)
Honduras	5	20	1	0	0	0	529	4
Hong Kong	1	17	6	0	0	(s)	327	2
India	(s)	40	5	84	(s)	1	960	6
Indonesia	(s)	242	(s)	0	(s)	0	1,340	9
Ireland	0	(s)	1	0	0	(s)	156	1
Israel	(s)	10	(s)	0	0	(s)	656	4
Italy	1	3	3	3,651	2	1	6,199	41
Jamaica	1	3	1	0	0	1	2,709	18
Japan	80	111	18	8,525	5	19	15,909	105
Korea, Republic of	13	34	5	510	1	(s)	11,010	73
Malaysia	(s)	4	1	0	(s)	1	8	(s)
Mexico	18	596	74	448	39	57	17,145	114
Netherlands	29	12	4	2,292	3	(s)	3,254	22
Netherlands Antilles	0	302	(s)	0	(s)	231	3,148	21
New Zealand	0	8	2	212	(s)	0	224	1
Nigeria	(s)	89	0	0	1	(s)	783	5
Norway	(s)	3	(s)	36	0	(s)	39	(s)
Panama	2	9	(s)	72	0	150	1,695	11
Peru	(s)	33	2	1	0	(s)	725	5
Philippines	(s)	15	3	30	(s)	1	320	2
Poland	0	3	0	0	0	0	3	(s)
Portugal	(s)	(s)	(s)	98	(s)	0	365	2
Puerto Rico	3	63	5	0	(s)	(s)	1,599	11
Russia	1	13	(s)	0	0	0	16	(s)
Saudi Arabia	(s)	12	(s)	88	0	1	103	1
Singapore	1	80	2	0	2	1	4,956	33
South Africa	(s)	19	1	145	(s)	0	343	2
Spain	0	3	17	3,238	1	(s)	3,733	25
Suriname	0	1	0	0	0	0	12	(s)
Sweden	0	5	1	430	0	81	517	3
Switzerland	8	1	(s)	58	(s)	0	68	(s)
Thailand	(s)	33	2	12	(s)	2	511	3
Trinidad and Tobago	(s)	1	(s)	0	(s)	(s)	4	(s)
Turkey	0	12	(s)	3,351	(s)	0	3,363	22
United Arab Emirates	(s)	43	0	288	3	(s)	2,218	15
United Kingdom	1	20	5	896	6	(s)	977	6
Uruguay	0	6	(s)	0	0	3	9	(s)
Venezuela	7	9	2	712	2	2	741	5
Virgin Islands	(s)	1	0	0	0	0	17,928	119
Yugoslavia	0	(s)	0	322	0	0	323	2
Other	2	246	1	483	8	1	1,585	10
Total	585	3,181	272	36,033	309	1,100	138,306	916

^a Crude oil exports are restricted to: (1) crude oil derived from fields under the State waters of Alaska's Cook Inlet; (2) certain domestically produced crude oil destined for Canada; and (3) shipments to U.S. territories, and California crude oil to Pacific Rim countries. On December 6, 1991, the U.S. Department of Commerce approved a license to export 25,000 barrels per day of California heavy crude oil (less than 20 degrees API gravity) to Pacific Rim countries for one year.

^b Includes miscellaneous products, motor gasoline blending components, and other hydrocarbons and oxygenates.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report" and the U.S. Bureau of the Census.

**Table 49. Net Imports of Crude Oil and Petroleum Products Into the United States by Country,
May 1993**
(Thousand Barrels per Day)

Country	Crude Oil ^a	Liquefied Petroleum Gases	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Petroleum Coke	Lubricants	Other Products ^b	Total Products	Total Crude Oil and Products
Arab OPEC	1,646	74	10	2	(s)	0	-3	(s)	302	384	2,030
Algeria	3	42	0	0	0	0	0	(s)	183	225	228
Kuwait	222	0	0	0	0	0	0	(s)	0	(s)	222
Qatar	0	0	0	0	0	0	0	(s)	0	(s)	(s)
Saudi Arabia	1,361	33	10	2	(s)	0	-1	(s)	119	161	1,523
United Arab Emirates	59	0	0	0	(s)	0	-2	(s)	(s)	-2	57
Other OPEC	1,984	(s)	35	44	39	76	-4	-10	87	266	2,250
Ecuador	56	0	0	0	(s)	0	0	(s)	(s)	(s)	56
Gabon	169	0	0	0	0	0	0	0	0	0	169
Indonesia	82	0	0	0	-3	0	0	-7	(s)	-10	72
Iran	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Nigeria	723	0	0	0	-7	19	0	-3	(s)	9	732
Venezuela	954	(s)	35	44	49	58	-4	(s)	87	268	1,222
Non OPEC	2,807	24	173	-31	-79	95	-216	-18	393	342	3,149
Angola	287	0	0	0	0	0	0	(s)	(s)	(s)	287
Argentina	12	0	(s)	0	(s)	0	0	-1	6	5	17
Australia	13	(s)	0	0	0	0	-14	(s)	(s)	-14	-1
Bahama Islands	0	-2	-1	(s)	(s)	4	0	(s)	(s)	(s)	(s)
Belgium & Luxembourg	0	0	22	0	(s)	0	-9	(s)	12	25	25
Brazil	0	0	39	0	-7	0	-4	(s)	2	30	30
Cameroon	0	0	0	0	0	5	0	(s)	0	5	5
Canada	873	56	58	-2	41	8	-14	-2	46	190	1,063
China, People's Republic of	40	0	0	-8	-29	0	0	-1	(s)	-38	1
China, Taiwan	0	-7	0	0	-24	0	(s)	-1	(s)	-32	-32
Colombia	90	-2	0	0	0	58	0	(s)	(s)	58	145
Congo	14	0	0	0	0	5	0	0	0	5	19
Egypt	44	0	0	0	(s)	5	0	(s)	(s)	5	49
France	0	0	34	0	(s)	0	0	(s)	(s)	34	34
Greece	0	0	0	0	0	0	-3	(s)	(s)	-3	-3
Guatemala	6	-3	-5	(s)	0	-2	0	(s)	(s)	-11	-5
India	0	0	0	0	0	-9	0	-1	13	3	3
Italy	0	(s)	17	0	0	-24	-13	(s)	1	-19	-19
Jamaica	0	-1	0	0	0	-14	0	(s)	(s)	-15	-15
Japan	0	(s)	0	-30	-4	0	-53	-1	(s)	-87	-87
Korea, Republic of	0	(s)	0	0	-45	-3	-9	(s)	3	-55	-55
Malaysia	10	0	11	0	0	0	0	(s)	(s)	11	20
Mexico	846	-12	-56	(s)	-1	-24	-5	-4	50	-51	796
Netherlands	0	(s)	0	0	-16	0	-19	(s)	10	-26	-26
Netherlands Antilles	0	0	-8	0	-18	22	0	-9	55	41	41
Norway	65	0	0	0	0	0	0	(s)	0	(s)	65
Oman	0	0	0	0	0	0	0	0	27	27	27
Panama	0	(s)	0	0	(s)	-13	0	(s)	-2	-15	-15
Peru	0	0	0	0	-4	0	0	(s)	(s)	-4	-4
Puerto Rico	0	(s)	0	(s)	(s)	0	0	7	25	30	30
Romania	0	0	0	0	0	0	0	(s)	0	(s)	(s)
Russia	32	0	0	0	0	(s)	0	(s)	0	(s)	32
Spain	0	0	9	0	0	(s)	-12	(s)	25	22	22
Sweden	0	0	0	0	(s)	0	(s)	(s)	-3	-3	-3
Syria	35	0	0	0	(s)	0	0	(s)	0	(s)	35
Thailand	0	0	0	0	(s)	0	(s)	(s)	(s)	(s)	(s)
Trinidad and Tobago	51	(s)	7	0	(s)	3	0	(s)	(s)	10	61
Turkey	0	0	0	0	0	0	-27	(s)	0	-27	-27
United Kingdom	458	(s)	9	0	0	0	-5	(s)	19	22	481
Virgin Islands	-111	0	53	19	59	69	0	(s)	76	275	164
Yemen	0	0	0	0	0	23	0	0	0	23	23
Zaire	24	0	0	0	0	0	0	0	0	0	24
Other	9	-4	-17	-9	-30	-17	-19	-3	32	-67	-58
Total	6,436	98	218	15	-39	171	-223	-28	782	993	7,429
Persian Gulf^c	1,642	33	10	2	(s)	0	-7	(s)	119	156	1,798

^a Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^b Includes asphalt and road oil, aviation gasoline, aviation gasoline blending components, kerosene, miscellaneous products, motor gasoline blending components, naphtha for petrochemical feedstock use, other hydrocarbons and oxygenates, other oils for petrochemical feedstock use, pentanes plus, special naphthas, unfinished oils, and waxes.

^c Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-814, "Monthly Imports Report" and the U.S. Bureau of the Census.

Table 50. Year-to-Date Net Imports of Crude Oil and Petroleum Products into the United States by Country, January-May 1993
(Thousand Barrels per Day)

Country	Crude Oil ^a	Liquefied Petroleum Gases	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Petroleum Coke	Lubricants	Other Products ^b	Total Products	Total Crude Oil and Products
Arab OPEC	1,704	37	15	3	(s)	19	-2	(s)	274	346	2,049
Algeria	13	23	0	0	(s)	15	0	(s)	167	205	218
Kuwait	228	0	0	0	(s)	10	0	(s)	(s)	10	239
Qatar	0	0	0	0	0	0	0	(s)	1	1	1
Saudi Arabia	1,447	14	15	3	(s)	0	-1	(s)	105	136	1,583
United Arab Emirates	16	0	0	0	(s)	-12	-2	(s)	(s)	-15	1
Other OPEC	2,006	-4	51	46	75	91	-5	-2	81	333	2,339
Ecuador	53	-5	0	0	(s)	4	0	(s)	(s)	-1	51
Gabon	120	0	0	0	0	1	0	0	0	1	121
Indonesia	62	-1	0	0	-6	1	0	-2	(s)	-8	54
Iran	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Nigeria	823	0	0	-3	(s)	14	0	-1	2	13	836
Venezuela	948	2	51	49	81	70	-5	(s)	79	328	1,276
Non OPEC	2,613	47	60	-38	(s)	98	-231	-8	373	301	2,914
Angola	344	0	0	0	0	0	0	(s)	(s)	(s)	344
Argentina	23	0	(s)	0	(s)	2	1	(s)	5	8	31
Australia	3	(s)	-2	0	-2	0	-8	(s)	(s)	-12	-9
Bahama Islands	0	-1	-1	(s)	-1	14	0	(s)	(s)	11	11
Belgium & Luxembourg	0	(s)	5	0	(s)	2	-21	(s)	10	-4	-4
Brazil	0	-1	27	-1	-3	1	-1	(s)	-1	22	22
Brunei	1	0	0	0	0	0	0	(s)	0	(s)	1
Cameroon	0	0	0	0	0	3	(s)	(s)	0	3	3
Canada	804	75	47	-2	61	-4	-13	-2	36	199	1,003
China, People's Republic of	44	0	(s)	-5	-8	0	0	-1	(s)	-14	30
China, Taiwan	0	-3	-9	0	-16	-4	(s)	-1	-4	-36	-36
Colombia	132	-3	0	0	(s)	27	-1	(s)	(s)	23	155
Congo	61	0	0	0	0	12	0	(s)	0	12	72
Egypt	39	0	0	1	(s)	1	0	(s)	1	3	42
France	0	(s)	9	0	(s)	0	-7	(s)	7	9	9
Greece	0	0	0	0	0	0	-5	(s)	2	-2	-2
Guatemala	4	-1	-5	(s)	0	-3	0	(s)	(s)	-9	-6
India	0	0	0	-4	(s)	-2	-1	(s)	8	1	1
Italy	0	(s)	13	0	(s)	-17	-24	1	18	-9	-9
Jamaica	0	(s)	0	0	(s)	-17	0	(s)	(s)	-18	-18
Japan	0	(s)	-1	-39	-2	-4	-56	-1	-3	-105	-105
Korea, Republic of	-3	(s)	-2	-14	-38	-3	-3	(s)	19	-42	-44
Malaysia	6	(s)	2	0	0	0	0	(s)	(s)	2	8
Mexico	811	-14	-60	1	-2	-11	-3	-4	25	-68	743
Netherlands	0	(s)	0	(s)	-5	-1	-15	(s)	10	-12	-12
Netherlands Antilles	0	(s)	-4	2	-10	30	0	-2	39	54	54
Norway	84	(s)	0	0	0	0	(s)	(s)	2	1	86
Oman	0	0	0	0	0	0	0	(s)	15	15	15
Panama	0	-1	(s)	(s)	-2	-6	(s)	(s)	-1	-11	-11
Peru	0	0	(s)	0	-4	4	(s)	(s)	(s)	-1	-1
Puerto Rico	0	(s)	-6	(s)	-1	(s)	0	7	17	18	18
Romania	0	0	0	0	0	0	0	(s)	0	(s)	(s)
Russia	10	0	0	0	(s)	(s)	0	(s)	(s)	(s)	10
Spain	0	0	5	(s)	-3	1	-21	(s)	31	12	12
Sweden	0	(s)	0	0	(s)	0	-3	(s)	-1	-3	-3
Syria	15	0	0	0	(s)	0	0	(s)	5	5	19
Thailand	3	-1	0	0	(s)	-2	(s)	(s)	(s)	-3	(s)
Trinidad and Tobago	57	(s)	1	0	(s)	13	0	(s)	1	16	72
Turkey	0	0	0	0	0	0	-22	(s)	(s)	-22	-22
United Kingdom	272	1	9	(s)	(s)	0	-6	(s)	29	33	306
Virgin Islands	-118	(s)	37	30	54	67	0	(s)	65	252	135
Yemen	0	0	0	0	0	9	0	0	5	14	14
Zaire	16	0	0	0	0	0	0	(s)	0	(s)	16
Other	2	-4	-5	-7	-19	-14	-15	-4	34	-34	-32
Total	6,322	80	126	11	75	208	-237	-10	728	980	7,302
Persian Gulf^c	1,691	14	15	3	(s)	4	-3	(s)	108	141	1,831

^a Includes crude oil imported for storage in the Strategic Petroleum Reserve.

^b Includes asphalt and road oil, aviation gasoline, aviation gasoline blending components, kerosene, miscellaneous products, motor gasoline blending components, naphtha for petrochemical feedstock use, other hydrocarbons and oxygenates, other oils for petrochemical feedstock use, pentanes plus, special naphthas, unfinished oils, and waxes.

^c Includes Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

(s) = Less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-814, "Monthly Imports Report" and the U.S. Bureau of the Census.

**Table 51. Stocks of Crude Oil and Petroleum Products by PAD District,
May 1993**
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					U. S. Total
	I	II	III	IV	V	
Crude Oil	16,473	78,355	755,238	12,899	71,999	934,964
Refinery	15,470	14,643	49,668	2,593	22,500	104,874
Tank Farms and Pipelines	999	62,428	108,235	9,402	32,996	214,060
Leases	4	1,284	15,216	904	1,037	18,445
Strategic Petroleum Reserve	0	0	582,119	0	0	582,119
Alaskan In Transit	0	0	0	0	15,466	15,466
Total Stocks, All Oils (excluding Crude Oil)	158,992	166,936	267,095	18,472	96,816	708,311
Refinery	47,211	65,157	143,197	12,725	64,327	332,617
Bulk Terminal	84,978	63,164	77,905	2,987	26,233	255,267
Pipeline	26,635	36,351	37,842	2,462	6,180	109,470
Natural Gas Processing Plant	168	2,264	8,151	298	76	10,957
Pentanes Plus	27	3,435	6,566	167	41	10,236
Refinery	0	380	246	6	8	640
Bulk Terminal	21	2,041	3,902	0	19	5,983
Pipeline	0	779	1,067	68	0	1,914
Natural Gas Processing Plant	6	235	1,351	93	14	1,699
Liquefied Petroleum Gases	4,555	25,997	62,321	1,193	3,194	97,260
Refinery	1,715	3,638	10,083	458	1,428	17,322
Bulk Terminal	1,162	13,593	38,601	71	1,704	55,131
Pipeline	1,516	6,737	6,837	459	0	15,549
Natural Gas Processing Plant	162	2,029	6,800	205	62	9,258
Ethane/Ethylene	0	3,718	16,573	189	0	20,480
Refinery	0	2	682	0	0	684
Bulk Terminal	0	1,762	10,931	0	0	12,693
Pipeline	0	1,338	2,883	187	0	4,408
Natural Gas Processing Plant	0	616	2,077	2	0	2,695
Propane/Propylene	2,545	12,703	20,739	429	521	36,937
Refinery	357	1,441	2,947	73	131	4,949
Bulk Terminal	653	7,147	13,253	71	350	21,474
Pipeline	1,455	3,344	2,717	156	0	7,672
Natural Gas Processing Plant	80	771	1,822	129	40	2,842
Normal Butane/Butylene	1,736	6,549	15,910	341	2,063	26,599
Refinery	1,147	1,688	4,108	230	903	8,076
Bulk Terminal	507	3,144	9,022	0	1,152	13,825
Pipeline	15	1,233	765	49	0	2,062
Natural Gas Processing Plant	67	484	2,015	62	8	2,636
Isobutane/Isobutylene	274	3,027	9,099	234	610	13,244
Refinery	211	507	2,346	155	394	3,613
Bulk Terminal	2	1,540	5,395	0	202	7,139
Pipeline	46	822	472	67	0	1,407
Natural Gas Processing Plant	15	158	886	12	14	1,085
Other Hydrocarbons/Hydrogen/Oxygenates	2,064	1,544	7,718	195	5,181	16,702
Refinery	1,518	385	2,040	56	3,590	7,589
Bulk Terminal	546	1,159	5,477	139	1,117	8,438
Pipeline	0	0	201	0	474	675
Other Hydrocarbons/Hydrogen	14	47	1	0	8	70
Refinery	14	47	1	0	8	70
Fuel Ethanol	136	1,322	312	42	506	2,318
Refinery	W	180	W	W	W	267
Bulk Terminal ^a	W	W	W	W	W	W
Pipeline	W	W	W	W	W	W
ETBE	W	W	W	W	W	W
Refinery	W	W	W	W	W	W
Bulk Terminal	W	W	W	W	W	W
Pipeline	W	W	W	W	W	W
Methanol	W	W	W	W	W	576
Refinery	W	W	W	W	W	576

See footnotes at end of table.

**Table 51. Stocks of Crude Oil and Petroleum Products by PAD District,
May 1993 (Continued)**
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					U. S. Total
	I	II	III	IV	V	
MTBE	1,808	W	6,783	W	4,598	13,490
Refinery	1,395	W	1,583	W	3,467	6,617
Bulk Terminal	W	W	4,999	W	655	6,198
Pipeline	W	W	201	W	474	675
Other Oxygenates^b	W	W	W	W	W	W
Refinery	W	W	W	W	W	W
Bulk Terminal	W	W	W	W	W	W
Pipeline	W	W	W	W	W	W
Unfinished Oils	12,259	17,441	48,656	2,687	23,334	104,377
Refinery						
Naphthas and Lighter	2,896	5,604	11,915	490	4,109	25,014
Kerosene and Light Gas Oils	2,243	2,300	7,774	620	3,649	16,586
Heavy Gas Oils	6,112	5,913	19,836	1,230	12,122	45,213
Residuum	1,008	3,624	9,131	347	3,454	17,564
Motor Gasoline Blending Components	5,706	7,586	15,730	1,780	6,399	37,201
Refinery	5,368	6,181	14,839	1,780	5,883	34,051
Bulk Terminal	338	696	737	0	87	1,858
Pipeline	0	709	154	0	429	1,292
Aviation Gasoline Blending Components	0	0	41	0	12	53
Refinery	0	0	41	0	12	53
Finished Motor Gasoline	59,090	50,387	48,387	5,091	22,457	185,412
Refinery	10,735	11,096	19,684	2,329	7,994	51,838
Bulk Terminal	32,957	22,071	10,800	1,660	12,022	79,510
Pipeline	15,398	17,220	17,903	1,102	2,441	54,064
Reformulated	0	0	0	0	0	0
Refinery	0	0	0	0	0	0
Bulk Terminal	0	0	0	0	0	0
Pipeline	0	0	0	0	0	0
Oxygenated	2,928	2,063	3,338	247	1,579	10,155
Refinery	339	230	1,010	26	0	1,605
Bulk Terminal	2,560	1,501	174	221	1,186	5,642
Pipeline	29	332	2,154	0	393	2,908
Other	56,162	48,324	45,049	4,844	20,878	175,257
Refinery	10,396	10,866	18,674	2,303	7,994	50,233
Bulk Terminal	30,397	20,570	10,626	1,439	10,836	73,868
Pipeline	15,369	16,888	15,749	1,102	2,048	51,156
Finished Aviation Gasoline	513	374	375	34	378	1,674
Refinery	20	90	323	23	111	567
Bulk Terminal	493	212	52	11	267	1,035
Pipeline	0	72	0	0	0	72
Naphtha-Type Jet Fuel	275	835	1,574	281	1,277	4,242
Refinery	40	363	1,042	187	422	2,054
Bulk Terminal	141	224	113	0	503	981
Pipeline	94	248	419	94	352	1,207
Kerosene-Type Jet Fuel	9,793	7,818	12,601	692	7,325	38,229
Refinery	1,864	2,702	6,232	270	3,715	14,783
Bulk Terminal	3,738	2,437	1,455	233	2,690	10,553
Pipeline	4,191	2,679	4,914	189	920	12,893

See footnotes at end of table.

**Table 51. Stocks of Crude Oil and Petroleum Products by PAD District,
May 1993 (Continued)**
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					U. S. Total
	I	II	III	IV	V	
Kerosene	1,279	1,348	1,393	107	45	4,170
Refinery	83	616	953	93	32	1,777
Bulk Terminal	1,178	669	293	7	8	2,155
Pipeline	18	61	147	7	5	238
Distillate Fuel Oil	37,103	26,896	24,132	2,397	11,028	101,556
Refinery	5,816	7,708	12,913	1,145	4,990	32,572
Bulk Terminal	25,869	11,445	5,091	716	4,643	47,764
Pipeline	5,418	7,743	6,128	536	1,395	21,220
0.05 Percent Sulfur and Under	8,825	1,714	2,568	357	2,659	14,123
Refinery	555	197	874	89	1,317	3,032
Bulk Terminal	6,267	1,244	1,154	241	1,308	10,214
Pipeline	3	273	540	27	34	877
Greater than 0.05 Percent Sulfur	30,278	25,182	21,564	2,040	8,369	87,433
Refinery	5,261	7,511	12,039	1,056	3,673	29,540
Bulk Terminal	19,602	10,201	3,937	475	3,335	37,550
Pipeline	5,415	7,470	5,588	509	1,361	20,343
Residual Fuel Oil^c	15,598	2,831	17,007	323	7,287	43,046
Refinery	3,039	1,836	7,765	323	5,409	18,372
Bulk Terminal	12,559	986	9,242	0	1,714	24,501
Pipeline	0	9	0	0	164	173
Less than 0.31% Sulfur	2,659	15	1,493	113	690	4,970
Refinery	647	15	1,028	113	682	2,485
Bulk Terminal	2,012	0	465	0	8	2,485
0.31 to 1.00% Sulfur	5,767	595	4,169	89	734	11,354
Refinery	1,540	257	909	89	548	3,343
Bulk Terminal	4,227	338	3,260	0	186	8,011
Greater than 1.00% Sulfur	7,172	2,212	11,345	121	5,699	26,549
Refinery	852	1,564	5,828	121	4,179	12,544
Bulk Terminal	6,320	648	5,517	0	1,520	14,005
Naphtha for Petrochemical Feedstock Use	224	319	2,148	0	55	2,746
Refinery	224	319	2,148	0	55	2,746
Other Oils for Petrochemical Feedstock Use	3	1	1,356	0	142	1,502
Refinery	3	1	1,356	0	142	1,502
Special Naphthas	112	435	1,851	1	57	2,456
Refinery	37	359	1,740	1	57	2,194
Bulk Terminal	75	76	111	0	0	262
Lubricants	2,934	1,867	5,908	0	1,796	12,503
Refinery	749	837	5,226	0	877	7,689
Bulk Terminal	2,185	1,030	680	0	919	4,814
Waxes	170	130	535	44	123	1,002
Refinery	170	130	535	44	123	1,002
Petroleum Coke	826	2,666	2,976	466	3,896	10,830
Refinery	826	2,666	2,976	466	3,896	10,830
Asphalt and Road Oil	5,871	14,716	4,771	3,006	2,381	30,745
Refinery	2,680	8,309	3,983	2,857	2,159	19,988
Bulk Terminal	3,191	6,407	788	149	222	10,757
Miscellaneous Products	590	312	1,051	8	408	2,369
Refinery	65	100	416	0	90	671
Bulk Terminal	525	118	563	1	318	1,525
Pipeline	0	94	72	7	0	173
Total Stocks, All Oils	175,465	245,291	1,022,333	31,371	168,815	1,643,275

^a Includes stocks held by producers.

^b Includes tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

^c Sulfur content not available for stocks held by pipelines.

W = Withheld to avoid disclosure of individual company data.

Note: Stocks are reported as of the last day of the month.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," and EIA-816, "Monthly Natural Gas Liquids Report."

Table 52. Refinery, Bulk Terminal, and Natural Gas Plant Stocks of Selected Petroleum Products by PAD District and State, May 1993
(Thousand Barrels)

PAD District and State	Motor Gasoline				Kerosene	Distillate Fuel Oil			Residual Fuel	Propane/Propylene
	Total	Reformulated	Oxygenated	Other		Total	0.05% Sulfur and Under	Greater than 0.05% Sulfur		
PAD District I	43,692	0	2,899	40,793	1,261	31,685	6,822	24,863	15,598	1,090
Connecticut	1,678	0	12	1,666	10	1,295	224	1,071	72	W
Delaware, D.C., Maryland	2,717	0	233	2,484	87	2,200	621	1,579	2,552	W
Florida	6,058	0	398	5,660	145	1,813	311	1,502	1,174	134
Georgia	2,351	0	99	2,252	77	919	138	781	357	W
Maine, New Hampshire, Vermont	1,136	0	147	989	96	1,466	96	1,370	527	W
Massachusetts	2,149	0	353	1,796	54	1,755	0	1,755	963	W
New Jersey	10,124	0	846	9,278	69	8,800	2,458	6,342	5,342	W
New York	5,191	0	85	5,106	127	4,605	1,529	3,076	2,369	W
North Carolina	2,248	0	112	2,136	117	1,075	124	951	259	W
Pennsylvania	5,137	0	425	4,712	290	3,846	413	3,433	906	W
Rhode Island	963	0	0	963	W	923	35	888	W	W
South Carolina	1,255	0	188	1,067	39	576	87	489	W	W
Virginia	2,596	0	1	2,595	134	2,314	731	1,583	653	W
West Virginia	89	0	0	89	W	98	55	43	W	W
PAD District II	33,167	0	1,731	31,436	1,285	19,153	1,441	17,712	2,822	9,359
Illinois	6,377	0	164	6,213	65	3,719	257	3,462	1,119	805
Indiana	4,672	0	102	4,570	125	2,878	349	2,529	355	W
Iowa	1,248	0	19	1,229	W	1,072	89	983	W	W
Kansas, Nebraska	3,411	0	221	3,190	7	1,887	185	1,702	34	5,659
Kentucky	1,092	0	74	1,018	59	565	30	535	W	W
Michigan	3,129	0	127	3,002	80	1,459	6	1,453	82	806
Minnesota	1,689	0	0	1,689	W	1,425	39	1,386	209	W
Missouri	1,228	0	47	1,181	W	603	146	457	W	W
North Dakota, South Dakota	675	0	0	675	W	729	6	723	W	W
Ohio	3,397	0	451	2,946	575	1,594	225	1,369	267	W
Oklahoma	2,200	0	176	2,024	W	1,365	79	1,286	286	790
Tennessee	2,183	0	350	1,833	76	806	1	805	242	W
Wisconsin	1,866	0	0	1,866	W	1,051	29	1,022	26	W
PAD District III	30,484	0	1,184	29,300	1,246	18,004	2,028	15,976	17,007	18,022
Alabama	1,344	0	144	1,200	16	644	65	579	374	67
Arkansas	736	0	0	736	W	274	145	129	W	W
Louisiana	5,336	0	53	5,283	177	4,022	394	3,628	6,809	2,633
Mississippi	3,095	0	30	3,065	6	1,772	335	1,437	W	907
New Mexico	492	0	0	492	W	266	24	242	10	W
Texas	19,481	0	957	18,524	1,021	11,026	1,065	9,961	9,002	14,297
PAD District IV	3,989	0	247	3,742	100	1,861	330	1,531	323	273
Colorado	1,445	0	205	1,240	W	351	119	232	W	W
Idaho	281	0	42	239	W	182	94	88	W	W
Montana	1,057	0	0	1,057	W	585	36	549	56	23
Utah	539	0	0	539	W	373	81	292	132	95
Wyoming	667	0	0	667	W	370	0	370	W	65
PAD District V	20,016	0	1,186	18,830	40	9,633	2,625	7,008	7,123	521
Alaska	634	0	2	632	W	702	301	401	W	W
Arizona	888	0	0	888	W	213	23	190	W	W
California	12,402	0	947	11,455	32	5,636	1,601	4,035	4,395	120
Hawaii	773	0	0	773	W	684	43	641	W	W
Nevada	198	0	0	198	W	167	3	164	W	W
Oregon	1,468	0	0	1,468	W	711	286	425	89	W
Washington	3,653	0	237	3,416	W	1,520	368	1,152	989	49
U.S. Total	131,348	0	7,247	124,101	3,932	80,336	13,246	67,090	42,873	29,265

W = Withheld to avoid disclosure of individual company data.

Notes: • Stocks are reported as of the last day of the month. • Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA) Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," and EIA-816, "Monthly Natural Gas Liquids Report."

Table 53. Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, May 1993
(Thousand Barrels)

Commodity	From I to			From II to				From III to	
	II	III	V	I	III	IV	V	I	II
Crude Oil	47	0	0	71	1,267	430	0	0	56,422
Petroleum Products	8,027	480	0	3,502	5,134	2,891	0	72,884	28,384
Pentanes Plus	0	0	0	0	169	0	0	0	673
Liquefied Petroleum Gases	0	0	0	967	3,172	42	0	1,158	3,616
Unfinished Oils	9	0	0	29	0	0	0	278	0
Motor Gasoline Blending Components	25	76	0	7	0	0	0	153	1,050
Finished Motor Gasoline	5,663	161	0	1,500	1,069	1,695	0	46,883	15,271
Reformulated	0	0	0	0	0	0	0	0	0
Oxygenated	0	0	0	0	0	0	0	324	0
Other	5,663	161	0	1,500	1,069	1,695	0	46,559	15,271
Finished Aviation Gasoline	14	0	0	0	0	8	0	144	36
Jet Fuel	274	0	0	206	277	677	0	8,746	3,095
Naphtha-Type	0	0	0	0	49	0	0	185	137
Kerosene-Type	274	0	0	206	228	677	0	8,561	2,958
Kerosene	0	0	0	22	0	0	0	0	0
Distillate Fuel Oil	2,017	216	0	472	147	469	0	14,612	3,998
0.05 percent sulfur and under	0	0	0	30	0	318	0	139	249
Greater than 0.05 percent sulfur	2,017	216	0	442	147	151	0	14,473	3,749
Residual Fuel Oil	0	0	0	63	263	0	0	120	0
Petrochemical Feedstocks ^a	25	0	0	0	0	0	0	0	0
Special Naphthas	0	0	0	0	0	0	0	74	45
Lubricants	0	27	0	83	28	0	0	365	273
Waxes	0	0	0	0	0	0	0	5	0
Asphalt and Road Oil	0	0	0	144	0	0	0	241	257
Miscellaneous Products	0	0	0	9	11	0	0	105	70
Total	8,074	480	0	3,573	6,401	3,321	0	72,884	84,806

Commodity	From III to		From IV to			From V to			
	IV	V	II	III	V	I	II	III	IV
Crude Oil	0	0	2,755	1,126	0	0	0	4,025	0
Petroleum Products	0	1,551	1,829	1,982	1,090	0	0	0	0
Pentanes Plus	0	0	155	207	0	0	0	0	0
Liquefied Petroleum Gases	0	0	921	1,775	0	0	0	0	0
Unfinished Oils	0	0	0	0	0	0	0	0	0
Motor Gasoline Blending Components	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	0	858	420	0	757	0	0	0	0
Reformulated	0	0	0	0	0	0	0	0	0
Oxygenated	0	0	0	0	0	0	0	0	0
Other	0	858	420	0	757	0	0	0	0
Finished Aviation Gasoline	0	0	0	0	0	0	0	0	0
Jet Fuel	0	255	100	0	188	0	0	0	0
Naphtha-Type	0	139	100	0	75	0	0	0	0
Kerosene-Type	0	116	0	0	113	0	0	0	0
Kerosene	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil	0	393	233	0	145	0	0	0	0
0.05 percent sulfur and under	0	0	0	0	0	0	0	0	0
Greater than 0.05 percent sulfur	0	393	233	0	145	0	0	0	0
Residual Fuel Oil	0	0	0	0	0	0	0	0	0
Petrochemical Feedstocks ^a	0	0	0	0	0	0	0	0	0
Special Naphthas	0	0	0	0	0	0	0	0	0
Lubricants	0	45	0	0	0	0	0	0	0
Waxes	0	0	0	0	0	0	0	0	0
Asphalt and Road Oil	0	0	0	0	0	0	0	0	0
Miscellaneous Products	0	0	0	0	0	0	0	0	0
Total	0	1,551	4,584	3,108	1,090	0	0	4,025	0

^a Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

Sources: Energy Information Administration (EIA) Forms EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," and EIA-817, "Monthly Tanker and Barge Movement Report."

**Table 54. Movements of Crude Oil and Petroleum Products by Pipeline Between PAD Districts,
May 1993
(Thousand Barrels)**

Commodity	From I to		From II to			From III to	
	II	III	I	III	IV	I	II
Crude Oil	47	0	0	1,267	430	0	56,387
Petroleum Products	7,957	0	2,264	4,845	2,891	58,057	25,043
Pentanes Plus	0	0	0	169	0	0	673
Liquefied Petroleum Gases	0	0	967	3,172	42	946	3,593
Motor Gasoline Blending Components	0	0	7	0	0	153	878
Finished Motor Gasoline	5,652	0	1,008	1,069	1,695	37,486	13,617
Reformulated	0	0	0	0	0	0	0
Oxygenated	0	0	0	0	0	0	0
Other	5,652	0	1,008	1,069	1,695	37,486	13,617
Finished Aviation Gasoline	14	0	0	0	8	14	36
Jet Fuel	274	0	134	277	677	6,974	2,933
Naphtha-Type	0	0	0	49	0	185	137
Kerosene-Type	274	0	134	228	677	6,789	2,796
Kerosene	0	0	22	0	0	0	0
Distillate Fuel Oil	2,017	0	126	147	469	12,484	3,263
0.05 percent sulfur and under	0	0	30	0	318	0	249
Greater than 0.05 percent sulfur	2,017	0	96	147	151	12,484	3,014
Residual Fuel Oil	0	0	0	0	0	0	0
Miscellaneous Products	0	0	0	11	0	0	50
Total	8,004	0	2,264	6,112	3,321	58,057	81,430

Commodity	From III to		From IV to			From V to	
	IV	V	II	III	V	III	IV
Crude Oil	0	0	2,755	1,126	0	3,311	0
Petroleum Products	0	1,506	1,829	1,982	1,090	0	0
Pentanes Plus	0	0	155	207	0	0	0
Liquefied Petroleum Gases	0	0	921	1,775	0	0	0
Motor Gasoline Blending Components	0	0	0	0	0	0	0
Finished Motor Gasoline	0	858	420	0	757	0	0
Reformulated	0	0	0	0	0	0	0
Oxygenated	0	0	0	0	0	0	0
Other	0	858	420	0	757	0	0
Finished Aviation Gasoline	0	0	0	0	0	0	0
Jet Fuel	0	255	100	0	188	0	0
Naphtha-Type	0	139	100	0	75	0	0
Kerosene-Type	0	116	0	0	113	0	0
Kerosene	0	0	0	0	0	0	0
Distillate Fuel Oil	0	393	233	0	145	0	0
0.05 percent sulfur and under	0	0	0	0	0	0	0
Greater than 0.05 percent sulfur	0	393	233	0	145	0	0
Residual Fuel Oil	0	0	0	0	0	0	0
Miscellaneous Products	0	0	0	0	0	0	0
Total	0	1,506	4,584	3,108	1,090	3,311	0

Sources: Energy Information Administration (EIA) Forms EIA-812, "Monthly Product Pipeline Report," and EIA-813, Monthly Crude Oil Report."

Table 55. Movements of Crude Oil and Petroleum Products by Tanker and Barge Between PAD Districts, May 1993
(Thousand Barrels)

Commodity	From I to			From II to			From III to	
	II	III	V	I	III	V	I	New England
Crude Oil	0	0	0	71	0	0	0	0
Petroleum Products	70	480	0	1,238	289	0	14,827	250
Liquefied Petroleum Gases	0	0	0	0	0	0	212	0
Unfinished Oils	9	0	0	29	0	0	278	0
Motor Gasoline Blending Components	25	76	0	0	0	0	0	0
Finished Motor Gasoline	11	161	0	492	0	0	9,397	0
Reformulated	0	0	0	0	0	0	0	0
Oxygenated	0	0	0	0	0	0	324	0
Other	11	161	0	492	0	0	9,073	0
Finished Aviation Gasoline	0	0	0	0	0	0	130	0
Jet Fuel	0	0	0	72	0	0	1,772	0
Naphtha-Type	0	0	0	0	0	0	0	0
Kerosene-Type	0	0	0	72	0	0	1,772	0
Kerosene	0	0	0	0	0	0	0	0
Distillate Fuel Oil	0	216	0	346	0	0	2,128	250
0.05 percent sulfur and under	0	0	0	0	0	0	139	0
Greater than 0.05 percent sulfur	0	216	0	346	0	0	1,989	250
Residual Fuel Oil	0	0	0	63	263	0	120	0
Less than 0.31 percent sulfur	0	0	0	0	0	0	120	0
0.31 to 1.00 percent sulfur	0	0	0	0	0	0	0	0
Greater than 1.00 percent sulfur	0	0	0	63	263	0	0	0
Petrochemical Feedstocks ^a	25	0	0	0	0	0	0	0
Special Naphthas	0	0	0	0	0	0	74	0
Lubricants	0	27	0	83	26	0	365	0
Waxes	0	0	0	0	0	0	5	0
Asphalt and Road Oil	0	0	0	144	0	0	241	0
Miscellaneous Products	0	0	0	9	0	0	105	0
Total	70	480	0	1,309	289	0	14,827	250

Commodity	From III to				From V to		
	Central Atlantic	Lower Atlantic	II	V	I	II	III
Crude Oil	0	0	35	0	0	0	714
Petroleum Products	425	14,152	3,341	45	0	0	0
Liquefied Petroleum Gases	0	212	23	0	0	0	0
Unfinished Oils	40	238	0	0	0	0	0
Motor Gasoline Blending Components	0	0	172	0	0	0	0
Finished Motor Gasoline	29	9,368	1,654	0	0	0	0
Reformulated	0	0	0	0	0	0	0
Oxygenated	17	307	0	0	0	0	0
Other	12	9,061	1,654	0	0	0	0
Finished Aviation Gasoline	10	120	0	0	0	0	0
Jet Fuel	0	1,772	162	0	0	0	0
Naphtha-Type	0	0	0	0	0	0	0
Kerosene-Type	0	1,772	162	0	0	0	0
Kerosene	0	0	0	0	0	0	0
Distillate Fuel Oil	0	1,878	735	0	0	0	0
0.05 percent sulfur and under	0	139	0	0	0	0	0
Greater than 0.05 percent sulfur	0	1,739	735	0	0	0	0
Residual Fuel Oil	0	120	0	0	0	0	0
Less than 0.31 percent sulfur	0	120	0	0	0	0	0
0.31 to 1.00 percent sulfur	0	0	0	0	0	0	0
Greater than 1.00 percent sulfur	0	0	0	0	0	0	0
Petrochemical Feedstocks ^a	0	0	0	0	0	0	0
Special Naphthas	0	74	45	0	0	0	0
Lubricants	275	90	273	45	0	0	0
Waxes	5	0	0	0	0	0	0
Asphalt and Road Oil	0	241	257	0	0	0	0
Miscellaneous Products	66	39	20	0	0	0	0
Total	425	14,152	3,376	45	0	0	714

^a Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

Sources: Energy Information Administration (EIA) Forms EIA-812, "Monthly Product Pipeline Report" and EIA-817, "Monthly Tanker and Barge Movement Report."

Table 56. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, May 1993
(Thousand Barrels)

Commodity	PAD District I			PAD District II		
	Receipts	Shipments	Net Receipts	Receipts	Shipments	Net Receipts
Crude Oil	71	47	24	59,224	1,768	57,456
Petroleum Products	76,386	8,507	67,879	38,240	11,527	26,713
Pentanes Plus	0	0	0	828	169	659
Liquefied Petroleum Gases	2,125	0	2,125	4,537	4,181	356
Ethane/Ethylene	0	0	0	616	1,878	-1,262
Propane/Propylene	2,110	0	2,110	2,742	1,832	910
Normal Butane/Butylene	15	0	15	498	329	169
Isobutane/Isobutylene	0	0	0	681	142	539
Unfinished Oils	307	9	298	9	29	-20
Motor Gasoline Blending Components	160	101	59	1,075	7	1,068
Finished Motor Gasoline	48,383	5,824	42,559	21,354	4,264	17,090
Reformulated	0	0	0	0	0	0
Oxygenated	324	0	324	0	0	0
Other	48,059	5,824	42,235	21,354	4,264	17,090
Finished Aviation Gasoline	144	14	130	50	8	42
Jet Fuel	8,952	274	8,678	3,469	1,160	2,309
Naphtha-Type	185	0	185	237	49	188
Kerosene-Type	8,767	274	8,493	3,232	1,111	2,121
Kerosene	22	0	22	0	22	-22
Distillate Fuel Oil	15,084	2,233	12,851	6,248	1,088	5,160
0.05 percent sulfur and under	169	0	169	249	348	-99
Greater than 0.05 percent sulfur	14,915	2,233	12,682	5,999	740	5,259
Residual Fuel Oil	183	0	183	0	326	-326
Petrochemical Feedstocks ^a	0	25	-25	25	0	25
Special Naphthas	74	0	74	45	0	45
Lubricants	448	27	421	273	109	164
Waxes	5	0	5	0	0	0
Asphalt and Road Oil	385	0	385	257	144	113
Miscellaneous Products	114	0	114	70	20	50
Total	76,457	8,554	67,903	97,484	13,295	84,169

Commodity	PAD District III			PAD District IV			PAD District V		
	Receipts	Shipments	Net Receipts	Receipts	Shipments	Net Receipts	Receipts	Shipments	Net Receipts
Crude Oil	6,418	56,422	-50,004	430	3,881	-3,451	0	4,025	-4,025
Petroleum Products	7,596	102,819	-95,223	2,891	4,901	-2,010	2,641	0	2,641
Pentanes Plus	376	673	-297	0	362	-362	0	0	0
Liquefied Petroleum Gases	4,947	4,774	173	42	2,696	-2,654	0	0	0
Ethane/Ethylene	2,771	324	2,447	0	1,185	-1,185	0	0	0
Propane/Propylene	1,341	3,518	-2,177	41	884	-843	0	0	0
Normal Butane/Butylene	538	330	208	1	393	-392	0	0	0
Isobutane/Isobutylene	297	602	-305	0	234	-234	0	0	0
Unfinished Oils	0	278	-278	0	0	0	0	0	0
Motor Gasoline Blending Components	76	1,203	-1,127	0	0	0	0	0	0
Finished Motor Gasoline	1,230	63,012	-61,782	1,695	1,177	518	1,615	0	1,615
Reformulated	0	0	0	0	0	0	0	0	0
Oxygenated	0	324	-324	0	0	0	0	0	0
Other	1,230	62,688	-61,458	1,695	1,177	518	1,615	0	1,615
Finished Aviation Gasoline	0	180	-180	8	0	8	0	0	0
Jet Fuel	277	12,096	-11,819	677	288	389	443	0	443
Naphtha-Type	49	461	-412	0	175	-175	214	0	214
Kerosene-Type	228	11,635	-11,407	677	113	564	229	0	229
Kerosene	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil	363	19,003	-18,640	469	378	91	538	0	538
0.05 percent sulfur and under	0	388	-388	318	0	318	0	0	0
Greater than 0.05 percent sulfur	363	18,615	-18,252	151	378	-227	538	0	538
Residual Fuel Oil	263	120	143	0	0	0	0	0	0
Petrochemical Feedstocks ^a	0	0	0	0	0	0	0	0	0
Special Naphthas	0	119	-119	0	0	0	0	0	0
Lubricants	53	683	-630	0	0	0	45	0	45
Waxes	0	5	-5	0	0	0	0	0	0
Asphalt and Road Oil	0	498	-498	0	0	0	0	0	0
Miscellaneous Products	11	175	-164	0	0	0	0	0	0
Total	14,014	159,241	-145,227	3,321	8,782	-5,461	2,641	4,025	-1,384

^a Includes naphtha less than 401° F endpoint and other oils equal to or greater than 401° F endpoint.

Sources: Energy Information Administration (EIA) Forms EIA-812, "Monthly Product Pipeline Report," EIA-813, "Monthly Crude Oil Report," and EIA-817, "Monthly Tanker and Barge Movement Report."

Appendix A

District Descriptions and Maps

Tank trucks are used to distribute heating oil to remote areas.

District Descriptions and Maps

The following are the Refining Districts which make up the Petroleum Administration for Defense (PAD) Districts.

PAD District I

East Coast: District of Columbia and the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and the following counties of the State of New York: Cayuga, Tompkins, Chemung, and all counties east and north thereof. Also the following counties in the State of Pennsylvania: Bradford, Sullivan, Columbia, Montour, Northumberland, Dauphin, York, and all counties east thereof.

Appalachian No. 1: The State of West Virginia and those parts of the States of Pennsylvania and New York not included in the East Coast District.

Sub-PAD District I

New England: The States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

Central Atlantic: The District of Columbia and the States of Delaware, Maryland, New Jersey, New York, and Pennsylvania.

Lower Atlantic: The States of Florida, Georgia, North Carolina, South Carolina, Virginia and West Virginia.

PAD District II

Indiana-Illinois-Kentucky: The States of Indiana, Illinois, Kentucky, Tennessee, Michigan, and Ohio.

Minnesota-Wisconsin-North and South Dakota: The States of Minnesota, Wisconsin, North Dakota, and South Dakota.

Oklahoma-Kansas-Missouri: The States of Oklahoma, Kansas, Missouri, Nebraska, and Iowa.

PAD District III

Texas Inland: The State of Texas except the Texas Gulf Coast District.

Texas Gulf Coast: The following counties of the State of Texas: Newton, Orange, Jefferson, Jasper, Tyler, Hardin, Liberty, Chambers, Polk, San Jacinto, Montgomery, Harris, Galveston, Waller, Fort Bend, Brazoria, Wharton, Matagorda, Jackson, Victoria, Calhoun, Refugio, Aransas, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron.

Louisiana Gulf Coast: The following parishes of the State of Louisiana: Vernon, Rapides, Avoyelles, Pointe Coupee, West Feliciana, East Feliciana, Saint Helena, Tangipahoa, Washington, and all parishes south thereof. Also the following counties of the State of Mississippi: Pearl River, Stone, George, Hancock, Harrison, and Jackson. Also the following counties of the State of Alabama: Mobile and Baldwin.

North Louisiana-Arkansas: The State of Arkansas and those parts of the States of Louisiana, Mississippi, and Alabama not included in the Louisiana Gulf Coast District.

New Mexico: The State of New Mexico.

PAD District IV

Rocky Mountain: The States of Montana, Idaho, Wyoming, Utah, and Colorado.

PAD District V

West Coast: The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

Petroleum Administration for Defense (PAD) Districts

Refining Districts

Appendix B

Detailed Statistics Explanatory Notes

The cluster of pipes and valves that control the flow of oil at the mouth of an oil well is what oilmen call a "Christmas Tree."

Explanatory Notes

The following Explanatory Notes are provided to assist in understanding and interpreting the data presented in the Detailed Statistics section in this publication.

- Note 1. Petroleum Supply Reporting System
- Note 2. Monthly Petroleum Supply Reporting System
- Note 3. Technical Notes for Detailed Statistics Tables
- Note 4. Domestic Crude Oil Production
- Note 5. Export Data
- Note 6. Quality Control and Data Revision
- Note 7. Frames Maintenance
- Note 8. 1981 Changes in the Petroleum Supply Reporting System
- Note 9. 1983 Changes in the Petroleum Supply Reporting System
- Note 10. 1984 Changes in the Petroleum Supply Reporting System
- Note 11. 1985 Changes in the Petroleum Supply Reporting System
- Note 12. 1986 Changes in the Petroleum Supply Reporting System
- Note 13. 1987 Changes in the Petroleum Supply Reporting System
- Note 14. 1989 Changes in the Petroleum Supply Reporting System
- Note 15. 1990 Changes in the Petroleum Supply Reporting System
- Note 16. 1991 Changes in the Petroleum Supply Reporting System
- Note 17. 1993 Changes in the Petroleum Supply Reporting System

Note 1. Petroleum Supply Reporting System

The Petroleum Supply Reporting System (PSRS) represents a family of data collection survey forms, data processing systems, and publication systems that have been consolidated to achieve comparability and consistency throughout. The survey forms that comprise the PSRS are:

Form Number	Name
EIA-800	"Weekly Refinery Report"
EIA-801	"Weekly Bulk Terminal Report"
EIA-802	"Weekly Product Pipeline Report"
EIA-803	"Weekly Crude Oil Stocks Report"
EIA-804	"Weekly Imports Report"
EIA-807	"Propane Telephone Survey"
EIA-810	"Monthly Refinery Report"
EIA-811	"Monthly Bulk Terminal Report"
EIA-812	"Monthly Product Pipeline Report"
EIA-813	"Monthly Crude Oil Report"
EIA-814	"Monthly Imports Report"
EIA-816	"Monthly Natural Gas Liquids Report"
EIA-817	"Monthly Tanker and Barge Movement Report"
EIA-818	"Monthly International Energy Agency Imports/Stocks-At-Sea Report"
EIA-819M	"Monthly Oxygenate Telephone Report"
EIA-819A	"Annual Oxygenate Report"
EIA-820	"Annual Refinery Report"

Forms EIA-800 through 804 comprise the Weekly Petroleum Supply Reporting System (WPSRS). A sample of all petroleum companies report weekly data to the Energy Information Administration (EIA) on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. The sample of companies that report weekly is selected from the universe of companies that report on the comparable monthly surveys. Data collected from the WPSRS are used to develop estimates of the most current monthly quantities in the Summary Statistics section of the *Petroleum Supply Monthly* (PSM) and which appear in the *Weekly Petroleum Status Report* (WPSR).

The Form EIA-807, "Propane Telephone Survey" is used to collect data on production, stocks, and imports of propane. These data are used to monitor the supply of propane and to report to the Congress and others on supplies when requested. Data are collected from a sample of respondents reporting on the Monthly Petroleum Supply Reporting System (MPSRS) surveys. Data are collected on a weekly basis during the heating season (October through March) and published in the *Winter Fuels Report*. During the non-heating season (April through September)

data are collected on end-of-month stocks only. These data are published in the *WPSR*.

Forms EIA-810 through 814, 816, and 817 comprise the MPSRS. These surveys are used to collect detailed refinery, natural gas plant and oxygenate plant operations data; refinery, bulk terminal, oxygenate plant, natural gas plant, and pipeline stocks data; crude oil and petroleum product imports data; and data on movements of petroleum products and crude oil between Petroleum Administration for Defense (PAD) Districts. A description of the MPSRS forms follows in Explanatory Note 2.

Data from these surveys are published in preliminary form in the *PSM*. They are published in final form in the Summary Statistics and the Detailed Statistics sections of the *Petroleum Supply Annual* (PSA), Volumes 1 and 2.

Summary information on the revision error between preliminary and final data is found in the feature article in the *PSM* entitled, "Timeliness and Accuracy of Petroleum Supply Data." The last article was published in the September 1992 issue and evaluated the accuracy of the data for 1991 compared with previous years.

The Form EIA-818, "Monthly International Energy Agency Imports/Stocks-At-Sea Report" is used to collect data on imports of crude oil and petroleum products and worldwide quantities of petroleum in transit or held as stocks-at-sea by U.S. companies. These data are not published but are used to assist the EIA in fulfilling its data-reporting obligation to the International Energy Agency (IEA) and to satisfy requirements of the North Atlantic Treaty Organization Civil Emergency Planning Organization. The data are used by the IEA in ongoing monitoring programs and contribute to petroleum-sharing programs during periods of international petroleum supply disruption.

The Form EIA-819M, "Monthly Oxygenate Telephone Report," is used to collect preliminary data on production, imports, and stocks of oxygenates by PAD District. These data are used to monitor the supply of oxygenates. Data are collected from a sample of respondents reporting on the MPSRS surveys and the EIA-822A/D, "Oxygenate Operations Identification Survey." Data are published in Appendix D of this publication and also in the *WPSR*.

The Form EIA-819A, "Annual Oxygenate Report" is used to collect data on current and projected nameplate production capacity of oxygenates. The results of this survey are published in the Oxygenate Capacity section of the *PSA*, Volume 1.

The Form EIA-820, "Annual Refinery Report" is used to collect data on refinery fuel use and consumption of steam and electricity, refinery receipts of crude oil by method of

transportation, and refinery operable and storage capacity. This survey is the primary source of data in the Refinery Capacity section of the *PSA*, Volume 1.

Note 2. Monthly Petroleum Supply Reporting System

The Monthly Petroleum Supply Reporting System (MPSRS) was implemented in January 1983 as the result of an extensive effort by the Energy Information Administration (EIA) to integrate the collection and processing of petroleum supply data that had been collected on other survey forms for many years. The collection of monthly petroleum supply statistics began as early as 1918 when the U.S. Bureau of Mines began collecting data on refinery operations, crude oil stocks and movements. The collection systems were further expanded in 1925 to include natural gas plant liquids production and storage, imports of crude oil and petroleum products and storage and movement of petroleum products in 1959, and tanker and barge movements of crude oil and petroleum products in 1964. Since their inception, each survey has undergone numerous changes, but the MPSRS was the first effort to make them all consistent and comparable. In 1993, the collection system was further expanded to include imports, stocks, and blending of oxygenates.

The forms that comprise the MPSRS are:

Form Number	Name
EIA-810	"Monthly Refinery Report"
EIA-811	"Monthly Bulk Terminal Report"
EIA-812	"Monthly Product Pipeline Report"
EIA-813	"Monthly Crude Oil Report"
EIA-814	"Monthly Imports Report"
EIA-816	"Monthly Natural Gas Liquids Report"
EIA-817	"Monthly Tanker and Barge Movement Report"
EIA-819M	"Monthly Oxygenate Telephone Report"

Respondent Frame

Form EIA-810, "Monthly Refinery Report" - Operators of all operating and idle petroleum refineries and blending plants located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam and other U.S. possessions. Approximately 240 respondents report on the Form EIA-810.

Form EIA-811, "Monthly Bulk Terminal Report" - Every bulk terminal operating company located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, and other U.S. possessions. A bulk terminal is primarily used for storage and/or marketing of petroleum products and has a total bulk storage capacity of 50,000 barrels or

more, and/or receives petroleum products by tanker, barge, or pipeline. Bulk terminal facilities associated with a product pipeline are included. In addition, the Form EIA-811 must be completed by merchant oxygenate plants that produce oxygenates. Approximately 350 respondents report on the Form EIA-811.

Form EIA-812, "Monthly Product Pipeline Report" - All product pipeline companies that carry petroleum products (including interstate, intrastate, and intracompany pipelines) in the 50 States and the District of Columbia. Approximately 80 respondents report on the Form EIA-812.

Form EIA-813, "Monthly Crude Oil Report" - All companies which carry or store 1,000 barrels or more of crude oil. Included in this survey are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil (except refineries), and companies transporting Alaskan crude oil by water in the 50 States and the District of Columbia. Approximately 170 respondents report on the Form EIA-813.

Form EIA-814, "Monthly Imports Report" - All companies, including subsidiary or affiliated companies, that import crude oil or petroleum products (1) into the 50 States and the District of Columbia, (2) into Puerto Rico, the Virgin Islands and other U.S. possessions (Guam, Midway Islands, Wake Island, American Samoa, and Northern Mariana Islands), and (3) from Puerto Rico, the Virgin Islands and other U.S. possessions into the 50 States and the District of Columbia. Imports into Foreign Trade Zones located in the 50 States and the District of Columbia are considered imports into the 50 States and the District of Columbia and must be reported. A report is required only if there has been an import during the month unless the importer has been selected as part of a sample to report every month regardless of activity. Approximately 860 respondents report on the Form EIA-814.

Form EIA-816, "Monthly Natural Gas Liquids Report" - Operators of all facilities that extract liquid hydrocarbons from a natural gas stream (natural gas processing plant) and/or separate a liquid hydrocarbon stream into its component products (fractionator). Approximately 800 respondents report on the Form EIA-816.

Form EIA-817, "Monthly Tanker and Barge Movement Report" - All companies that have custody of crude oil or petroleum products transported by tanker or barge between Petroleum Administration for Defense (PAD) Districts or between the Panama Canal and the United States. For purposes of this report, custody is defined as physical possession of crude oil or petroleum products on a company-owned tanker or barge. Also, companies which lease vessels or contract for the movement of crude oil or

petroleum products on a tanker or barge between PAD Districts or between the Panama Canal and the United States are considered to have custody. Approximately 35 respondents report on the Form EIA-817.

Form EIA-819M, "Monthly Oxygenate Telephone Report" - The sample of companies that report on the EIA-819M are selected from the universe of companies that report on the MPSRS surveys and the EIA-822A/D, "Oxygenate Operations Identification Survey." The universe consists of (1) operators of facilities that produce (manufacture or distill) oxygenates (including MTBE plants, petrochemical plants, and refineries that produce oxygenates as part of their operations); (2) operators of petroleum refineries; (3) operators of bulk terminals, bulk stations, blending plants, and other nonrefinery facilities that store and/or blend oxygenates; and (4) importers of oxygenates (importer of record) located in or importing oxygenates into the 50 States and the District of Columbia. Approximately 136 respondents report on the Form EIA-819M.

Description of Survey Forms

The Form EIA-810, "Monthly Refinery Report," is used to collect data on refinery input and capacity, sulfur content and API gravity of crude oil, and data on supply (beginning stocks, receipts, and production) and disposition (inputs, shipments, fuel use and losses, and ending stocks) of crude oil and refined products.

The Form EIA-811, "Monthly Bulk Terminal Report," is used to collect data on end-of-month stock levels of finished petroleum products by State in the custody of the bulk terminal company or merchant oxygenate plant regardless of ownership. Leased tankage at other facilities is excluded. All domestic and foreign stocks held at bulk terminals and in-transit thereto, except those in-transit by pipeline are included. Petroleum products in-transit by pipeline are reported by pipeline operators on Form EIA-812, "Monthly Product Pipeline Report."

The Form EIA-812, "Monthly Product Pipeline Report," is used to collect data on end-of-month stock levels and movements of petroleum products transported by pipeline. Intermediate movements for pipeline systems operating in more than two PAD Districts are included.

The Form EIA-813, "Monthly Crude Oil Report," is used to collect data on end-of-month stocks of crude oil held at pipeline and tank farms (associated with the pipelines) and terminals operated by the reporting company. Also, crude oil consumed by pipelines and on leases as pump fuel, boiler fuel, etc., is reported. Data are reported on a PAD District basis.

Total Alaskan crude oil stocks in-transit by water (including stocks held at transshipment terminals between Alaska and the continental United States) to the 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands are also reported by the transporting company having custody of the stocks.

Inter-PAD District movements of crude oil by pipeline are collected by the shipping and receiving PAD District. Intermediate movements for pipeline systems operating in more than two PAD Districts are not included.

The Form EIA-814, "Monthly Imports Report," is used to collect data on imports of crude oil and petroleum products (1) into the 50 States and the District of Columbia, (2) into Puerto Rico, the Virgin Islands, and other U.S. possessions (Guam, Midway Islands, Wake Island, American Samoa, and Northern Mariana Islands), and (3) from Puerto Rico, the Virgin Islands, and other U.S. possessions into the 50 States and the District of Columbia. Imports into Foreign Trade Zones located in the 50 States and the District of Columbia are considered imports into the 50 States and the District of Columbia.

The type of commodity, port of entry, country of origin, quantity (thousand barrels), sulfur percent by weight, API gravity, and name and location of the processing or storage facility are reported. Sulfur percent by weight is requested for crude oil, crude oil burned as fuel, and residual fuel oil only. API gravity is requested for crude oil only. The name and location of the processing or storage facility is requested for crude oil, unfinished oils, other hydrocarbons/hydrogen/oxygenates and blending components only.

The Form EIA-816, "Monthly Natural Gas Liquids Report," is used to collect data on the operations of natural gas processing plants and fractionators. Beginning and end-of-month stocks, receipts, inputs, production, shipments, and plant fuel use and losses during the month are collected from operators of natural gas processing plants. End-of-month stocks are collected from fractionators.

The Form EIA-817, "Monthly Tanker and Barge Movement Report," is used to collect data on the movements of crude oil and petroleum products between PAD Districts. Data are reported by shipping and receiving PAD District and sub-PAD District. Shipments to and from the Panama Canal are also included if the shipment was delivered to the Canal.

The Form EIA-819M, "Monthly Oxygenate Telephone Report," is used to collect data on production, stocks, and imports of oxygenates. Data on end-of-month stocks are reported on a custody basis regardless of ownership. Data are reported on a PAD District basis.

Collection Methods

Except for the EIA-819M, survey forms for the MPSRS can be submitted by mail, facsimile, or electronic transmission. Completed forms are required to be postmarked by the 20th calendar day following the end of the report month. Data for the EIA-819M are solicited by telephone or transmitted to the EIA by facsimile. Data for the EIA-819M survey are collected beginning on the seventh working day of each month. Receipt of the reports are monitored using an automated respondent mailing list. Telephone follow-up calls are made to nonrespondents prior to the publication deadline.

Response Rate

The response rate is generally 98 to 100 percent. Chronic nonrespondents and late filing respondents are contacted in writing and reminded of their requirement to report. Companies that file late or fail to file are subject to criminal fines, civil penalties, and other sanctions as provided by Section 13(i) of the Federal Energy Administration (FEA) Act.

Data Imputation

Imputation is performed for companies that fail to file Forms EIA-810 through 813, 816, and 819M. For such companies, previous monthly values are used for current values. The ending stock value of the previous month is used as the value for beginning and ending stocks for the current month.

On the EIA-819M, data are aggregated for each geographic region. Estimation factors, which are derived from 1992 reported data, are then applied to each cell to generate published estimates.

Data for nonrespondents on the Forms EIA-814 and 817 are not imputed because these data series, by respondent, are highly variable.

Confidentiality

The Office of Legal Counsel of the Department of Justice concluded on March 20, 1991, that the Federal Energy Administration Act requires the Energy Information Administration to provide company-specific data to the Department of Justice, or to any Federal agency when requested for official use, which may include enforcement of Federal law. The information contained on this form may also be made available, upon request, to another component of the Department of Energy (DOE), to any Committee of Congress, the General Accounting Office, or other Congressional agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order.

The information contained on Forms EIA-810 through 813, 816, 817, and 819M are kept confidential and not disclosed to the public to the extent that they satisfy the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. 552, the Department of Energy (DOE) regulations, 10 C.F.R. 1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. 1905. The information contained on Form EIA-814 are not considered confidential and historically has not been treated as such.

Upon receipt of a request for this information under the FOIA, the DOE shall make a final determination whether the information is exempt from disclosure in accordance with the procedures and criteria provided in the regulations. To assist us in this determination, respondents should demonstrate to the DOE that, for example, their information contains trade secrets or commercial or financial information whose release would be likely to cause substantial harm to their company's competitive position. A letter accompanying the submission that explains (on an element-by-element basis) the reasons why the information would be likely to cause the respondent substantial competitive harm if released to the public would aid in this determination. A new justification does not need to be provided each time information is submitted on the form, if the company has previously submitted a justification for that information and the justification has not changed. Company specific data are also provided to other DOE offices for the purpose of examining operations in the context of emergency response planning and actual emergencies.

The data collected on Forms EIA-810 through 814, 816, and 817 appear in EIA publications such as *Petroleum Supply Monthly* (PSM), *Monthly Energy Review*, *Petroleum Supply Annual* (PSA), and the *Annual Energy Review*.

Data on the breakdown between liquefied refinery gases and olefins is suppressed on PSM Table 29, "Refinery Net Production of Finished Petroleum Products by PAD and Refining Districts" and the corresponding PSA table to avoid disclosure of company identifiable data.

Data on PSM Table 28, "Refinery Input of Crude Oil and Petroleum Products by PAD and Refining Districts," Table 30, "Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining Districts," Table 51, "Stocks of Crude Oil and Petroleum Products by PAD District," and Table 52, "Refinery, Bulk Terminal, and Natural Gas Plant Stocks of Selected Petroleum Products, by State" as well as data on the production and stocks of oxygenates published in Appendix D are subject to statistical nondisclosure procedures for oxygenates. Statistics representing data aggregated from less than three com-

panies or aggregated data representing 60 percent or more of a single company's data are suppressed.

With the exception of Tables 28, 29, 30, 51, and 52 in the PSM (and corresponding PSA tables), the tables are not subject to statistical nondisclosure procedures. Thus, there may be some table cells which are based on data from only one or two respondents, or which are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable user of the data to make inferences about the data reported by a specific respondent.

Note 3. Technical Notes for Detailed Statistics Tables

The detailed statistics tables in the *Petroleum Supply Monthly* (PSM) provide complete supply and demand information for the current year. The tables are organized to locate National and Petroleum Administration for Defense (PAD) District summary data at the front followed by tables on crude oil and petroleum product production, import/export data, stocks information, and lastly, data on crude oil and petroleum product movements. To assist in the interpretation of these tables, the following technical notes are provided. Column and row headings are defined in the Glossary.

Supply

Field Production - Field production is the sum of crude oil production, natural gas plant liquids production, other liquids production, and finished petroleum products production.

Crude oil production is an estimate based on data received from State conservation agencies and the Mineral Management Service of the U.S. Department of the Interior. Refer to Explanatory Note 4 for further details.

Field production of natural gas plant liquids is reported on Form EIA-816 and published on a net basis (i.e., production minus inputs) in this column.

Other liquids field production is calculated by forcing the product supplied to be zero; thereby backing into field production.

Field production of finished petroleum products is calculated by (1) adding the amount of fuel ethanol that has been blended into finished motor gasoline, and (2) plus (+) or minus (-) the field production of motor gasoline blending components. Refer to Explanatory Note 17 for a further discussion of this calculation.

Negative field production of motor gasoline blending components represents an understatement for finished motor gasoline.

Negative field production of other finished motor gasoline represents an overstatement of other finished motor gasoline and an understatement of oxygenated motor gasoline.

Refinery Production - Published production of these products equal refinery production minus refinery input. Refinery production of other hydrocarbons, hydrogen and oxygenates, unfinished oils, and motor and aviation gasoline blending components appear on a net basis under refinery input. Negative refinery production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month.

Unaccounted for Crude Oil - This column is a balancing item for crude oil. This data element represents the difference between crude oil supply and disposition. Crude oil supply is the sum of field production and imports. Crude oil disposition is the sum of stock change, losses, refinery inputs, exports, and products supplied. A positive result indicates that refiners and exporters reported use of more crude oil than was reported to have been available to them. (This occurs, for example, when imports are undercounted due to late reporting or other problems). A negative result indicates that more crude oil was reported to have been supplied to refiners and exporters than they reported to have used.

Disposition

Stock Change - This column is calculated as the difference between the Ending Stocks column of this table and the Ending Stocks column of this table in the prior month's publication. A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

Crude Losses - The volume of crude oil reported by petroleum refineries as being lost in their operations. These losses are due to spills, contamination, fires, etc., as opposed to refining processing losses or gains.

Refinery Inputs - Refinery inputs of crude oil and intermediate materials (unfinished oils, gasoline blending components, other hydrocarbons and oxygenates, liquefied petroleum gases, and pentanes plus) that are processed at refineries to produce finished petroleum products.

Crude oil inputs represents total crude oil (domestic and foreign) input to atmospheric crude oil distillation units

and other refinery processing units (i.e., catalytic cracking units, cokers).

Inputs of natural gas liquids are natural gas liquids received from natural gas plants for blending and processing. Published inputs of natural gas liquids are reported on a gross basis.

Inputs of unfinished oils, motor and aviation gasoline blending components, and other hydrocarbons and oxygenates are published on a net basis (i.e., refinery input minus refinery production).

Inputs of finished petroleum products are published on a net basis (i.e., refinery production minus refinery inputs) and displayed under the refinery production column.

Exports - Exports include crude oil shipments from the 50 States to Puerto Rico, and the Virgin Islands.

Products Supplied - Products supplied is equal to field production, plus refinery production, plus imports, plus unaccounted for crude oil, (plus net receipts on a PAD District basis), minus stock change, minus crude losses, minus refinery inputs, minus exports.

Products supplied indicates those quantities of petroleum products supplied for domestic consumption. Occasionally, the result for a product is negative because total disposition of the product exceeds total supply. Negative product supplied may occur for a number of reasons: (1) product reclassification has not been reported; (2) data were misreported or reported late; (3) in the case of calculations on a PAD District basis, the figure for net receipts was inaccurate because the coverage of interdistrict movements was incomplete; and (4) products such as gasoline blending components and unfinished oils have entered the primary supply channels with their production not having been reported, e.g., streams returned to refineries from petrochemical plants.

Product supplied for crude oil is the sum of crude oil burned on leases and by pipelines as fuel. Prior to January 1983, crude oil burned on leases and by pipelines as fuel were reported as either distillate or residual fuel oil and were included in product supplied for these products.

Yields

The refinery yield of finished motor gasoline is calculated by subtracting the inputs of pentanes plus, liquefied petroleum gases, other hydrocarbons/oxygenates and motor gasoline blending components from the production of finished motor gasoline before dividing by the sum of crude oil input and unfinished oils input (net).

The refinery yield of finished aviation gasoline is calculated by subtracting the inputs of aviation gasoline blending components from the production of finished aviation gasoline before dividing by the sum of crude oil input and unfinished oils input (net).

Refinery yields for all products (except finished motor gasoline and finished aviation gasoline) are calculated by dividing the production for each product by the sum of crude oil input and unfinished oils input (net) reported in the U.S. total.

Stocks

Primary stocks of petroleum products do not include either secondary stocks held by dealers and jobbers or tertiary stocks held by consumers.

Movements

Movements of crude oil by pipeline between PAD Districts include trunk pipeline companies (interstate, intrastate, and intracompany pipelines). Intermediate movements for crude oil pipeline systems operating in more than two PAD Districts are not included.

Movements of petroleum products by pipeline between PAD Districts include trunk pipeline companies (interstate, intrastate and intracompany pipelines). Intermediate movements for product pipeline systems operating in more than two PAD Districts are included. For example, a shipment originating in PAD District 3, passing through PAD District 2 to PAD District 1, is reported as a movement from PAD District 3 to PAD District 2 and also from PAD District 2 to PAD District 1.

Waterborne movements of crude oil and petroleum products between PAD Districts include all shipments of crude oil or petroleum products for which the transporter has custody at the time of shipment. Custody is defined as physical possession of crude oil or petroleum products on a company-owned tanker and barge.

Note 4. Domestic Crude Oil Production

The Energy Information Administration (EIA) collects monthly crude oil production data on an ongoing basis. Data on crude oil production for States are reported to the EIA by State government agencies. Data on crude oil production for Federal offshore areas are reported to the EIA by the Minerals Management Service of the U.S. Department of the Interior and the Conservation Committee of California Oil Producers.

Currently, all except four crude oil producing States (Michigan, New York, Ohio, and Pennsylvania) report

production on a monthly basis. These four States report crude oil production on an annual basis. Estimates of monthly crude oil production for these four States are made by the EIA using data reported on Form EIA-182, "Domestic Crude Oil First Purchase Report." After the end of each calendar year, the monthly crude oil production estimates are updated using annual reports from various State agencies, the Minerals Management Service, and the Conservation Committee of California Oil Producers. The final estimate is published in the *Petroleum Supply Annual* (PSA).

Table 26 of this publication provides estimates of crude oil production in the latest month for which most State production data are available. There is a time lag of approximately 4 months between the end of the production month and the time when most monthly State crude oil production data become available.

In order to present more timely crude oil production estimates, the EIA prepares a weekly crude oil production estimate, which is used in the *Weekly Petroleum Status Report*. At the end of the production month, these weekly estimates are aggregated into an original estimate of monthly crude oil production. Approximately 45 days later, this original estimate is replaced by State-level interim estimates. The State-level interim estimates are based on: (a) data reported by the States (e.g., production data for Alaska are typically reported to the EIA before the interim estimate is made); (b) first purchase data reported on Form EIA-182, "Domestic Crude Oil First Purchase Report;" (c) exponential or hyperbolic curve fitted projections based on recent State data; or (d) constant level projections based on the average production rate during a recent time period.

Table B1 is intended to provide further insight into the EIA's estimates of monthly U.S. crude oil production. It shows: (a) how the aggregate of reported State data evolves over a period of 18 months; (b) the number of producing States that have not reported production for a given month within that period; and (c) various EIA estimates of monthly crude oil production within that period:

- The original estimate is a monthly aggregate of the weekly crude oil production estimates published in the *Weekly Petroleum Status Report*. This original monthly estimate is used in the *Petroleum Supply Monthly* (PSM) Tables S1 and S2 until replaced by the interim estimate.
- The interim estimate is used in the *PSM* Tables 1 through 25, and in Tables S1 and S2 until replaced by the final estimate.
- The initial estimate based upon first purchase data collected on the Form EIA-182 is used as an estimation

Table B1. U.S. Crude Oil^a Production Estimates and Reported States^b Data by Month
(Thousand Barrels per Day)

Date of Data Availability	Month of Production																	
	1-92	2-92	3-92	4-92	5-92	6-92	7-92	8-92	9-92	10-92	11-92	12-92	1-93	2-93	3-93	4-93	5-93	6-93
Reported State Data^c																		
3-14-92	1854	0																
4-14-92	2634	1875	0															
5-14-92	4860	2434	1849	0														
6-14-92	6767	4898	2665	1828	0													
7-14-92	7226	6834	4073	2566	1749	0												
8-14-92	7231	7242	6760	4046	2538	1773	0											
9-14-92	7240	7260	7206	6688	4738	2680	1740	0										
10-14-92	7243	7266	7224	7152	6638	4767	2572	1652	0									
11-14-92	7244	7267	7225	7166	7046	6954	6520	2465	1765	0								
12-14-92	7244	7271	7232	7173	7054	7050	7005	4959	2562	1696	0							
1-14-93	7244	7272	7233	7174	7055	7055	7006	6726	6416	2514	1743	0						
2-14-93	7245	7272	7233	7174	7056	7054	7009	6816	6810	5644	4121	1725	0					
3-14-93	7244	7272	7233	7174	7057	7053	7019	6817	6822	6482	5636	4290	1717	0				
4-14-93	7254	7282	7242	7185	7068	7065	7031	6828	6922	6917	6820	6873	4048	1700	0			
5-14-93	7256	7283	7245	7188	7069	7067	7032	6822	6924	6997	6829	6877	5549	4119	1738	0		
6-14-93	7365	7391	7352	7297	7173	7174	7137	6926	7030	7103	7007	6989	6745	6237	4112	1664	0	
7-14-93	7365	7391	7352	7297	7173	7174	7137	6926	7030	7103	7009	6991	6753	6743	6353	4058	1577	0
Producing States Without Reported Monthly Production^d																		
7-14-93	0	0	0	0	0	0	0	0	0	0	0	0	1	6	6	8	19	30 33
Production Estimates																		
Original ^e	7344	7360	7324	7279	7212	7217	7114	6958	6996	7031	7014	7078	7023	7001	6980	6904	6840	6771
Interim ^f	7363	7373	7315	7291	7110	7138	7096	6928	7019	7065	7027	7125	7008	6957	6976	6897	6833	
Form EIA-182																		
Initial	7171	7219	7168	7161	6878	6981	6945	6748	6836	6942	6908	6925	7001	6732	6962	6620	6128	
Revised	7176	7231	7065	7160	6918	6981	6936	6753	6862	6958	6887	6951	6775	6812	6810	6714		
Final ^g	7361	7389	7348	7293	7169	7167	7131	6922	7030	7126	7024	7103						

^a Includes lease condensate.

^b Includes Federal offshore areas, Gulf of Mexico (PADD III) and Pacific (PADD V), as two separate reporting entities.

^c Includes EIA prorated monthly production in 1992 (annual average of 75 thousand barrels per day) for four States (Michigan, New York, Ohio, and Pennsylvania) for which only annual State data are available. Includes EIA prorated production in 1992 (annual average of 75 thousand barrels per day) for four States (Michigan, New York, Ohio, and Pennsylvania) for which only annual State data are available.

^d Michigan, New York, Ohio, and Pennsylvania are counted as having monthly reported data in 1992 after their annual reports were received. These data are first reported as of 4-14-92. Michigan, New York, Ohio, and Pennsylvania are counted as having monthly reported data in 1992 after their annual reports were received. These data are first reported as of 6-14-93.

^e Original estimates are weighted averages based on the weekly estimates published in the *Weekly Petroleum Status Report*.

^f Interim estimates were made 44 days after the end of the production month.

^g Published in the *Petroleum Supply Annual* 1992, DOE/EIA 0340(92)/2.

tool in generating the interim estimate. The initial volume represents the best estimate available 40 days after the end of the production month and includes imputation for nonresponse and possible reporting errors. The revised volume is the best estimate available about 70 days after the production month and includes imputation as needed. A final revision is published concurrent with publication of Form EIA-182 price data in the *Petroleum Marketing Annual*.

- The final estimate is published in the *PSA*.

Note 5. Export Data

Each month the Energy Information Administration (EIA) receives magnetic tapes of aggregated export statistics from the U.S. Bureau of the Census (EM-522 and EM-594).

Census export statistics used in the *Petroleum Supply Monthly* reflect both government and nongovernment exports of domestic and foreign merchandise from the United States (the 50 States and the District of Columbia) to foreign countries and U.S. possessions, without regard to whether or not the exportation involves a commercial transaction. The following types of transactions are excluded from the statistics:

- (1) Merchandise shipped in transit through the United States from one foreign country to another, when documented as such with U.S. Customs.
- (2) Bunker fuels and other supplies and equipment for use on departing vessels, planes, or other carriers engaged in foreign trade.

Source of Export Information

The official U.S. export statistics are compiled by the U.S. Bureau of the Census. Exporters are required to file export documents with U.S. Customs officials (Customs Form 7525).

Country and Area of Destination

The country of destination is defined as the country of ultimate destination or the country where the goods are to be consumed, further processed, or manufactured, as known to the shipper at the time of exportation. If the shipper does not know the country of ultimate destination, the shipment is credited to the last country to which the shipper knows that the merchandise will be shipped in the same form as it was when exported.

Note 6. Quality Control and Data Revision

Quality Control

The Energy Information Administration (EIA) monitors the supply and disposition of crude oil, petroleum products, and natural gas liquids in the United States. Through a tracking system, the EIA provides insight into the activities of primary operators and distributors in the petroleum industry. The tracking system, known as the Petroleum Supply Reporting System (PSRS), consists of production, inputs, imports, inventories, movements, and other petroleum-related data collected on weekly, monthly, and annual surveys.

Survey forms are periodically reviewed for completeness, meaningfulness, and clarity. Modifications are made, when needed, to maintain efficient measure of the intended data items and to track product movement accurately throughout the industry. Through this process, the EIA can maintain consistency among forms, minimize respondent burden, and eliminate ambiguity.

In any survey, nonresponse can be a major concern because the effects can cause serious bias in survey results. Nonresponse occurs whenever requested information is not obtained from all units in a survey. The PSRS surveys have a very high response rate. In general, response rates average above 95 percent for the weekly survey and above 98 percent for monthly surveys. Whenever survey responses are not received in time to be included in published statistics, the data are imputed. Although imputing for missing data may not eliminate the total error associated with nonresponse, it can serve to reduce the error. The data reported in the previous month are used as imputed values for missing data for all surveys except the Forms EIA-814, "Monthly Imports Report," and EIA-817, "Monthly Tanker and Barge Movement Report." There is no imputation procedure for these surveys because these data series, by respondent, are highly variable.

Response error is the major factor affecting the accuracy of PSRS data. Response, or reporting error, is the difference between the true value and the value reported on a survey form. Response error can occur for any number of reasons. For example, figures may be entered incorrectly when written on forms by the respondent, or errors may result from the misunderstanding of survey form instructions or definitions. Response error can also occur from the use of preliminary data when final data are not available. This can result in differences between published preliminary and final data. To help detect and minimize probable reporting errors, automated editing procedures are used to check current data for consistency with past data, as well as for internal consistency (e.g., totals equal

to the sums of the parts), and to flag those data elements that fail edit criteria.

Errors can also be introduced during data processing. For example, while creating computer data files, key errors can occur in transcribing or coding the data; or information can be entered into the wrong cell. Using well designed edit criteria which examine orders of magnitude, cell position, and historical reporting patterns, many of these errors can be identified and corrected.

A principal objective of PSRS surveys is to provide a timely and accurate picture of petroleum industry activities. As part of this objective, a comparison of the data collected on the PSRS with other similar data series from sources outside of the Petroleum Supply Division is performed each year. The results of this data comparison are published in the *Petroleum Supply Monthly* (PSM) feature article, "Comparison of Independent Statistics on Petroleum Supply" and in subsequent explanatory notes.

The 819M data, which are based on sample estimates, serve as leading indicators of the PSRS monthly data for oxygenates. To assess the accuracy of the 819M statistics, data are compared with the monthly aggregate data for the EIA-810, 811, and 812 surveys. Although monthly data are still subject to error, they have been thoroughly reviewed and edited, and are considered to be the most accurate data available.

Resubmissions

Resubmissions are any changes to the originally submitted data that were either requested by the EIA, or initiated by the respondent. Resubmissions are compared with the original submission and processed at the time of receipt. For Forms EIA-810 through 813, 816, and 817 the Resubmission Tracking System (RTS) is run after resubmissions have been processed for the month. The RTS enables the user to study major products and data series to see how company resubmissions impact published data on a month by month basis. During the processing year, a summary of the effect of these resubmissions to major series is provided in Appendix C.

For the EIA-819M data, a determination is made on whether to process the resubmissions based on the magnitude of the revision. Cell entries on publication tables are marked with an "R" for revised.

Late Response

Respondents who fail to respond within the prescribed time limit (25th day following the end of the report month) become nonrespondents for that particular report period and are contacted by phone to obtain the current month's data. Respondents who are chronically late (i.e.,

3 consecutive months) are notified by EIA either by letter or telephone.

Nonresponse

Follow-up action is taken when a company fails to respond adequately to data requests from the EIA. Preliminary attempts to gather delinquent reports are made by phone. Noncompliance form letters are sent to those companies that have not submitted reports and have not responded to data requests by phone.

Note 7. Frames Maintenance

The Petroleum Supply Division (PSD) maintains complete lists of respondents to its monthly surveys. Each survey has a list of companies and facilities required to submit petroleum activity data. This list is known as the survey frame. Frame maintenance procedures are used to monitor the status of petroleum companies and facilities currently contained in each survey frame as well as to identify new members to be added to the frame. As a result, all known petroleum supply organizations falling within the definition of "Who Must Submit" participate in the survey.

The activities for frames maintenance are conducted within three time frames: monthly, annually, and triennially. Monthly frames maintenance procedures focus on examining several frequently published industry periodicals that report changes in status (births, deaths, sales, and acquisitions) of petroleum facilities producing, transporting, importing, and/or storing crude oil and petroleum products. These sources are augmented by articles in newspapers, letters from respondents indicating changes in status, and information received from survey systems operated by other offices. Survey managers review these sources to monitor changes in company operations and to develop lists of potential respondents. These activities assure coverage of the reporting universe and maintain accurate facility information on addresses and ownership.

The sample frame for the Form EIA-819M, "Monthly Oxygenate Telephone Report," is also updated on a monthly basis as needed.

Annual frames maintenance focuses on re-evaluating the "must submit" companies filing the Form EIA-814. In addition, the PSD conducts a comprehensive frame identifier survey of companies that produce, blend, store, or import oxygenates. This information is used in determining which companies are eligible respondents to the Monthly Petroleum Supply Reporting System surveys.

To supplement monthly and annual frames maintenance activities and to provide more thorough coverage, the

Table B2. New Basis Stocks¹
(Million Barrels)

Commodity	1980	1982	1983
Crude Oil			
Total	488	645	723
Other Primary	380	351	379
Crude Oil and Petroleum Products ..	1,425	1,461	1454
Motor Gasoline			
Total	263	244	222
Finished	214	202	186
Distillate Fuel Oil	205	186	140
Residual Fuel Oil	91	69	49
Jet Fuel			
Total	42	39	39
Kerosene-type	36	32	32
Liquefied			
Petroleum Gases	128	102	108
Propane/Propylene	69	57	55
Other Petroleum Products	207	219	210

¹ Stocks as of December 31.

PSD also conducts a comprehensive triennial frames investigation. These triennial evaluations result in the reassessment and recompilation of the complete frame for each survey.

Changes in Survey Frames

Beginning in January 1981, the Energy Information Administration (EIA) expanded its universe to include non-refinery blenders; redefined motor gasoline into two categories (finished leaded and finished unleaded); and separated blending components from finished motor gasoline as a reporting category. Refer to Explanatory Note 8 for future discussion.

In January 1981, 1983, and 1984 numerous respondents were added to bulk terminal and pipeline surveys affect-

ing subsequent stocks reported and stock change calculations. Table B2 displays the end-of-year stocks, in million barrels using the expanded coverage (new basis).

Beginning in January 1986, as a result of frames maintenance activities, 39 respondents were added to the monthly survey frames: 2 motor gasoline blenders, 30 bulk terminal operators, 3 pipeline operators, 3 crude oil stock holders, and 1 tanker and barge operator. Table B3 shows the impact of the data reported by the new respondents on published data for production and stocks of major petroleum products.

Also, beginning in January 1986, a major petroleum company consolidated production and stocks reporting for some of its facilities. Data previously reported separately on Form EIA-811, "Monthly Bulk Terminal Report," and on Form EIA-816, "Monthly Natural Gas Liquids Report" for two facilities were combined with data reported for two refineries on Form EIA-810, "Monthly Refinery Report." The primary impact of this reporting change is on Table 24, "Stocks of Crude Oil and Petroleum Products by PAD District," which showed a decrease in natural gas liquids (NGL) stocks at bulk terminals and natural gas processing plants, and an increase in NGL stocks at refineries.

Beginning no later than November 1992, the Clean Air Act Amendments of 1990 require that all gasoline sold in carbon monoxide nonattainment areas have an oxygen content of 2.7 percent (by weight) during winter months. Beginning in 1995 further requirements are that only reformulated gasoline having an average oxygen content of 2.0 percent be sold in the nine worst ozone nonattainment areas.

In 1991, the EIA conducted a frame identifier survey of companies that produce, blend, store, or import

Table B3. Impact of New Respondents to December 1985 PSM Data

Product	Refinery Production (thousand barrels per day)		Stocks ^a (thousand barrels)	
	Reported by New Respondents	Published U.S. Total	Reported by New Respondents	Published U.S. Total
Leaded Gasoline	1.3	2,326	224	81,379
Unleaded Gasoline	0.6	4,323	276	108,422
Distillate Fuel Oil	0	3,174	1,217	143,911
Residual Fuel Oil	0	1,055	1,747	50,671
NGLs & LRGs	0	393	409	80,898
Other Products	0	3,302	1,413	239,158
Crude Oil (excl. SPR)	—	—	2,314	318,695

^a Stocks as of December 31, 1985.

oxygenates. The purpose of this survey was to (1) identify all U.S. producers, blenders, storers, and importers of oxygenates; and (2) collect supply and blending data for 1990 and end of 1990 inventory data on those oxygenates blended into motor gasoline. A summary of the results from the identification survey were published in the *Weekly Petroleum Status Report* dated February 12, 1992 and in the February 1992 issue of the *Petroleum Supply Monthly*.

In order to continue to provide relevant information about U.S. and regional gasoline supply, the EIA conducted a second frame identifier survey of these companies during 1992. As a result, a number of respondents were added to the monthly surveys effective in January 1993: 19 blenders, 25 stock holders, and 8 importers. This change affected stocks reported and stock change calculations. However, a new basis stock level was not calculated.

Sampling

The sampling procedure used for the survey Form EIA-819M is the cut-off method and is performed using software developed by EIA's Office of Statistical Standards. In the cut-off method, companies are ranked from largest to smallest on the basis of quantities reported (oxygenate production, oxygenate stocks, and oxygenate imports) during 1992. Companies are chosen for the sample beginning with the largest and adding companies until the total sample covers approximately 90 percent of the total for each oxygenate item and supply type by geographic region (PAD Districts I through V) for which data may be published.

Note 8. 1981 Changes in the Petroleum Supply Reporting System

Petroleum statistics contained in this report for all years through 1980 were developed using definitions, concepts, reporting procedures, and aggregation methods that are consistent with those developed by the U.S. Bureau of Mines. Research conducted by the Energy Information Administration (EIA) in 1979 and 1980 indicated that changes had occurred in the petroleum industry that were not being adequately reflected in EIA's reporting system.

The EIA reporting forms, definitions, and procedures were modified beginning in January 1981 to describe industry operations more accurately. Unfortunately, empirical information is not available to precisely measure the data shortcomings through 1980. Estimates of the magnitudes of differences in the major data series are described below to form a basis for comparing 1979, 1980, and 1981 data.

Motor Gasoline

Prior to 1979, the EIA product-supplied series for motor gasoline was consistently about 2 percent lower than the Federal Highway Administration (FHWA) gasoline sales data series, which is derived from State tax receipts. The difference increased to about 3 percent in 1979 and 1980. There were two primary causes for this growing difference. First, refinery operations, particularly the flows of unfinished oils and the redesignation of some finished products, were not being accurately described on the EIA survey forms. Second, a large amount of gasoline was being produced away from refineries at "downstream blending stations" to take advantage of provisions in regulations governing the amount of lead that could be added. These blending stations were not reporting gasoline production to the EIA until the data system was changed in January 1981.

Quantitative estimates of the magnitude of the difference in EIA's gasoline product supplied data in 1979 and 1980 have been made by the EIA and the American Petroleum Institute (API). Table B4 provides 1979 and 1980 data as published in the *Petroleum Statement, Annual*, as well as EIA and API estimates of "recast" motor gasoline product supplied.

The EIA recast estimates were based upon preliminary monthly information in the *Monthly Petroleum Statement*. The ranges displayed in the EIA column reflect uncertainty in the estimates. Also shown are the FHWA motor gasoline sales statistics for those years.

Table B4. Finished Motor Gasoline Product Supplied
(Thousand Barrels per Day)

	EIA Reported	API Recast	EIA Recast	FHWA ^a
1979	7,034	7,302	7,183-7,347	7,258
1980	6,579	6,882	6,806-6,889	6,792

^a FHWA gasoline statistics based on data from Federal Highway Administration, *Estimate of Total Gasoline Use*, Table MF-21A published October 1980 and September 1981. Aviation gasoline (Table MF-24) has been subtracted from FHWA product supplied quantities to make data comparable.

Distillate and Residual Fuel Oil

Distillate and residual fuel oil refinery production statistics through 1980 were adjusted to account for an imbalance between unfinished oil supply and disposition. The reported quantities of refinery inputs of unfinished oils typically exceed the available supply of unfinished oils. It has been assumed that this occurs when distillate

and residual fuel oils produced by a refinery are shipped to another refinery, where it is treated as unfinished oil. This oil is then reprocessed rather than used or sold as distillate or residual fuel oil.

For many years (including 1980), the difference between unfinished oil disposition and supply was subtracted from distillate and residual fuel oil production to adjust for this discrepancy. Two-thirds of the difference was applied to distillate fuel oil, and one-third to residual fuel oil.

Beginning in January 1981, this adjustment was discontinued because there was not sufficient empirical evidence to support it. Table B5 presents distillate and residual fuel oil refinery production in 1979 and 1980 as published (adjusted) and on the same basis as 1981 statistics (unadjusted) to permit comparison.

Adjusted distillate and residual fuel oil product supplied volumes differ from the unadjusted volumes by the same amounts as the adjusted and unadjusted production volumes.

Table B5. Distillate and Residual Fuel Oil Production and Product Supplied
(Thousand Barrels per Day)

	Adjusted Refinery Production	Unadjusted Refinery Production	Difference	Unadjusted Product Supplied
Distillate Fuel Oil				
1979	3,152	3,169	16	3,327
1980	2,661	2,764	103	2,969
Residual Fuel Oil				
1979	1,687	1,695	8	2,834
1980	1,580	1,634	54	2,562

Total Petroleum Products

The imbalance between the supply and disposition of unfinished oils and gasoline blending components is included with other products (line 35) in Table 1. These imbalances are reported as negative product supplied in Table 2. Since these changes only involve redistribution of the volumes of finished motor gasoline, distillate and residual fuel oil, gasoline blending components, and unfinished oils, the total volume of petroleum products supplied remains unaffected by them.

Alaskan In-Transit Stocks

Stocks of Alaskan crude oil in-transit were included for the first time in January 1981. The major impact of this change is on the reporting of stock change calculations.

Using the expanded coverage (new basis), 1980 end-of-year crude oil stocks would have been 488 million barrels for Total and 380 million barrels for Other Primary.

Note 9. 1983 Changes in the Petroleum Supply Reporting System

January 1983 marked the implementation of recent changes in the collection, processing and availability of the Energy Information Administration's (EIA) petroleum supply data. Survey forms and definitions were made consistent; frames for bulk terminals, petroleum product pipelines and crude oil stock holders were updated, and the survey processing system was redesigned and incorporated into the new Petroleum Supply Reporting System (PSRS).

Changes in Data Collection

Changes in data collection can be grouped into five categories. Some were made to improve consistency, others to classify activity more precisely, and others to combine or eliminate information elements or to reduce the frequency of reporting in recognition of the trade-off between data value and reporting burden. The changes are itemized below.

- Motor gasoline was divided into three standard categories (finished leaded motor gasoline, finished unleaded motor gasoline and motor gasoline blending components).
- Aviation gasoline blending components were added to Form EIA-817.
- Crude oil burned as fuel on leases and by pipelines is reported as a single item on Form EIA-813. Previously it was reported as distillate or residual fuel oil consumption.
- No. 4 Fuel Oil is now included with distillate fuel oil.
- Gasohol was eliminated as a separate category and is now reported as either "finished leaded motor gasoline" or "finished unleaded motor gasoline."
- Waterborne movements of petrochemical feedstocks are now divided into naphtha-less than 400 degrees end-point and other-oils equal to or greater than 400 degrees end-point on Form EIA-817.
- Data aggregation for Petroleum Administration for Defense District (PADD) I was divided into three sub-districts on Forms EIA-812 and 817.

- Detailed categories of Gross Input to Crude Oil Distillation Units were eliminated, and only Total Gross Inputs is collected on Form EIA-810.
- Waterborne movements of crude oil and petroleum products between PADD's, on Form EIA-817, no longer reflect shipping and receiving States.
- Reporting of production and stocks of No. 4 Fuel Oil by sulfur levels were eliminated from Forms EIA-810, 811, 812, and 817.
- Crude oil stocks are collected at PADD levels rather than State levels on Form EIA-813.
- Shipments from natural gas processing plants no longer reflect destination by facility type on Form EIA-816.
- The four categories for unfinished oils were reduced to two on Form EIA-810.
- The five categories for sulfur content of residual fuel oil were reduced to three on Forms EIA-810, 811, and 817.
- Normal Butane and Other Butanes were combined into a single category on Forms EIA-810, 811, and 816.
- Three subcategories of lubricating oils (bright stock, neutral, and other) were combined into a single category on the Form EIA-810.
- Three subcategories of waxes (microcrystalline, crystalline-fully refined, and crystalline-other) were combined into a single category on the Form EIA-810.
- Asphalt and Road Oil were combined into a single category on Forms EIA-810 and 811.
- Plant fuel use and Losses were combined on Form EIA-816.
- Natural Gasoline and Isopentane were combined on Form EIA-816.

Change in Crude Oil Lease Stocks

The end-of-month crude oil stocks held on leases are reported on the Form EIA-813, "Monthly Crude Oil Report." However, only those companies that store 1,000 barrels or more of crude oil are required to submit a report. Previous frames analysis has shown that crude oil stocks held on leases reported to the Energy Information Administration (EIA) are consistently lower than the lease stocks reported to individual states.

Up until 1983, monthly state government data on lease stocks were substituted for EIA data wherever possible in order to rectify the understatement of lease crude oil stocks. State data were available from three states -- Texas, New Mexico, and Montana. To calculate the "lease adjustment", a comparison between the EIA reported data and the state government data was made and the difference added to the EIA data for respective states.

In 1983, the EIA modified the Form EIA-813 to eliminate state data on crude oil stocks and began collecting crude oil stock data by PAD District. With this change, the "lease adjustment" could no longer be calculated on a state basis and was changed to a PAD District level.

Note 10. 1984 Changes in the Petroleum Supply Reporting System

In January 1984, a number of changes in the reporting of natural gas liquids (NGL) were implemented. The modified system reflects supply and disposition of NGL on a component, rather than a product, basis.

From 1979 to 1983, the Energy Information Administration (EIA) collected and reported information on the supply and disposition of nine NGL products. Beginning with January 1984, NGL supply and disposition data were reported for 5 components to be consistent with record keeping practices used by the industry. Table B6 shows the product category under the new and old basis.

Table B6. Product Basis vs. Component Basis Reporting

1979-1983 Product Basis	1984 Component Basis				
	Ethane	Propane	Normal Butane	Isobutane	Pentanes Plus
Ethane	•				
Ethane-Propane Mixtures	•	•			
Propane		•			
Butane-Propane Mixtures		•	•		
Butane			•		
Isobutane				•	
Unfractionated Stream	•	•	•	•	•
Natural Gasoline and Isopentane					•
Plant Condensate					•

Table B7. Algorithm for Allocating NGL Imports/Exports
(Percent)

Product	EIA Component Slate				
	Ethane	Propane	Normal Butane	Isobutane	Pentanes Plus
Import Product					
Natural Gasoline and Isopentane (EIA-814) . . .	—	—	—	—	100
Plant Condensate (EIA-814)	—	—	—	—	100
Ethane (IM-145)	100	—	—	—	—
Propane (IM-145)	—	100	—	—	—
Butane (IM-145)	—	—	65	35	—
Butane-Propane Mixtures (IM-145)	—	40	35	20	5
Ethane-Propane Mixtures (IM-145)	60	40	—	—	—
Export Product					
Ethane (All PAD Districts)	100	—	—	—	—
Propane (All PAD Districts)	—	100	—	—	—
Butane (All PAD Districts)	—	—	100	—	—
Mixed Streams					
PAD Districts I, IV, V	—	40	60	—	—
PAD District II	30	25	15	15	15
PAD District III	—	80	20	—	—

Four Petroleum Supply Reporting System surveys were modified beginning in January 1984. They were:

EIA-810	"Monthly Refinery Report"
EIA-811	"Monthly Bulk Terminal Report"
EIA-812	"Monthly Product Pipeline Report"
EIA-816	"Monthly Natural Gas Liquids Report"

This change affected stocks reported and stock change calculations. Under the new basis, end-of-year 1983 stocks would have been 108 million barrels for Liquefied Petroleum Gases and 210 million barrels for Other Petroleum Products.

A fifth survey, Form EIA-814, "Monthly Imports Report" (formerly Form ERA-60), was not modified. Therefore, to allocate imports and exports of mixed NGL streams to individual component parts, the EIA developed a statistical algorithm.

Imports

The imports algorithm was based on information gathered from the larger importers of NGL, who were asked to provide component analysis of the products they imported during the first 6 months of 1983. The percentages shown in Table B7 are derived from the weighted averages of the data provided by the importers.

Exports

The exports algorithm was based on information gathered from the larger exporters of NGL, who were asked to provide component analysis of the products they exported during 1983. The percentages shown in Table B7 are derived from the weighted averages of the data provided by the exporters. It was necessary to derive percentages by Petroleum Administration for Defense District of exportation, due to the wide variation of components included in the mixed streams.

Note 11. 1985 Changes in the Petroleum Supply Reporting System

Beginning in January 1985, inter-Petroleum Administration for Defense (PAD) District pipeline movements of crude oil were included in the crude oil supply balance at the PAD District level but did not affect National level statistics. As a result of including these movements, *Net Receipts* of crude oil and *Unaccounted for Crude Oil* at the PAD District level changed significantly. Also affected were crude oil imports and unfinished oil imports at the PAD District level which are provided by *PAD District of Entry* (Tables 6-10) and by *PAD District of Processing* (Tables 16-19).

The tables in the *Petroleum Supply Monthly* that were changed due to the inclusion of inter-PAD District pipeline movements of crude oil are the following:

- Tables 6 through 10, "PAD Districts I to V, Supply and Disposition of Crude Oil and Petroleum Products."
 - Effective January 1985, crude oil imports and unfinished oil imports in Tables 4 through 8 were reported at the *PAD District of Entry* rather than at the *PAD District of Processing*. *Net Receipts* now include movements by pipeline as well as by tanker and barge.
- Table 26, "Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts."
 - The crude oil line includes movements by pipeline as well as by tanker and barge.
- Table 27, "Movements of Crude Oil and Petroleum Products by Pipeline Between PAD Districts."
 - A line was added to report crude oil movements.
- Table 29, "Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts."
 - The crude oil line includes movements by pipeline as well as by tanker and barge.

Note 12. 1986 Changes in the Petroleum Supply Reporting System

Beginning in January 1986, several changes to the Petroleum Supply Reporting System (PSRS) went into effect. These changes affected the frame of operators of petroleum facilities required to complete the monthly surveys in the PSRS and resulted in some changes to the tables presented in the *Petroleum Supply Monthly* (PSM). Refer to Explanatory Note 7 for detailed description of frames maintenance and updates.

Changes in Data Collection

- The unit of measure used on Form EIA-814, "Monthly Imports Report," was changed from barrels to thousands of barrels.
- Unfinished oil imports data, previously reported as one product on the Form EIA-814, were separated into the following four classifications.
 - Naphthas and lighter

- Kerosene and light gas oils
- Heavy gas oils
- Residuum

- The number of categories for reporting natural gas liquids and liquefied petroleum gases data on Form EIA-814 was reduced from 19 to 5 by eliminating the requirement to separately identify categories for further processing, petrochemical use, and fuel use.
- The requirements to report the type of processing facility and the applicable section of the oil import regulations were eliminated for the Form EIA-814.
- The requirement to report data for imports of crude oil, unfinished oils, and finished products on separate schedules of the Form EIA-814 was eliminated.
- The requirement to report two end-use categories, petrochemical use and other use, for still gas and liquefied refinery gases, was eliminated on Form EIA-810, "Monthly Refinery Report."
- Form EIA-815, "Monthly Shipments from Puerto Rico to the United States Report," was discontinued. The data previously reported on this form are now reported on Form EIA-814.

Changes in Publication Tables

Several changes were also made to tables in the *PSM* either as a direct result of changes in reporting requirements or to improve the usefulness of the publication. These changes were:

- Table 13, "Refinery Input of Crude Oil and Petroleum Products by PAD District."
 - Alaskan crude oil receipts were shown separately.
- Table 14, "Refinery Production of Petroleum Products by PAD District."
 - The breakout between "petrochemical feedstock use" and "other use" were no longer shown separately for still gas or for liquefied refinery gases.
- Tables 16 and 17, "Imports of Crude Oil and Petroleum Products by PAD District."
 - Imports of unfinished oils were separated into four categories: naphthas and lighter, kerosene and light gas oils, heavy gas oils, and residuum.
- Tables 18 and 19, "Imports of Crude Oil and Petroleum Products by Source."

- Countries formerly included in the categories "Other Western Hemisphere" and "Other Eastern Hemisphere" were shown individually.
- Table 24, "Stocks of Crude Oil and Petroleum Products by PAD District."
 - The breakout between "petrochemical feedstock use" and "other use" for each liquefied petroleum gas was eliminated.

Note 13. 1987 Changes in the Petroleum Supply Reporting System

Several changes to the Petroleum Supply Reporting System (PSRS) went into effect at the beginning of January 1987. These changes were made as part of the Energy Information Administration's (EIA's) continuing effort to provide pertinent, timely, and consistent energy information. These changes were subsequently reflected in the *Petroleum Supply Annual*.

Changes in Data Collection

Fresh feed input to catalytic cracking units, hydrocracking units, and cokers were added to the Form EIA-810, "Monthly Refinery Report."

Changes in Publication Tables

- The "Appalachian No. 2" Refining District was combined with the "Indiana, Illinois, Kentucky," Refining District. This affected *Petroleum Supply Monthly* (PSM) Tables 12 through 15, 24, 30, and 31.
- Fresh feed inputs to catalytic cracking units, hydrocracking units, and cokers were added to Table 13, "Refinery Input of Crude Oil and Petroleum Products by PAD District."

Clarification

In 1986, several refineries and terminals in the United States applied for Foreign Trade Zone (FTZ) status and applications from three refineries were approved. Consequently, during 1986, some refineries with FTZ status were treated as if they were within the United States while the Hawaiian FTZ was considered outside.

Effective with the January 1987 data, all FTZ facilities located within the 50 United States are considered domestic entities and are included in PSM statistics. The principal differences in the PSM data series as a result of adding the Hawaiian FTZ was an approximate 1-percent

increase in crude imports and a 3-percent decrease in product imports.

Note 14. 1989 Changes in the Petroleum Supply Reporting System

Several changes to the Petroleum Supply Reporting System (PSRS) went into effect at the beginning of January 1989. These changes were made to reduce respondent burden, to fulfill user requests for additional data, and to improve accuracy and consistency in reporting. To reflect these changes and to improve the usefulness of the *Petroleum Supply Monthly* (PSM) publication, the following changes were made in January 1989 and subsequently reflected in the *Petroleum Supply Annual* (PSA).

Changes in Data Collection

- Data on inputs and production of naphthenic and paraffinic lubricants were added to the Form EIA-810, "Monthly Refinery Report."
- Separate lines for the collection of inputs and production of olefins (ethylene, propylene, and butylene) were added to Form EIA-810, "Monthly Refinery Report."
- The collection of data on the movement of Liquefied Petroleum Gases (LPGs) and Liquefied Refinery Gases (LRGs) on a component basis were added to the Forms EIA-812, "Monthly Product Pipeline Report," and the EIA-817, "Monthly Tanker and Barge Movement Report."
- Bonded imports of jet fuel and fuel oils and imports of LPGs previously published from data provided by the U.S. Bureau of the Census were discontinued. Data are now published from the data reported on Form EIA-814, "Monthly Imports Report."
- Exports of butane/propane and ethane/propane mixtures were split in a ratio of 60 percent for the butane and ethane portions and 40 percent for the propane portion.
- The reporting of products other than Natural Gas Liquids (NGLs) by natural gas processing plants was eliminated on Form EIA-816, "Monthly Natural Gas Liquids Report."
- Fractionators were required to report only end-of-month stocks of NGLs on Form EIA-816, "Monthly Natural Gas Liquids Report."

Changes in Natural Gas Liquids and Crude Oil Statistics

Beginning with the January 1989 issue of the *PSM*, adjustments were being made to refinery inputs and product supplied of NGLs and refinery inputs of crude oil to account for refiner misreporting. Substantial volumes of NGLs are produced at natural gas processing plants in Alaska and injected into the crude oil moving in the Trans Alaska Pipeline System (TAPS). Refiners receiving any crude oil commingled with NGLs are instructed to report the NGL portion of that stream separately from the crude oil portion. This has not been done for Alaskan crude oil because refiners are unable to identify these volumes for accounting purposes. As a result, the NGL production in Alaska has been credited directly toward product supplied and also toward product supplied from refinery production when the refiner processes the crude oil-NGL mixture. In addition, the reporting of the commingled stream as crude oil by the refiner has overstated crude oil inputs and resulted in an increase in unaccounted for crude oil equal to the volume of NGL in the crude oil.

To offset this reporting error, an adjustment was made to refinery input in all Petroleum Administration for Defense (PAD) Districts receiving Alaskan crude oil. The adjustment reduces the crude oil inputs and increases the NGL inputs by an equal amount. Each PAD District adjustment is a portion of the known Alaskan NGL production that is proportional to the PAD District's share of Alaskan crude oil received at all refineries in the United States. The greatest impact occurs in PAD District V for butane and pentanes plus.

The reporting problem began in 1987 and has grown as injections of NGLs into the TAPS have increased. Data for 1988 was revised to account for the adjustment in the *PSA* published in May 1989. Revisions for 1987 data are not planned.

Changes in Publication Tables

- Year-to-Date tables on Supply and Disposition by PAD District (Tables 7, 9, 11, 13, and 15) were added.
- "Stock Withdrawal" was renamed "Stock Change" and was moved from Supply to Disposition in Tables 2 through 15. A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.
- A jet fuel total line was added to Tables 2-15, 19, 20, 23, 24, 43-46.
- PAD District Supply and Disposition tables (Tables 6 through 15) now display liquefied petroleum gases on a component basis.
- Tables showing net imports by country for the current month and year-to-date (Tables 39 and 40) were added.
- Table numbers were changed as a result of data additions and table reorganization. Table B8 is provided to show the old to new table numbers for the detailed statistics tables.
- Table 17, "Natural Gas Plant Net Production and Stocks of Petroleum Products by PAD and Refining District."
 - Stocks at natural gas processing plants by Refining District previously published in Table 24 was included with net production of petroleum products at natural gas plants.
 - The reporting of products other than natural gas liquids by natural gas processing plants was eliminated.
- Table 19, "Net Refinery Production of Finished Petroleum Products by PAD and Refining District."

Table B8. Conversion Table for 1989 PSM

Table Numbers											
Old	New	Old	New	Old	New	Old	New	Old	New	Old	New
1	1	NA	9	12, 24	17	18, 33	25	19	33	24, 31	41
2	2	8	10	13	18	18, 33	26	19	34	25	42
3	3	NA	11	14, 30	19	18, 33	27	20	35	26	43
4	4	9	12	24, 31	20	18, 33	28	21	36	27	44
5	5	NA	13	15	21	18, 33	29	22	37	28, 32	45
6	6	10	14	34	22	19	30	23	38	29	46
NA	7	NA	15	16	23	19	31	NA	39		
7	8	11	16	17	24	19	32	NA	40		

NA = Not Applicable

- Net production of olefins (ethylene, propylene, and butylene) was added.
- Net production of naphthenic and paraffinic lubricants was added.
- Net production of residual fuel oil by percent sulfur, previously published as Table 30, was added.
- Table 20, "Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining District."
 - Stocks at refineries by Refining District were added from Table 24.
 - Stocks of residual fuel oil by percent sulfur content, previously published as Table 31, were added.
- Tables 25 through 34, "Imports of Crude Oil and Petroleum Products by Country of Origin."
 - Data previously included in the "Other Products" category were displayed separately for naphthas for petrochemical feedstock use, other oils for petrochemical feedstock use, lubricants, and asphalt and road oil.
 - Sulfur content categories for residual fuel oil, previously published as Table 33, were added.
- Tables 37 and 38, "Exports of Crude Oil and Petroleum Products by Destination."
 - Data for exports by destination previously included in the "Other Products" category were displayed separately for pentanes plus, kerosene, naphthas for petrochemical feedstock use, and other oils for petrochemical feedstock use.
- Table 41, "Stocks of Crude Oil and Petroleum Products by PAD District."
 - Refining District data were eliminated. Refinery stocks and natural gas processing plant stocks by Refining District were added to Tables 17 and 20, respectively.
 - Sulfur content categories for residual fuel oil, previously published as Table 31, were added.

Note 15. 1990 Changes in the Petroleum Supply Reporting System

Beginning with the May 1990 issue of the *Petroleum Supply Monthly*, stocks of propane/propylene were added

to Table 42, "Refinery, Bulk Terminal, and Natural Gas Plant Stocks of Selected Petroleum Products by State." This change was subsequently reflected in the *Petroleum Supply Annual*.

Note 16. 1991 Changes in the Petroleum Supply Reporting System

Several changes were made to the Petroleum Supply Reporting System effective with the March issue of the *Petroleum Supply Monthly* (PSM). These changes were made to provide additional data and to improve the usefulness of the publication.

Changes in Publication Tables

Summary Statistics Tables

- A new table was added to show jet fuel supply and disposition.
- Table S8, "Other Petroleum Products Supply and Disposition" was redesignated as Table S9. Jet fuel data is no longer included. Historical data were revised to exclude jet fuel.
- Table S3, "Crude Oil and Petroleum Product Imports" was expanded to display all Organization of Petroleum Exporting Countries (OPEC) and additional Non-OPEC countries. A separate column for crude oil imports was also been added for each country.
- Time periods were included in table titles.

Figures

- Annual graphs were eliminated.
- Time periods were included in figure titles.
- Sources were provided for each figure.
- Bar graphs used to display end-of-month stocks were replaced with line graphs.

Sources

The sources and explanatory notes for this section were updated and relocated to the end of the Summary Statistics section.

Detailed Statistics Tables

- Table 1, "U.S. Petroleum Balance"

Table B9. Conversion Table for 1991 PSM

Table Numbers											
Old	New	Old	New	Old	New	Old	New	Old	New	Old	New
1	1	N	11	13	21	21	31	31	41	41	51
2	2	N	12	14	22	22	32	32	42	42	52
3	3	9	13	N	23	23	33	33	43	43	53
4	4	10	14	N	24	24	34	34	44	44	54
5	5	N	15	15	25	25	35	35	45	45	55
6	6	N	16	16	26	26	36	36	46	46	56
N	7	11	17	17	27	27	37	37	47		
N	8	12	18	18	28	28	38	38	48		
7	9	N	19	19	29	29	39	39	49		
8	10	N	20	20	30	30	40	40	50		

N = New Table

- A line was added to display jet fuel as a separate category for Total Products Supplied and Total Stocks (lines 34 and 44, respectively).
- PAD District Supply and Disposition Tables
 - A year-to-date table in thousand barrels and a current month table in thousand barrels per day were added for each PAD District.
- Imports of Crude Oil and Petroleum Products by PAD District
 - Residual fuel oil sulfur categories were added.
- Imports of Crude Oil and Petroleum Products by Country of Origin
 - Residual fuel oil sulfur categories by country of origin were eliminated. These categories are now reported on a PAD District basis.
 - Separate daily average columns were added for crude oil and petroleum products.
- Table numbers were changed as a result of table additions. Table B9 is provided to show the old to new table numbers for the detailed statistics tables.

Note 17. 1993 Changes in the Petroleum Supply Reporting System

In keeping with the Department of Energy's (DOE's) mandated responsibilities, the Energy Information Administration (EIA) made several changes to the Petroleum Supply Reporting System (PSRS) effective in January

1993. These changes were designed to accommodate the revisions to the Clean Air Act of 1990, and to reflect current and upcoming changes in the petroleum industry. These changes will be subsequently reflected in the 1993 *Petroleum Supply Annual*.

Changes in Data Collection

- Motor gasoline categories have been revised to reflect the change in the type of fuels produced. The new categories are: reformulated gasoline, oxygenated gasoline, and other finished gasoline. These changes were made to Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-814, "Monthly Imports Report," and EIA-817, "Monthly Tanker and Barge Movement Report."
- Distillate Fuel Oil has been split into two sulfur categories to meet Environmental Protection Agency requirements effective in October 1993. The new categories for inputs, production, end-of-month stocks and movements are: 0.05% sulfur and under, and greater than 0.05% sulfur. These changes were made to Forms EIA-810, "Monthly Refinery Report," EIA-811, "Monthly Bulk Terminal Report," EIA-812, "Monthly Product Pipeline Report," EIA-814, "Monthly Imports Report," and EIA-817, "Monthly Tanker and Barge Movement Report."
- Other hydrocarbons, hydrogen, and alcohol (Code 090) has been renamed "Other hydrocarbons, hydrogen, and oxygenates" on Form EIA-810, "Monthly Refinery Report." A new line has also been added to report Other hydrocarbons and hydrogen separately.
- Data on inputs and end-of-month stocks of oxygenates (i.e., fuel ethanol, ethyl tertiary butyl ether (ETBE),

methanol, methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other oxygenates) has been added to Form EIA-810, "Monthly Refinery Report."

- Inputs and production of Isobutylene (Code 634) has been added as sub-categories to Isobutane (Code 615) on Form EIA-810, "Monthly Refinery Report."
- Data on inputs and production of military kerosene-type jet fuel and commercial kerosene-type jet fuel has been added to Form EIA-810, "Monthly Refinery Report."
- Liquefied Petroleum and Refinery Gases column headings for Ethane, Propane, Normal Butane, and Isobutane have been revised to include olefins (e.g., Ethane/Ethylene etc.) on Form EIA-811, "Monthly Bulk Terminal Report."
- Data on end-of-month stocks of oxygenates (i.e., fuel ethanol, ethyl tertiary butyl ether (ETBE), methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other oxygenates) have been added to Forms EIA-811, "Monthly Bulk Terminal Report," and EIA-812, "Monthly Product Pipeline Report." Data for methanol are not collected at this time but has been included on the form for future use.
- Imports of oxygenates (i.e., fuel ethanol, ethyl tertiary butyl ether (ETBE), methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and other oxygenates) have been added to Form EIA-814, "Monthly Imports Report." Data for methanol are not requested at this time.
- Imports of olefins are collected separately from liquefied petroleum gases (i.e., ethylene, propylene, butylene, and isobutylene) on Form EIA-814, "Monthly Imports Report."
- Data on blended into motor gasoline has been eliminated on the Form EIA-819M, "Monthly Oxygenate Telephone Report."
- Data on methanol is no longer required on the Form EIA-819M, "Monthly Oxygenate Telephone Report" but remains on the form for future use.

Changes in Summary Statistics Tables

- Table S1. Crude and Petroleum Products Overview
 - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.

• Table S2. Crude Oil Supply and Disposition

- History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- The Crude Used Directly column has been eliminated. This column is no longer applicable since the years 1973 through 1980 have been eliminated. The data for 1981 and 1982 are provided in a footnote.

• Table S3. Crude Oil and Petroleum Product Imports

- History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- The Former USSR has been renamed Russia. The remaining states that comprised the Former USSR have been included in the Other Non-OPEC column.

• Table S4. Finished Motor Gasoline Supply and Disposition

- History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- Product supplied-unleaded and product supplied-unleaded (percent of Total) columns have been eliminated. A new column has been added to display end-of-month stocks of oxygenates. These stocks **are not included** in the Total Motor Gasoline end-of-month stocks.

• Table S5. Distillate Fuel Oil Supply and Disposition

- History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- Distillate fuel oil stocks have been separated into two sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur).
- The Crude Used Directly column has been eliminated. This column is no longer applicable since the years 1973 through 1980 have been eliminated. The data for 1981 and 1982 are provided in a footnote.

• Table S6. Residual Fuel Oil Supply and Disposition

- History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.

- The Crude Used Directly column has been eliminated. This column is no longer applicable since the years 1973 through 1980 have been eliminated. The data for 1981 and 1982 are provided in a footnote.
- Table S7. Jet Fuel Supply and Disposition
 - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- Table S8. Propane/Propylene Supply and Disposition
 - A new summary table has been added to display supply and disposition data for propane/propylene. This information will continue to be included in the Liquefied Petroleum Gases Supply and Disposition table (renumbered as Table S9).
- Table S9. Liquefied Petroleum Gases Supply and Disposition
 - Formerly numbered as Table S8.
 - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- Table S10. Other Petroleum Products Supply and Disposition
 - Formerly numbered as Table S9.
 - History data for 1973 through 1980 has been dropped. The table title has been changed to reflect the change in time series.
- Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/ Hydrogen/Oxygenates for clarification.
- Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
- Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Table 28. Refinery Input
 - Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/ Hydrogen/Oxygenates for clarification. Sub-categories are displayed for Other Hydrocarbons/Hydrogen and for Oxygenates.
 - Oxygenates are displayed separately for fuel ethanol, methanol, MTBE, and other oxygenates. Other oxygenates includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl alcohol (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).
- Table 29. Refinery Net Production
 - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification. Isobutylene is displayed as a sub-category to be consistent with the other liquefied gases.
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated (EPA approved), and other.
 - Military and commercial kerosene-type jet fuel has been added.
 - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.

Changes in Detailed Statistics Tables

- Table 1. U.S. Petroleum Balance
 - Line 14 includes fuel ethanol blended into finished motor gasoline. This quantity is comparable to the sum of field production of finished motor gasoline and natural gas liquids and LRGs on Table 2.
 - Line 20 has been modified to read: Other Liquids New Supply (Field Production) to accommodate motor gasoline blending components field production.
- Tables 2 through 25. Supply and Disposition
 - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
 - Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/ Hydrogen/Oxygenates for clarification. Sub-categories are displayed for Other Hydrocarbons/Hydrogen and for Oxygenates.
 - Oxygenates are displayed separately for fuel ethanol, methanol, MTBE, and other oxygenates. Other oxygenates includes ethyl tertiary butyl ether (ETBE),

- tertiary amyl methyl alcohol (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).
- Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
 - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Tables 33 and 34. Imports by PAD District
 - Data on olefins are displayed separately from liquefied petroleum gases.
 - Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/ Hydrogen/Oxygenates for clarification. Sub-categories are displayed for Other Hydrocarbons/Hydrogen and for Oxygenates.
 - Oxygenates are displayed separately for fuel ethanol, MTBE, and other oxygenates. Other oxygenates includes ethyl tertiary butyl ether (ETBE), tertiary amyl methyl alcohol (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
 - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added to both bonded ship bunkers and other.
 - Tables 35-44. Imports by Country of Origin
 - A new line has been added to appear below the Total line to show the sum of the Persian Gulf countries.
 - Former USSR has been changed to read Russia. States formerly included in USSR are now included in the Other countries category under Non-OPEC.
 - Tables 45 and 46. Exports
 - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
 - Other Hydrocarbons/Oxygenates and Motor Gasoline Blending Components have been added as export products under the Other Liquids category.
 - Tables 47-48. Exports by Destination
 - Miscellaneous products category has been renamed Other Products to accommodate exports of other hydrocarbons/ oxygenates and motor gasoline blending components.
 - Tables 49-50. Net Imports
 - A new line has been added to appear below the Total line to show the sum of the Persian Gulf countries.
 - Former USSR has been changed to read Russia. States formerly included in USSR are now included in the Other countries category under Non-OPEC.
 - Table 51. Stocks
 - Other Hydrocarbons/Hydrogen/Alcohol has been renamed Other Hydrocarbons/ Hydrogen/Oxygenates for clarification. Sub-categories are displayed for Other hydrocarbons/hydrogen fuel ethanol, ETBE, methanol, MTBE, and other oxygenates.
 - Other oxygenates includes tertiary amyl methyl alcohol (TAME), tertiary butyl alcohol (TBA), and other aliphatic alcohols and ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
 - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
 - Table 52. Refinery, Bulk Terminal, and Natural Gas Plant Stocks
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
 - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
 - Table 53. Movements by Pipeline, Tanker, and Barge
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
 - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
 - Table 54. Movements by Pipeline

- Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
- Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Table 55. Movements by Tanker and Barge
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
 - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.
- Table 56. Net Movements
 - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
 - Distillate fuel oil sulfur categories (0.05% sulfur and under and greater than 0.05% sulfur) have been added.

Changes in Appendix C

- Inputs
 - Other hydrocarbons has been renamed Other Hydrocarbons/ Oxygenates for clarification.
- Production
 - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
 - A new line has been added to display field production of motor gasoline blending components.
- Imports
 - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.

- Stocks
 - Other hydrocarbons has been renamed Other Hydrocarbons/ Oxygenates for clarification.
 - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.
- Product Supplied
 - Isobutane has been renamed Isobutane/Isobutylene under Liquefied Petroleum Gases for clarification.
 - Unleaded and leaded motor gasoline categories have been replaced with the new types of gasolines produced: reformulated, oxygenated, and other.

Changes in Appendix D

- Table D1. U.S. Summary Table
 - Data on blended into motor gasoline has been eliminated. This information is no longer collected on the survey EIA-819M, "Monthly Oxygenate Telephone Report."
- Table D2. Monthly Fuel Ethanol Production and Ending Stocks
 - Data for the previous year as well as current year are displayed.
 - Data on blended into motor gasoline has been eliminated. This information is no longer collected on the survey EIA-819M, "Monthly Oxygenate Telephone Report."
 - Data for fuel ethanol imports has been dropped due to small volumes reported by respondents.
- Table D3. Monthly MTBE Production and Ending Stocks
 - Data for the previous year as well as current year are displayed.
 - Data on blended into motor gasoline has been eliminated. This information is no longer collected on the survey EIA-819M, "Monthly Oxygenate Telephone Report."
 - Data on MTBE imports has been dropped from the table due to small volumes reported by respondents.

Appendix C

Impact of Resubmissions on Major Series, 1993

This table contains information on revisions to published statistics caused by resubmission of respondent survey forms. The table shows the published value in the *Petroleum Supply Monthly* (PSM) and the cumulative difference resulting from resubmissions for the major product series. The official published petroleum supply statistics are not changed to reflect revisions until publication of the *Petroleum Supply Annual* (PSA), except in cases of catastrophic error.

This table is provided as a service to analysts who need to know the latest available statistics. It should be used with caution because resubmissions are received on an irregular basis and the impact on published data can change from month to month. In some cases, the pattern of revision caused by resubmissions during the year is a poor indicator of final statistics that will be published in the *PSA*.

Surface aerators are used at U.S. petroleum refineries to help prevent water pollution. These aerators speed up the oxidation process by beating air into water.

Table C1. Impact of Resubmissions on Major Series, 1993
(Thousand Barrels per Day, Except Where Noted)

Product	January		February		March		April		May		June		Year to Date
	PSM Value	Difference	PSM Value	Difference	PSM Value	Difference	PSM Value	Difference	PSM Value	Difference	PSM Value	Difference	Average Difference
Inputs.....	14,249	-8	14,238	-1	14,259	3	--	--	--	--	--	--	-2
Crude Oil.....	12,980	-5	12,923	1	13,249	3	--	--	--	--	--	--	(s)
Pentanes Plus	153	0	167	3	149	-2	--	--	--	--	--	--	(s)
LPGs.....	440	0	367	(s)	263	(s)	--	--	--	--	--	--	(s)
Ethane/Ethylene.....	0	0	0	0	0	0	--	--	--	--	--	--	0
Propane/Propylene.....	1	0	(s)	0	(s)	0	--	--	--	--	--	--	0
Normal Butane/Butylene	289	0	211	(s)	103	(s)	--	--	--	--	--	--	(s)
Isobutane/Isobutylene	150	0	155	0	160	(s)	--	--	--	--	--	--	(s)
Oth Hydrocbns/Oxygenates ..	247	-5	197	-5	143	-2	--	--	--	--	--	--	-4
Unfinished Oils.....	504	1	584	(s)	421	(s)	--	--	--	--	--	--	(s)
Motor Gas. Blend. Comp.....	-75	1	1	1	34	3	--	--	--	--	--	--	2
Aviation Gas. Blend. Comp ...	(s)	0	(s)	0	(s)	0	--	--	--	--	--	--	0
Production	17,284	31	16,996	-26	17,069	-9	--	--	--	--	--	--	-1
Pentanes Plus	319	3	323	2	330	1	--	--	--	--	--	--	2
LPGs.....	1,837	-3	1,912	8	2,106	2	--	--	--	--	--	--	2
Ethane/Ethylene.....	588	-1	608	4	630	(s)	--	--	--	--	--	--	1
Propane/Propylene.....	965	(s)	959	3	971	1	--	--	--	--	--	--	1
Normal Butane/Butylene	106	-1	164	0	301	1	--	--	--	--	--	--	(s)
Isobutane/Isobutylene	177	-1	182	1	204	(s)	--	--	--	--	--	--	(s)
Oth Hydrocbns/Oxygenates ..	461	38	163	-35	164	-17	--	--	--	--	--	--	-4
Motor Gas Blend. Comp.....	-25	1	-2	1	-42	3	--	--	--	--	--	--	1
Finished Motor Gasoline.....	7,254	3	7,172	(s)	6,897	(s)	--	--	--	--	--	--	1
Reformulated.....	0	0	0	0	0	0	--	--	--	--	--	--	0
Oxygenated.....	1,667	341	1,211	413	383	683	--	--	--	--	--	--	481
Other	5,588	-338	5,961	-412	6,513	-683	--	--	--	--	--	--	-480
Finished Aviation Gasoline	16	0	19	0	22	(s)	--	--	--	--	--	--	(s)
Jet Fuel.....	1,437	(s)	1,442	0	1,463	1	--	--	--	--	--	--	(s)
Naphtha-Type Jet.....	131	-1	125	0	131	(s)	--	--	--	--	--	--	(s)
Kerosene-Type Jet.....	1,306	1	1,318	0	1,332	1	--	--	--	--	--	--	(s)
Kerosene	74	-1	63	0	49	0	--	--	--	--	--	--	(s)
Distillate Fuel Oil.....	2,909	-2	2,813	1	2,918	1	--	--	--	--	--	--	(s)
Residual Fuel Oil	820	(s)	841	0	819	1	--	--	--	--	--	--	(s)
Naphtha Pet. Feedstock.....	124	0	128	0	130	0	--	--	--	--	--	--	0
Other Oils Pet. Feedstock	287	-1	292	-2	314	(s)	--	--	--	--	--	--	-1
Special Naphthas	47	(s)	47	0	57	(s)	--	--	--	--	--	--	(s)
Lubricants.....	154	0	162	(s)	165	-1	--	--	--	--	--	--	(s)
Waxes.....	19	0	21	0	20	0	--	--	--	--	--	--	0
Petroleum Coke.....	598	-2	615	0	617	0	--	--	--	--	--	--	-1
Asphalt and Road Oil.....	285	-2	306	(s)	373	(s)	--	--	--	--	--	--	-1
Still Gas	622	-1	636	0	623	(s)	--	--	--	--	--	--	(s)
Miscellaneous Products.....	45	0	43	0	45	0	--	--	--	--	--	--	0
Imports	7,964	16	7,930	(s)	8,342	-79	--	--	--	--	--	--	-22
Crude Oil.....	6,292	0	6,156	0	6,513	-26	--	--	--	--	--	--	-8
Pentanes Plus	10	0	49	(s)	29	0	--	--	--	--	--	--	(s)
LPGs.....	117	6	128	4	123	(s)	--	--	--	--	--	--	3
Ethane/Ethylene.....	11	0	10	0	12	0	--	--	--	--	--	--	0
Propane/Propylene.....	72	4	78	3	85	(s)	--	--	--	--	--	--	2
Normal Butane/Butylene	31	2	32	1	18	(s)	--	--	--	--	--	--	1
Isobutane/Isobutylene	3	(s)	8	1	8	0	--	--	--	--	--	--	1
Oth Hydrocbns/Oxygenates ..	17	0	17	1	12	0	--	--	--	--	--	--	(s)
Unfinished Oils.....	486	0	496	0	496	0	--	--	--	--	--	--	0
Motor Gas. Blend. Comp.....	21	0	31	0	47	0	--	--	--	--	--	--	0
Aviation Gas. Blend. Comp ...	0	0	0	0	0	0	--	--	--	--	--	--	0
Finished Motor Gasoline.....	204	0	216	0	198	-31	--	--	--	--	--	--	-11
Reformulated.....	0	0	0	0	0	0	--	--	--	--	--	--	0
Oxygenated.....	0	0	0	0	0	0	--	--	--	--	--	--	0
Other	204	0	216	0	198	-31	--	--	--	--	--	--	-11
Finished Aviation Gasoline	(s)	0	(s)	0	(s)	0	--	--	--	--	--	--	0
Jet Fuel.....	89	(s)	110	0	102	-26	--	--	--	--	--	--	-9
Naphtha-Type Jet.....	7	0	9	0	7	-5	--	--	--	--	--	--	-2
Kerosene-Type Jet.....	82	(s)	101	0	96	-21	--	--	--	--	--	--	-7
Kerosene	1	0	2	0	1	0	--	--	--	--	--	--	0
Distillate Fuel Oil.....	182	0	224	(s)	235	(s)	--	--	--	--	--	--	(s)
Residual Fuel Oil	383	2	325	0	352	(s)	--	--	--	--	--	--	1
Naphtha Pet. Feedstock.....	31	0	18	0	32	5	--	--	--	--	--	--	2
Other Oils Pet. Feedstock	93	0	99	0	144	0	--	--	--	--	--	--	0
Special Naphthas	3	0	7	0	6	(s)	--	--	--	--	--	--	(s)
Lubricants.....	15	0	9	1	13	0	--	--	--	--	--	--	(s)
Waxes.....	1	0	1	0	3	-1	--	--	--	--	--	--	(s)
Petroleum Coke.....	1	0	1	0	7	0	--	--	--	--	--	--	0
Asphalt and Road Oil.....	15	8	43	-6	28	0	--	--	--	--	--	--	1
Miscellaneous Products.....	3	0	2	0	(s)	0	--	--	--	--	--	--	0

(s) = Less than 500 barrels per day.

NA = Not Available.

Note: • Volumes indicate cumulative changes resulting from resubmissions received for that month as of the date of this publication. • Totals may not equal sum of components due to independent rounding.

Table C1. Impact of Resubmissions on Major Series, 1993
(Thousand Barrels per Day, Except Where Noted)

Product	January		February		March		April		May		June		Year to Date
	PSM Value	Difference	PSM Value	Difference	PSM Value	Difference	PSM Value	Difference	PSM Value	Difference	PSM Value	Difference	Average Difference
Stocks (Thousand Barrels)....	1,611,388	1,673	1,595,153	512	1,583,590	-62	--	--	--	--	--	--	708
Crude Oil (excl. SPR)	325,640	1,442	331,285	1,387	337,114	125	--	--	--	--	--	--	985
Pentanes Plus.....	8,260	150	7,731	-58	8,318	54	--	--	--	--	--	--	49
LPGs.....	74,993	-1,560	66,322	-1,355	66,610	-31	--	--	--	--	--	--	-982
Ethane/Ethylene.....	16,496	137	15,940	376	17,596	-2	--	--	--	--	--	--	170
Propane/Propylene.....	33,489	-1,104	26,174	-917	21,834	17	--	--	--	--	--	--	-668
Normal Butane/Butylene.....	14,383	-481	13,589	-550	16,421	-45	--	--	--	--	--	--	-359
Isobutane/Isobutylene.....	10,625	-112	10,619	-264	10,759	-1	--	--	--	--	--	--	-126
Oth Hydrocbrns/Oxygenates..	14,016	1,305	13,515	476	14,528	8	--	--	--	--	--	--	596
Unfinished Oils.....	99,259	163	99,707	7	103,484	8	--	--	--	--	--	--	59
Motor Gas. Blend. Comp.....	41,309	-6	41,800	-22	40,370	-39	--	--	--	--	--	--	-22
Aviation Gas. Blend. Comp...	61	0	55	0	51	0	--	--	--	--	--	--	0
Finished Motor Gasoline.....	195,291	62	199,766	-193	187,039	205	--	--	--	--	--	--	25
Reformulated.....	0	0	0	0	0	0	--	--	--	--	--	--	0
Oxygenated.....	32,349	-242	23,025	338	17,461	-34	--	--	--	--	--	--	21
Other.....	162,942	304	176,741	-531	169,578	239	--	--	--	--	--	--	4
Finished Aviation Gasoline ...	1,717	0	1,905	0	1,763	1	--	--	--	--	--	--	(s)
Jet Fuel.....	41,014	7	42,315	147	41,429	307	--	--	--	--	--	--	154
Naphtha-Type Jet.....	4,763	0	4,489	3	4,415	1	--	--	--	--	--	--	1
Kerosene-Type Jet.....	36,251	7	37,826	144	37,014	306	--	--	--	--	--	--	152
Kerosene.....	5,289	-4	4,520	0	4,455	-43	--	--	--	--	--	--	-16
Distillate Fuel Oil.....	130,222	-78	109,433	66	97,456	-665	--	--	--	--	--	--	-226
Residual Fuel Oil.....	44,221	-1	42,116	53	40,690	14	--	--	--	--	--	--	22
Naphtha Pet. Feedstock.....	1,616	0	1,801	0	1,787	0	--	--	--	--	--	--	0
Other Oils Pet. Feedstock.....	1,680	-25	1,958	-12	1,846	-4	--	--	--	--	--	--	-14
Special Naphthas.....	2,216	-3	2,256	0	2,389	7	--	--	--	--	--	--	1
Lubricants.....	13,514	0	13,691	5	13,437	-17	--	--	--	--	--	--	-4
Waxes.....	919	0	901	0	860	0	--	--	--	--	--	--	0
Petroleum Coke.....	10,494	0	10,597	0	10,710	0	--	--	--	--	--	--	0
Asphalt and Road Oil.....	22,115	221	25,336	11	29,111	8	--	--	--	--	--	--	80
Miscellaneous Products.....	2,231	0	2,336	0	2,532	0	--	--	--	--	--	--	0
Product Supplied.....	16,502	42	17,577	16	17,752	-84	--	--	--	--	--	--	-10
Crude Oil.....	10	0	10	0	11	0	--	--	--	--	--	--	0
Pentanes Plus.....	196	-2	222	6	190	-1	--	--	--	--	--	--	1
LPGs.....	1,917	53	1,928	5	1,910	-40	--	--	--	--	--	--	6
Ethane/Ethylene.....	672	-5	638	-4	589	12	--	--	--	--	--	--	1
Propane/Propylene.....	1,179	40	1,261	-1	1,165	-29	--	--	--	--	--	--	3
Normal Butane/Butylene.....	31	16	-5	3	109	-15	--	--	--	--	--	--	1
Isobutane/Isobutylene.....	35	3	34	7	47	-8	--	--	--	--	--	--	1
Oth Hydrocbrns/Oxygenates..	0	0	0	0	0	0	--	--	--	--	--	--	0
Unfinished Oils.....	-144	-6	-103	6	-47	(s)	--	--	--	--	--	--	(s)
Motor Gas. Blend. Comp.....	0	0	0	0	0	0	--	--	--	--	--	--	0
Aviation Gas. Blend. Comp...	(s)	0	(s)	0	(s)	0	--	--	--	--	--	--	0
Finished Motor Gasoline.....	6,746	1	7,129	9	7,397	-43	--	--	--	--	--	--	-12
Reformulated.....	NA	NA	NA	NA	NA	NA	--	--	--	--	--	--	NA
Oxygenated.....	NA	NA	NA	NA	NA	NA	--	--	--	--	--	--	NA
Other.....	NA	NA	NA	NA	NA	NA	--	--	--	--	--	--	NA
Finished Aviation Gasoline ...	10	0	12	0	27	(s)	--	--	--	--	--	--	(s)
Jet Fuel.....	1,464	-1	1,488	-5	1,493	-30	--	--	--	--	--	--	-12
Naphtha-Type Jet.....	93	-1	143	(s)	123	-4	--	--	--	--	--	--	-2
Kerosene-Type Jet.....	1,371	1	1,346	-5	1,371	-26	--	--	--	--	--	--	-10
Kerosene.....	63	-1	91	(s)	52	1	--	--	--	--	--	--	(s)
Distillate Fuel Oil.....	3,322	1	3,658	-4	3,450	25	--	--	--	--	--	--	7
Residual Fuel Oil.....	1,020	2	1,128	-2	1,065	2	--	--	--	--	--	--	1
Naphtha Pet. Feedstock.....	158	0	139	0	162	5	--	--	--	--	--	--	2
Other Oils Pet. Feedstock.....	388	-1	381	-2	462	-1	--	--	--	--	--	--	-1
Special Naphthas.....	40	(s)	46	(s)	58	-1	--	--	--	--	--	--	(s)
Lubricants.....	149	0	144	1	166	(s)	--	--	--	--	--	--	(s)
Waxes.....	18	0	21	0	23	-1	--	--	--	--	--	--	(s)
Petroleum Coke.....	339	-2	373	0	394	0	--	--	--	--	--	--	-1
Asphalt and Road Oil.....	145	-1	233	2	277	(s)	--	--	--	--	--	--	(s)
Still Gas.....	622	-1	636	0	623	(s)	--	--	--	--	--	--	(s)
Miscellaneous Products.....	39	0	41	0	39	0	--	--	--	--	--	--	0

(s) = Less than 500 barrels per day.

NA = Not Available.

Note: • Volumes indicate cumulative changes resulting from resubmissions received for that month as of the date of this publication. • Totals may not equal sum of components due to independent rounding.

Appendix D

EIA 819 Monthly Oxygenate Report

The Clean Air Act Amendments of 1990 include provisions intended to reduce toxic vehicle emissions.

EIA-819M

Monthly Oxygenate Telephone Report

The EIA-819M, "Monthly Oxygenate Telephone Report," provides production data and preliminary stock data for fuel ethanol and methyl tertiary butyl ether (MTBE) in the United States and major U.S. geographic regions. These data have been published in the *Weekly Petroleum Status Report* (WPSR) and the *Petroleum Supply Monthly* since March 1992.

Data are collected from a sample of respondents reporting on the Monthly Petroleum Supply Reporting System surveys. Final data on production and stocks of fuel ethanol and MTBE are presented in the Detailed Statistics section beginning with the March 1993 issue. The quantity of oxygenates blended into motor gasoline previously published in this appendix is now presented in the Highlights section.

Table D1. U.S. Summary Table, June 1993

Products	June 1993		May 1993		Year-to-Date	
	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day
Fuel Ethanol						
Production	2,270	76	2,302	74	13,631	75
Stocks	2,499	--	2,314	--	2,499	--
MTBE						
Production	3,775	126	4,100	132	22,208	123
Stocks	14,544	--	13,476	--	14,544	--

Source: Energy Information Administration (EIA) Form EIA-819M, "Monthly Oxygenate Telephone Report."

**Table D2. Monthly Fuel Ethanol Production and Stocks by Petroleum Administration
for Defense Districts (PADD)**

(Thousand Barrels per Day, Except Where Noted)

District/Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total U.S.												
Production												
1992	78	71	68	68	68	66	66	70	67	74	74	75
1993	76	73	77	76	74	76						
Stocks (thous. bbls.)												
1992	1,076	1,287	1,462	1,457	1,858	1,941	2,362	2,530	2,973	2,980	2,547	1,791
1993	2,036	1,929	1,878	2,069	2,314	2,499						
East Coast (PADD I)												
Production												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
Stocks (thous. bbls.)												
1992	85	93	100	82	88	67	200	207	177	163	139	99
1993	117	64	62	41	136	112						
Midwest (PADD II)												
Production												
1992	73	66	63	64	64	61	61	66	66	72	72	73
1993	74	71	75	74	73	74						
Stocks (thous. bbls.)												
1992	532	662	791	794	1,010	1,143	1,344	1,361	1,639	1,553	1,279	889
1993	1,094	1,124	1,143	1,310	1,322	1,413						
Gulf Coast (PADD III)												
Production												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
Stocks (thous. bbls.)												
1992	248	344	394	452	530	464	562	612	405	477	465	254
1993	203	244	216	294	312	333						
Rocky Mountain (PADD IV)												
Production												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
Stocks (thous. bbls.)												
1992	27	11	20	14	15	12	17	20	21	44	60	70
1993	61	44	45	41	42	45						
West Coast (PADD V)												
Production												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
Stocks (thous. bbls.)												
1992	184	177	156	114	214	254	240	330	732	743	604	479
1993	561	453	412	383	502	596						

W = Withheld to avoid disclosure of individual company data.

Note: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-819M, "Monthly Oxygenate Telephone Report."

Glossary

Pipelines carry natural gas across geographic regions.

**Table D3. Monthly Methyl Tertiary Butyl Ether (MTBE) Production and Stocks by Petroleum Administration
for Defense Districts (PADD)**
(Thousand Barrels per Day, Except Where Noted)

District/Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total U.S.												
Production												
1992	98	94	89	79	90	90	101	91	104	118	128	125
1993	115	114	112	138	132	126						
Stocks (thous. bbls.)												
1992	11,999	12,681	13,966	14,962	15,961	18,887	20,436	23,131	22,853	19,208	16,342	13,818
1993	10,648	10,148	10,550	11,953	13,476	14,544						
East Coast (PADD I)												
Production												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
Stocks (thous. bbls.)												
1992	3,086	2,944	3,551	3,929	4,453	4,663	4,824	5,046	4,875	3,839	3,098	2,613
1993	1,881	1,833	1,492	1,598	2,201	2,578						
Midwest (PADD II)												
Production												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
Stocks (thous. bbls.)												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
Gulf Coast (PADD III)												
Production												
1992	88	82	77	69	77	77	88	78	93	108	118	114
1993	102	101	99	124	117	111						
Stocks (thous. bbls.)												
1992	5,104	5,711	6,058	6,728	6,870	8,549	8,928	9,847	9,192	8,309	7,380	6,159
1993	4,987	4,707	5,304	6,152	6,553	6,890						
Rocky Mountain (PADD IV)												
Production												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
Stocks (thous. bbls.)												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
West Coast (PADD V)												
Production												
1992	W	W	W	W	W	W	W	W	W	W	W	W
1993	W	W	W	W	W	W						
Stocks (thous. bbls.)												
1992	3,418	3,673	4,011	4,064	4,309	5,385	6,419	7,936	8,466	6,723	5,543	4,768
1993	3,536	3,333	3,516	3,921	4,427	4,774						

W = Withheld to avoid disclosure of individual company data.

Note: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA) Form EIA-819M, "Monthly Oxygenate Telephone Report."

Definitions of Petroleum Products and Other Terms

Alcohol. The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus a hydroxyl group; $\text{CH}_3\text{-(CH}_2\text{)}_n\text{-OH}$ (e.g., methanol, ethanol, and tertiary butyl alcohol).

Alkylate. The product of an alkylation reaction. It usually refers to the high octane product from alkylation units. This alkylate is used in blending high octane gasoline.

Alkylation. A refining process for chemically combining isobutane with olefin hydrocarbons (e.g., propylene, butylene) through the control of temperature and pressure in the presence of an acid catalyst, usually sulfuric acid or hydrofluoric acid. The product, alkylate, an isoparaffin, has high octane value and is blended with motor and aviation gasoline to improve the antiknock value of the fuel.

API Gravity. An arbitrary scale expressing the gravity or density of liquid petroleum products. The measuring scale is calibrated in terms of degrees API; it is calculated as follows:

$$\text{Degrees API} = \frac{141.5}{\text{sp.gr. } 60^\circ \text{ F}/60^\circ \text{ F}} - 131.5$$

Aromatics. Hydrocarbons characterized by unsaturated ring structures of carbon atoms. Commercial petroleum aromatics are benzene, toluene, and xylene (BTX).

Asphalt. A dark-brown-to-black cement-like material containing bitumens as the predominant constituent obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts. The conversion factor for asphalt is 5.5 barrels per short ton.

ASTM. The acronym for the American Society for Testing and Materials.

Atmospheric Crude Oil Distillation. The refining process of separating crude oil components at atmospheric pressure by heating to temperatures of about 600° to 750° F (depending on the nature of the crude oil and desired products) and subsequent condensing of the fractions by cooling.

Aviation Gasoline (Finished). All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G-5572. Excludes blending components which will be used in blending or compounding into finished aviation gasoline.

Aviation Gasoline Blending Components. Naphthas which will be used for blending or compounding into finished aviation gasoline (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus. Oxygenates are reported as other hydrocarbons, hydrogen, and oxygenates.

Barrel. A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons. This measure is used in most statistical reports. Factors for converting petroleum coke, asphalt, still gas and wax to barrels are given in the definitions of these products.

Barrels Per Calendar Day. The maximum number of barrels of input that can be processed during a 24-hour period after making allowances for the following limitations:

the capability of downstream facilities to absorb the output of crude oil processing facilities of a given refinery. No reduction is made when a planned distribution of intermediate streams through other than downstream facilities is part of a refinery's normal operation;

the types and grades of inputs to be processed;

the types and grades of products expected to be manufactured;

the environmental constraints associated with refinery operations;

the reduction of capacity for scheduled downtime such as routine inspection, mechanical problems, maintenance, repairs, and turnaround; and

the reduction of capacity for unscheduled downtime such as mechanical problems, repairs, and slowdowns.

Barrels Per Stream Day. The amount a unit can process running at full capacity under optimal crude oil and product slate conditions.

Benzene (C₆H₆). An aromatic hydrocarbon present in small proportion in some crude oils and made commercially from petroleum by the catalytic reforming of naphthenes in petroleum naphtha. Also made from coal in the manufacture of coke. Used as a solvent, in manufacturing detergents, synthetic fibers, and petrochemicals and as a component of high-octane gasoline.

Blending Components. See Motor or Aviation Gasoline Blending Components.

Blending Plant. A facility which has no refining capability but is either capable of producing finished motor gasoline through mechanical blending or blends oxygenates with motor gasoline.

Bonded Petroleum Imports. Petroleum imported and entered into Customs bonded storage. These imports are not included in the import statistics until they are: (1) withdrawn from storage free of duty for use as fuel for vessels and aircraft engaged in international trade; or (2) withdrawn from storage with duty paid for domestic use.

BTX. The acronym for the commercial petroleum aromatics benzene, toluene, and xylene. See individual categories for definitions.

Bulk Station. A facility used primarily for the storage and/or marketing of petroleum products which has a total bulk storage capacity of less than 50,000 barrels and receives its petroleum products by tank car or truck.

Bulk Terminal. A facility used primarily for the storage and/or marketing of petroleum products which has a total bulk storage capacity of 50,000 barrels or more and/or receives petroleum products by tanker, barge, or pipeline.

Butane (C₄H₁₀). A normally gaseous straight-chain or branch-chain hydrocarbon extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and is designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial butane.

Isobutane (C₄H₁₀). A normally gaseous branch-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams.

Normal Butane (C₄H₁₀). A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 31.1° F. It is extracted from natural gas or refinery gas streams.

Butylene (C₄H₈). An olefinic hydrocarbon recovered from refinery processes.

Captive Refinery Oxygenate Plants. Oxygenate production facilities located within or adjacent to a refinery complex.

Catalytic Cracking. The refining process of breaking down the larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. Catalytic cracking is accomplished by the use of a catalytic agent and is an effective process for increasing the yield of gasoline from crude oil. Catalytic cracking processes fresh feeds and recycled feeds.

Fresh Feeds. Crude oil or petroleum distillates which are being fed to processing units for the first time.

Recycled Feeds. Feeds that are continuously fed back for additional processing.

Catalytic Hydrocracking. A refining process that uses hydrogen and catalysts with relatively low temperatures and high pressures for converting middle boiling or residual material to high-octane gasoline, reformer charge stock, jet fuel, and/or high grade fuel oil. The process uses one or more catalysts, depending upon product output, and can handle high sulfur feedstocks without prior desulfurization.

Catalytic Hydrotreating. A refining process for treating petroleum fractions from atmospheric or vacuum distillation units (e.g., naphthas, middle distillates, reformer feeds, residual fuel oil, and heavy gas oil) and other petroleum (e.g., cat cracked naphtha, coker naphtha, gas oil, etc.) in the presence of catalysts and substantial quantities of hydrogen. Hydrotreating includes desulfurization, removal of substances (e.g., nitrogen compounds) that deactivate catalysts, conversion of olefins to paraffins to reduce gum formation in gasoline, and other processes to upgrade the quality of the fractions.

Catalytic Reforming. A refining process using controlled heat and pressure with catalysts to rearrange certain hydrocarbon molecules, thereby converting paraffinic and naphthenic type hydrocarbons (e.g., low-octane gasoline boiling range fractions) into petrochemical feedstocks and higher octane stocks suitable for blending into finished gasoline. Catalytic reforming is reported in two categories. They are:

Low Pressure. A processing unit operating at less than 225 pounds per square inch gauge (PSIG) measured at the outlet separator.

High Pressure. A processing unit operating at either equal to or greater than 225 pounds per square inch gauge (PSIG) measured at the outlet separator.

Charge Capacity. The input (feed) capacity of the refinery processing facilities.

Coal. A black or brownish-black solid combustible substance formed by the partial decomposition of vegetable matter without access to air. The rank of coal, which includes anthracite, bituminous coal, subbituminous coal, and lignite, is based on fixed carbon, volatile matter, and heating value. Coal rank indicates the progressive alteration, or coalification, from lignite to anthracite. Lignite contains approximately 9 to 17 million BTU per ton. The heat contents of subbituminous and bituminous coal range from 16 to 24 million BTU per ton, and from 19 to 30 million BTU per ton, respectively. Anthracite contains approximately 22 to 28 million BTU per ton.

Commercial Kerosene-Type Jet Fuel. See Kerosene-Type Jet Fuel.

Crude Oil (Including Lease Condensate). A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface-separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale. Drip gases are also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign, according to the following:

Domestic. Crude oil produced in the United States or from its "outer continental shelf" as defined in 43 USC 1331.

Foreign. Crude oil produced outside the United States. Imported Athabasca hydrocarbons are included.

Crude Oil, Refinery Receipts. Receipts of domestic and foreign crude oil at a refinery. Includes all crude oil in transit except crude oil in transit by pipeline. Foreign crude oil is reported as a receipt only after entry through customs. Crude oil of foreign origin held in bonded storage is excluded.

Crude Oil Losses. Represents the volume of crude oil reported by petroleum refineries as being lost in their operations. These losses are due to spills, contamination, fires, etc. as opposed to refinery processing losses.

Crude Oil Production. The volume of crude oil produced from oil reservoirs during given periods of time. The amount of such production for a given period is measured as volumes delivered from lease storage tanks (i.e., the point of custody transfer) to pipelines, trucks, or other

media for transport to refineries or terminals with adjustments for (1) net differences between opening and closing lease inventories, and (2) basic sediment and water (BS&W).

Crude Oil Qualities. Refers to two properties of crude oil, the sulfur content and API gravity, which affect processing complexity and product characteristics.

Delayed Coking. A process by which heavier crude oil fractions can be thermally decomposed under conditions of elevated temperatures and pressure to produce a mixture of lighter oils and petroleum coke. The light oils can be processed further in other refinery units to meet product specifications. The coke can be used either as a fuel or in other applications such as the manufacturing of steel or aluminum.

Disposition. The components of petroleum disposition are stock change, crude oil losses, refinery inputs, exports, and products supplied for domestic consumption.

Distillate Fuel Oil. A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on-and-off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1, No. 2, and No. 4 fuel oils; No. 1, No. 2, and No. 4 diesel fuels. Distillate fuel oil is reported in the following sulfur categories: 0.05% sulfur and under and Greater than 0.05% sulfur.

No. 1 Distillate. A petroleum distillate which meets the specifications for No. 1 heating or fuel oil as defined in ASTM D 396 and/or the specifications for No. 1 diesel fuel as defined in ASTM Specification D 975 with distillation temperatures of 420° F at the 10-percent recovery point and 550° F at the 90-percent recovery point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100° F.

No. 2 Distillate. A petroleum distillate which meets the specifications for No. 2 heating or fuel oil as defined in ASTM D 396 and/or the specifications for No. 2 diesel fuel as defined in ASTM Specification D 975 with distillation temperatures of 540° and 640° F at the 90-percent recovery point, and kinematic viscosities between 2.0 and 4.3 centistokes at 100° F.

No. 4 Fuel Oil. A fuel oil for commercial burner installations not equipped with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks that conforms to ASTM Specification D396 or Federal Specification VV-F-815C; with minimum and maximum kinematic viscosities between 5.8 and 26.4 centistokes at

100° F. Also included is No. 4-D, a fuel oil for low and medium-speed diesel engines that conforms to ASTM Specification D975.

Electricity (Purchased). Electricity purchased for refinery operations that is not produced within the refinery complex.

Ending Stocks. Primary stocks of crude oil and petroleum products held in storage as of 12 midnight on the last day of the month. Primary stocks include crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tank farms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in-transit by water from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. Primary Stocks exclude stocks of foreign origin that are held in bonded warehouse storage.

ETBE (Ethyl tertiary butyl ether) (CH₃)₃COC₂H₅. An oxygenate blend stock formed by the catalytic etherification of isobutylene with ethanol.

Ethane (C₂H₆). A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of -127.48° F. It is extracted from natural gas and refinery gas streams.

Ether. A generic term applied to a group of organic chemical compounds composed of carbon, hydrogen, and oxygen, characterized by an oxygen atom attached to two carbon atoms (e.g., methyl tertiary butyl ether).

Ethylene (C₂H₄). An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

Exports. Shipments of goods from the 50 States and the District of Columbia to foreign countries, Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

Field Production. Represents crude oil production on leases, natural gas liquids production at natural gas processing plants, new supply of other hydrocarbons/oxygenates and motor gasoline blending components, and fuel ethanol blended into finished motor gasoline.

Flexicoking. A thermal cracking process which converts heavy hydrocarbons such as crude oil, tar sands bitumen, and distillation residues into light hydrocarbons. Feedstocks can be any pumpable hydrocarbons including those containing high concentrations of sulfur and metals.

Fluid Coking. A thermal cracking process utilizing the fluidized-solids technique to remove carbon (coke) for

continuous conversion of heavy, low-grade oils into lighter products.

Fresh Feed Input. Represents input of material (crude oil, unfinished oils, natural gas liquids, other hydrocarbons and oxygenates or finished products) to processing units at a refinery that is being processed (input) into a particular unit for the first time.

Examples:

- (1) Unfinished oils coming out of a crude oil distillation unit which are input into a catalytic cracking unit are considered fresh feed to the catalytic cracking unit.
- (2) Unfinished oils coming out of a catalytic cracking unit being looped back into the same catalytic cracking unit to be reprocessed are not considered fresh feed.

Fuel Ethanol (C₂H₅OH). An anhydrous denatured aliphatic alcohol intended for gasoline blending as described in Oxygenates definition.

Fuels Solvent Deasphalting. A refining process for removing asphalt compounds from petroleum fractions, such as reduced crude oil. The recovered stream from this process is used to produce fuel products.

Gas Oil. A liquid petroleum distillate having a viscosity intermediate between that of kerosene and lubricating oil. It derives its name from having originally been used in the manufacture of illuminating gas. It is now used to produce distillate fuel oils and gasoline.

Gasoline Blending Components. Naphthas which will be used for blending or compounding into finished aviation or motor gasoline (e.g., straight-run gasoline, alkylate, reformat, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus.

Gross Input to Atmospheric Crude Oil Distillation Units. Total input to atmospheric crude oil distillation units. Includes all crude oil, lease condensate, natural gas plant liquids, unfinished oils, liquefied refinery gases, slop oils, and other liquid hydrocarbons produced from tar sands, gilsonite, and oil shale.

Heavy Gas Oil. Petroleum distillates with an approximate boiling range from 651° to 1000° F.

Hydrogen. The lightest of all gases, occurring chiefly in combination with oxygen in water; exists also in acids, bases, alcohols, petroleum, and other hydrocarbons.

Idle Capacity. The component of operable capacity that is not in operation and not under active repair, but capable of being placed in operation within 30 days; and capacity not in operation but under active repair that can be completed within 90 days.

Imported Crude Oil Burned As Fuel. The amount of foreign crude oil burned as a fuel oil, usually as residual fuel oil, without being processed as such. Imported crude oil burned as fuel includes lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale.

Imports. Receipts of goods into the 50 States and the District of Columbia from foreign countries, Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

Isobutane. See Butane.

Isobutylene (C₄H₈). An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

Isohexane (C₆H₁₄). A saturated branch-chain hydrocarbon. It is a colorless liquid that boils at a temperature of 156.2° F.

Isomerization. A refining process which alters the fundamental arrangement of atoms in the molecule without adding or removing anything from the original material. Used to convert normal butane into isobutane (C₄), an alkylation process feedstock, and normal pentane and hexane into isopentane (C₅) and isohexane (C₆), high-octane gasoline components.

Isopentane. See Natural Gasoline and Isopentane.

Kerosene. A petroleum distillate that has a maximum distillation temperature of 401° F at the 10-percent recovery point, a final boiling point of 572° F, and a minimum flash point of 100° F. Included are the two grades designated in ASTM D3699: No. 1-K and No. 2-K, and all grades of kerosene called range or stove oil. Kerosene is used in space heaters, cook stoves, and water heaters and is suitable for use as an illuminant when burned in wick lamps.

Kerosene-Type Jet Fuel. A quality kerosene product with a maximum distillation temperature of 400° F at the 10-percent recovery point and a final maximum boiling point of 572° F. The fuel is designated in ASTM Specification D1655 and Military Specification MIL-T-5624L (Grades JP-5 and JP-8). A relatively low-freezing point distillate of the kerosene type used primarily for turbojet and turboprop aircraft engines.

Commercial. Kerosene-type jet fuel intended for commercial use.

Military. Kerosene-type jet fuel intended for military use.

Lease Condensate. A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

Light Gas Oils. Liquid petroleum distillates heavier than naphtha, with an approximate boiling range from 401° F to 650° F.

Liquefied Petroleum Gases (LPG). Ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, and isobutylene produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids.

Liquefied Refinery Gases (LRG). Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration, they are retained in the liquid state. The reported categories are ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene. Excludes still gas.

Lubricants. A substance used to reduce friction between bearing surfaces or as process materials either incorporated into other materials used as processing aids in the manufacturing of other products, or as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. Do not include byproducts of lubricating oil refining such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. "Lubricants" includes all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. Reporting categories include:

Paraffinic. Includes all grades of bright stock and neutrals with a Viscosity Index > 75.

Naphthenic. Includes all lubricating oil base stocks with a Viscosity Index < 75.

Note: The criterion for categorizing the lubricants is based solely on the Viscosity Index of the stocks and is independent of crude sources and type of processing used to produce the oils.

Exceptions: Lubricating oil base stocks that have been historically classified as naphthenic or paraffinic by a refiner may continue to be so categorized irrespective of the Viscosity Index criterion.

Example:

- (1) Unextracted paraffinic oils that would not meet the Viscosity Index test.

Merchant Oxygenate Plants. Oxygenate production facilities that are not associated with a petroleum refinery. Production from these facilities is sold under contract or on the spot market to refiners or other gasoline blenders.

Methanol (CH_3OH). A light, volatile alcohol eligible for gasoline blending as described in Oxygenate definition.

Middle Distillates. A general classification of refined petroleum products that includes distillate fuel oil and kerosene.

Military Kerosene-Type Jet Fuel. See Kerosene-Type Jet Fuel.

Miscellaneous Products. Includes all finished products not classified elsewhere (e.g., petrolatum, lube refining byproducts (aromatic extracts and tars), absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils).

Motor Gasoline (Finished). A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that has been blended to form a fuel suitable for use in spark-ignition engines. Motor gasoline, as given in ASTM Specification D439 or Federal Specification VV-G-1690B, includes a range in distillation temperatures from 122° to 158° F at the 10-percent recovery point and from 365° to 374° F at the 90-percent recovery point. "Motor gasoline" includes reformulated gasoline, oxygenated gasoline, and other finished gasoline. Blendstock is excluded until blending has been completed.

Reformulated Gasoline. Gasoline formulated for use in motor vehicles, the composition and properties of which are certified as "reformulated gasoline" by the U.S. Environmental Protection Agency.

Oxygenated Gasoline. Gasoline formulated for use in motor vehicles that has an oxygen content of 1.8 percent or higher, by weight.

Other Finished. Motor gasoline not included in the oxygenated or reformulated gasoline categories.

Motor Gasoline Blending. Mechanical mixing of motor gasoline blending components and oxygenates to produce finished motor gasoline (see definition of Motor Gasoline).

Motor Gasoline Blending Components. Naphthas which will be used for blending or compounding into finished motor gasoline (e.g. straight-run gasoline, alkylate, reformate, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus. Oxygenates are reported as individual components and included in the total for other hydrocarbons, hydrogens, and oxygenates.

MTBE (Methyl tertiary butyl ether) ($\text{CH}_3)_3\text{COCH}_3$. An ether intended for gasoline blending as described in Oxygenate definition.

Nameplate Capacity. The maximum design production capacity specified by the manufacturer of a processing unit or the maximum amount of a product that can be produced running the manufacturing unit at full capacity.

Naphtha. A generic term applied to a petroleum fraction with an approximate boiling range between 122° and 400° F.

Naphtha Less Than 401° F. See Petrochemical Feedstocks.

Naphtha-Type Jet Fuel. A fuel in the heavy naphtha boiling range. ASTM Specification D1655 specifies for this fuel maximum distillation temperatures of 290° F at the 20-percent recovery point and 470° F at the 90-percent point, meeting Military Specification MIL-T-5624L (Grade JP-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. Excludes ram-jet and petroleum rocket fuels.

Natural Gas. A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

Natural Gas Field Facility. A field facility designed to process natural gas produced from more than one lease for the purpose of recovering condensate from a stream of natural gas; however, some field facilities are designed to recover propane, normal butane, pentanes plus, etc., and to control the quality of natural gas to be marketed.

Natural Gas Plant Liquids. Natural gas liquids recovered from natural gas in gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Materials and are classified as follows: ethane, propane, normal butane, isobutane, and pentanes plus.

Natural Gas Processing Plant. A facility designed (1) to achieve the recovery of natural gas liquids from the stream of natural gas which may or may not have been processed through lease separators and field facilities, and (2) to control the quality of the natural gas to be marketed. Cycling plants are classified as gas processing plants.

Natural Gasoline and Isopentane. A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane which is a saturated branch-chain hydrocarbon, (C₅H₁₂), obtained by fractionation of natural gasoline or isomerization of normal pentane.

Net Receipts. The difference between total movements into and total movements out of each PAD District by pipeline, tanker, and barge.

Normal Butane. See Butane.

OPEC. The acronym for the Organization of Petroleum Exporting Countries, that have organized for the purpose of negotiating with oil companies on matters of oil production, prices and future concession rights. Current members are Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela. The Neutral Zone between Kuwait and Saudi Arabia is considered part of OPEC.

Operable Capacity. The amount of capacity that, at the beginning of the period, is in operation; not in operation and not under active repair, but capable of being placed in operation within 30 days; or not in operation but under active repair that can be completed within 90 days. Operable capacity is the sum of the operating and idle capacity and is measured in barrels per calendar day or barrels per stream day.

Operating Capacity. The component of operable capacity that is in operation at the beginning of the period.

Operable Utilization Rate. Represents the utilization of the atmospheric crude oil distillation units. The rate is calculated by dividing the gross input to these units by the operable refining capacity of the units.

Operating Utilization Rate. Represents the utilization of the atmospheric crude oil distillation units. The rate is calculated by dividing the gross input to these units by the operating refining capacity of the units.

Other Finished. See Motor Gasoline (Finished).

Other Hydrocarbons. Materials received by a refinery and consumed as a raw material. Includes hydrogen, coal

tar derivatives, gilsonite, and natural gas received by the refinery for reforming into hydrogen. Natural gas to be used as fuel is excluded.

Other Oils Equal To or Greater Than 401° F. See Petrochemical Feedstocks.

Other Oxygenates. Other aliphatic alcohols and aliphatic ethers intended for motor gasoline blending (e.g., isopropyl ether (IPE) or n-propanol).

Oxygenated Gasoline. See Motor Gasoline (Finished).

Oxygenates. Any substance which, when added to gasoline, increases the amount of oxygen in that gasoline blend. Through a series of waivers and interpretive rules, the Environmental Protection Agency (EPA) has determined the allowable limits for oxygenates in unleaded gasoline. The "Substantially Similar" Interpretive Rules (56 FR (February 11, 1991)) allows blends of aliphatic alcohols other than methanol and aliphatic ethers, provided the oxygen content does not exceed 2.7 percent by weight. The "Substantially Similar" Interpretive Rules also provides for blends of methanol up to 0.3 percent by volume exclusive of other oxygenates, and butanol or alcohols of a higher molecular weight up to 2.75 percent by weight. Individual waivers pertaining to the use of oxygenates in unleaded gasoline have been issued by the EPA. They include:

Fuel Ethanol. Blends of up to 10 percent by volume anhydrous ethanol (200 proof) (commonly referred to as the "gasohol waiver").

Methanol. Blends of methanol and gasoline-grade tertiary butyl alcohol (GTBA) such that the total oxygen content does not exceed 3.5 percent by weight and the ratio of methanol to GTBA is less than or equal to 1. It is also specified that this blended fuel must meet ASTM volatility specifications (commonly referred to as the "ARCO" waiver).

Blends of up to 5.0 percent by volume methanol with a minimum of 2.5 percent by volume cosolvent alcohols having a carbon number of 4 or less (i.e., ethanol, propanol, butanol, and/or GTBA). The total oxygen must not exceed 3.7 percent by weight, and the blend must meet ASTM volatility specifications as well as phase separation and alcohol purity specifications (commonly referred to as the "DuPont" waiver).

MTBE (Methyl tertiary butyl ether). Blends up to 15.0 percent by volume MTBE which must meet the ASTM D4814 specifications. Blenders must take precautions that the blends are not used as base gasolines for other oxygenated blends (commonly referred to as the "Sun" waiver).

Pentanes Plus. A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

Persian Gulf. The countries that comprise the Persian Gulf are: Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates.

Petrochemical Feedstocks. Chemical feedstocks derived from petroleum principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics. The categories reported are "Naphtha Less Than 401° F" and "Other Oils Equal To or Greater Than 401° F."

Naphtha Less Than 401° F. A naphtha with a boiling range of less than 401° F that is intended for use as a petrochemical feedstock.

Other Oils Equal To or Greater Than 401° F. Oils with a boiling range equal to or greater than 401° F that are intended for use as a petrochemical feedstock.

Petroleum Administration for Defense (PAD) Districts. Geographic aggregations of the 50 States and the District of Columbia into five districts by the Petroleum Administration for Defense in 1950. These districts were originally instituted for economic and geographic reasons as Petroleum Administration for War (PAW) Districts, which was established in 1942.

Petroleum Coke. A residue, the final product of the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion factor is 5 barrels per short ton.

Marketable Coke. Those grades of coke produced in delayed or fluid cokers which may be recovered as relatively pure carbon. This "green" coke may be sold as is or further purified by calcining.

Catalyst Coke. In many catalytic operations (e.g., catalytic cracking) carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refining process. This carbon or coke is not recoverable in a concentrated form.

Petroleum Products. Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special

naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Pipeline (Petroleum). Crude oil and product pipelines used to transport crude oil and petroleum products respectively, (including interstate, intrastate, and intracompany pipelines) within the 50 States and the District of Columbia.

Plant Condensate. One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

Processing Gain. The volumetric amount by which total output is greater than input for a given period of time. This difference is due to the processing of crude oil into products which, in total, have a lower specific gravity than the crude oil processed.

Processing Loss. The volumetric amount by which total refinery output is less than input for a given period of time. This difference is due to the processing of crude oil into products which, in total, have a higher specific gravity than the crude oil processed.

Product Supplied, Crude Oil. Crude oil burned on leases and by pipelines as fuel.

Production Capacity. The amount of product that can be produced from processing facilities.

Products Supplied. Approximately represents consumption of petroleum products because it measures the disappearance of these products from primary sources, i.e., refineries, natural gas processing plants, blending plants, pipelines, and bulk terminals. In general, product supplied of each product in any given period is computed as follows: field production, plus refinery production, plus imports, plus unaccounted for crude oil, (plus net receipts when calculated on a PAD District basis), minus stock change, minus crude oil losses, minus refinery inputs, minus exports.

Propane (C₃H₈). A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of -43.67° F. It is extracted from natural gas or refinery gas streams. It includes all products designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial propane and HD-5 propane.

Propylene (C₃H₆). An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

Refinery. An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and oxygenates.

Refinery Input, Crude Oil. Total crude oil (domestic plus foreign) input to crude oil distillation units and other refinery processing units (cokers, etc.).

Refinery Input, Total. The raw materials and intermediate materials processed at refineries to produce finished petroleum products. They include crude oil, products of natural gas processing plants, unfinished oils, other hydrocarbons and oxygenates, motor gasoline and aviation gasoline blending components and finished petroleum products.

Refinery Production. Petroleum products produced at a refinery or blending plant. Published production of these products equals refinery production minus refinery input. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. Refinery production of unfinished oils, and motor and aviation gasoline blending components appear on a net basis under refinery input.

Refinery Yield. Refinery yield (expressed as a percentage) represents the percent of finished product produced from input of crude oil and net input of unfinished oils. It is calculated by dividing the sum of crude oil and net unfinished input into the individual net production of finished products. Before calculating the yield for finished motor gasoline, the input of natural gas liquids, other hydrocarbons and oxygenates, and net input of motor gasoline blending components must be subtracted from the net production of finished motor gasoline. Before calculating the yield for finished aviation gasoline, input of aviation gasoline blending components must be subtracted from the net production of finished aviation gasoline.

Reformulated Gasoline. See Motor Gasoline (Finished).

Residual Fuel Oil. The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations and that conform to ASTM Specifications D396 and 975. Included are No. 5, a residual fuel oil of medium viscosity; Navy Special, for use in steam-powered vessels in government service and in shore power plants; No. 6, which includes Bunker C fuel oil, and is used for commercial and industrial heating, electricity generation and to power ships. Imports of residual fuel oil include imported crude oil burned as fuel.

Residuum. Residue from crude oil after distilling off all but the heaviest components, with a boiling range greater than 1000° F.

Road Oil. Any heavy petroleum oil, including residual asphaltic oil used as a dust pallative and surface treatment on roads and highways. It is generally produced in six grades from 0, the most liquid, to 5, the most viscous.

Shell Storage Capacity. The design capacity of a petroleum storage tank which is always greater than or equal to working storage capacity.

Special Naphthas. All finished products within the naphtha boiling range that are used as paint thinners, cleaners, or solvents. These products are refined to a specified flash point. Special naphthas include all commercial hexane and cleaning solvents conforming to ASTM Specification D1836 and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline, or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded.

Steam (Purchased). Steam, purchased for use by a refinery, that was not generated from within the refinery complex.

Still Gas (Refinery Gas). Any form or mixture of gases produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, propylene, etc. Still gas is used as a refinery fuel and a petrochemical feedstock. The conversion factor is 6 million BTU's per fuel oil equivalent barrel.

Stock Change. The difference between stocks at the beginning of the month and stocks at the end of the month. A negative number indicates a decrease in stocks and a positive number indicates an increase in stocks.

Strategic Petroleum Reserve (SPR). Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

Sulfur. A nonmetallic element of lemon-yellow color, sometimes known as "brimstone".

Supply. The components of petroleum supply are field production, refinery production, imports, and net receipts when calculated on a PAD District basis.

TAME (Tertiary amyl methyl ether) $(CH_3)_2(C_2H_5)COCH_3$. An oxygenate blend stock formed by the catalytic etherification of isoamylene with methanol.

Tank Farm. An installation used by gathering and trunk pipeline companies, crude oil producers, and terminal operators (except refineries) to store crude oil.

Tanker and Barge. Vessels that transport crude oil or petroleum products. Data are reported for movements between PAD Districts; from a PAD District to the Panama Canal; or from the Panama Canal to a PAD District.

TBA (Tertiary butyl alcohol) ($\text{CH}_3)_3\text{COH}$. An alcohol primarily used as a chemical feedstock, a solvent or feedstock for isobutylene production for MTBE; produced as a co-product of propylene oxide production or by direct hydration of isobutylene.

Thermal Cracking. A refining process in which heat and pressure are used to break down, rearrange, or combine hydrocarbon molecules. Thermal cracking includes gas oil, visbreaking, fluid coking, delayed coking, and other thermal cracking processes (e.g., flexicoking). See individual categories for definition.

Toluene ($\text{C}_6\text{H}_5\text{CH}_3$). Colorless liquid of the aromatic group of petroleum hydrocarbons, made by the catalytic reforming of petroleum naphthas containing methyl cyclohexane. A high-octane gasoline-blending agent, solvent, and chemical intermediate, base for TNT.

Unaccounted for Crude Oil. Represents the arithmetic difference between the calculated supply and the calculated disposition of crude oil. The calculated supply is the sum of crude oil production plus imports minus changes in crude oil stocks. The calculated disposition of crude oil is the sum of crude oil input to refineries, crude oil exports, crude oil burned as fuel, and crude oil losses.

Unfinished Oils. Includes all oils requiring further processing, except those requiring only mechanical blending. Includes naphthas and lighter oils, kerosene and light gas oils, heavy gas oils, and residuum. See individual categories for definition.

Unfractionated Streams. Mixtures of unsegregated natural gas liquid components excluding those in plant condensate. This product is extracted from natural gas.

United States. The United States is defined as the 50 States and the District of Columbia.

Vacuum Distillation. Distillation under reduced pressure (less the atmospheric) which lowers the boiling

temperature of the liquid being distilled. This technique with its relatively low temperatures prevents cracking or decomposition of the charge stock.

Visbreaking. A thermal cracking process in which heavy atmospheric or vacuum-still bottoms are cracked at moderate temperatures to increase production of distillate products and reduce viscosity of the distillation residues.

Wax. A solid or semi-solid material derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. It is light-colored, more-or-less translucent crystalline mass, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Includes all marketable wax whether crude scale or fully refined. The three grades included are microcrystalline, crystalline-fully refined, and crystalline-other. The conversion factor is 280 pounds per 42 U.S. gallons per barrel.

Microcrystalline Wax. Wax extracted from certain petroleum residues having a finer and less apparent crystalline structure than paraffin wax and having the following physical characteristics: penetration at 77° F (D1321)-60 maximum; viscosity at 210° F in Saybolt Universal Seconds (SUS); (D88)-60 SUS (10.22 centistokes) minimum to 150 SUS (31.8 centistokes) maximum; oil content (D721)-5 percent minimum.

Crystalline-Fully Refined Wax. A light-colored paraffin wax having the following characteristics: viscosity at 210° F (D88)-59.9 SUS (10.18 centistokes) maximum; oil content (D721)-0.5 percent maximum; other +20 color, Saybolt minimum.

Crystalline-Other Wax. A paraffin wax having the following characteristics: viscosity at 210° F (D88)-59.9 SUS (10.18 centistokes) maximum; oil content (D721)-0.51 percent minimum to 15 percent maximum.

Working Storage Capacity. The difference in volume between the maximum safe fill capacity and the quantity below which pump suction is ineffective (bottoms).

Xylene ($\text{C}_6\text{H}_4(\text{CH}_3)_2$). Colorless liquid of the aromatic group of hydrocarbons made the catalytic reforming of certain naphthenic petroleum fractions. Used as high-octane motor and aviation gasoline blending agents, solvents, chemical intermediates. Isomers are metaxylene, orthoxylene, paraxylene.

END

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