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Preface

The *Petroleum Supply Annual* (PSA) contains information on the supply and disposition of crude oil and petroleum products. The publication reflects data that were collected from the petroleum industry during 1998 through annual and monthly surveys. The *PSA* is divided into two volumes. This first volume contains three sections: Summary Statistics, Detailed Statistics, and Refinery Statistics; each with final annual data. The second volume contains final statistics for each month of 1998, and replaces data previously published in the *Petroleum Supply Monthly* (PSM). The tables in Volumes 1 and 2 are similarly numbered to facilitate comparison between them. Below is a description of each section in Volume 1 of the *PSA*.

Summary Statistics

This section contains a summary of the data presented each month in the *PSM* and in Volume 2 of the *PSA*. Graphs and tables are provided which show 14 years of data depicting the balance between supply, disposition and ending stocks for various commodities including crude oil, motor gasoline, distillate fuel oil, residual fuel oil, jet fuel, propane/propylene, and liquefied petroleum gases.

Detailed Statistics

The tables contained in this section provide 1998 detailed statistics on supply and disposition, refinery operations, imports and exports, stocks, and transportation of crude oil and petroleum products. In most cases, the statistics are presented for several geographic areas — the United States (50 States and the District of Columbia), five Petroleum Administration for Defense (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.

Refinery Statistics

The tables contained in this section are compiled from the Form EIA-820 "Biennial Refinery Report." Of particular note are listings of refineries and associated crude oil distillation and downstream capacities by State, as of January 1, 1999, as well as summaries of corporate refinery capacities and refinery storage capacities. In addition, refinery receipts of crude oil by method of transportation for 1998 are provided. Also included are fuels consumed at refineries, and lists of shutdowns, sales, reactivations, and mergers during 1998.

Appendices

Three appendices are provided to assist in understanding and interpreting the data presented in this publication. Industry terminology and product definitions are listed alphabetically in the Glossary.

- 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 (1997 Revised Crude Oil Production) -Updated monthly and annual crude oil production statistics received after the publication of the 1997 *PSA*.

Contents

Page

Tables

Exports of Crude Oil and Petroleum Products

Net Imports

Stocks

Movements of Crude Oil and Petroleum Products

Refinery Statistics

Illustrations

Appendices

Glossary

Table S1. Crude Oil and Petroleum Products Overview, 1984 - Present

(Thousand Barrels per Day, Except Where Noted)

Year/Month	Field Production			Stock Change[a]			Ending Stocks[b] (Million Barrels)
	Total Domestic[c]	Crude Oil	Natural Gas Plant Liquids	Crude Oil[d]	Petroleum Products	Petroleum Products Supplied	Crude Oil[d] and Petroleum Products
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**	**8,680**	**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 Average	**9,168**	**7,417**	**1,659**	**-42**	**32**	**16,714**	**1,617**
1992 Average	**8,996**	**7,171**	**1,697**	**-1**	**-68**	**17,033**	[g] **1,592**
1993 Average	**8,836**	**6,847**	**1,736**	**81**	**70**	**17,237**	**1,647**
1994 Average	**8,645**	**6,662**	**1,727**	**18**	**-2**	**17,718**	**1,653**
1995 Average	**8,626**	**6,560**	**1,762**	**-93**	**-153**	**17,725**	**1,563**
1996 January	8,564	6,495	1,716	-8	[g] -592	18,261	[g] 1,544
February	8,558	6,577	1,680	-63	-1,454	18,620	1,500
March	8,718	6,571	1,814	-132	-464	18,301	1,482
April	8,597	6,444	1,845	29	633	17,885	1,502
May	8,502	6,394	1,806	2	576	17,957	1,520
June	8,550	6,458	1,833	305	593	18,107	1,546
July	8,486	6,338	1,829	-244	358	18,211	1,550
August	8,535	6,360	1,858	-19	-130	18,658	1,545
September	8,623	6,482	1,872	-499	701	17,655	1,551
October	8,685	6,481	1,912	186	-630	19,171	1,538
November	8,730	6,476	1,915	-414	-117	18,535	1,522
December	8,738	6,506	1,876	-627	165	18,334	1,507
Average	**8,607**	**6,465**	**1,830**	**-124**	**-28**	**18,309**	**—**
1997 January	8,470	6,402	1,782	462	-679	18,554	1,501
February	8,708	6,514	1,867	-122	-557	18,398	1,482
March	8,646	6,452	1,876	520	444	17,863	1,512
April	8,604	6,441	1,824	197	4	18,559	1,518
May	8,633	6,474	1,822	230	1,172	18,293	1,561
June	8,610	6,442	1,827	-199	658	18,617	1,575
July	8,608	6,409	1,821	-343	-167	19,107	1,559
August	8,535	6,347	1,831	-283	643	18,565	1,570
September	8,679	6,486	1,845	95	642	18,562	1,592
October	8,624	6,467	1,813	393	-214	19,071	1,598
November	8,565	6,459	1,728	252	-195	18,578	1,600
December	8,662	6,531	1,773	-608	-675	19,250	1,560
Average	**8,611**	**6,452**	**1,817**	**51**	**93**	**18,620**	**—**
1998 January	8,781	6,541	1,805	389	-66	18,362	1,570
February	8,731	6,476	1,857	37	-79	18,316	1,569
March	8,590	6,408	1,853	538	54	18,685	1,587
April	8,685	6,483	1,869	556	349	19,044	1,614
May	8,529	6,347	1,835	-9	1,232	18,375	1,652
June	8,460	6,267	1,748	-620	577	19,182	1,651
July	8,155	6,194	1,586	187	162	19,466	1,661
August	8,301	6,203	1,722	-293	530	19,347	1,669
September	7,878	5,789	1,716	-641	95	18,895	1,652
October	8,257	6,143	1,744	677	-776	19,188	1,649
November	8,294	6,140	1,768	321	425	18,673	1,672
December	8,066	6,043	1,620	-285	-515	19,419	1,647
Average	**8,392**	**6,252**	**1,759**	**74**	**165**	**18,917**	**—**

[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 2.

Footnotes continued on following page.

Table S1. Crude Oil and Petroleum Products Overview, 1984 - Present (Continued)

(Thousand Barrels per Day, Except Where Noted)

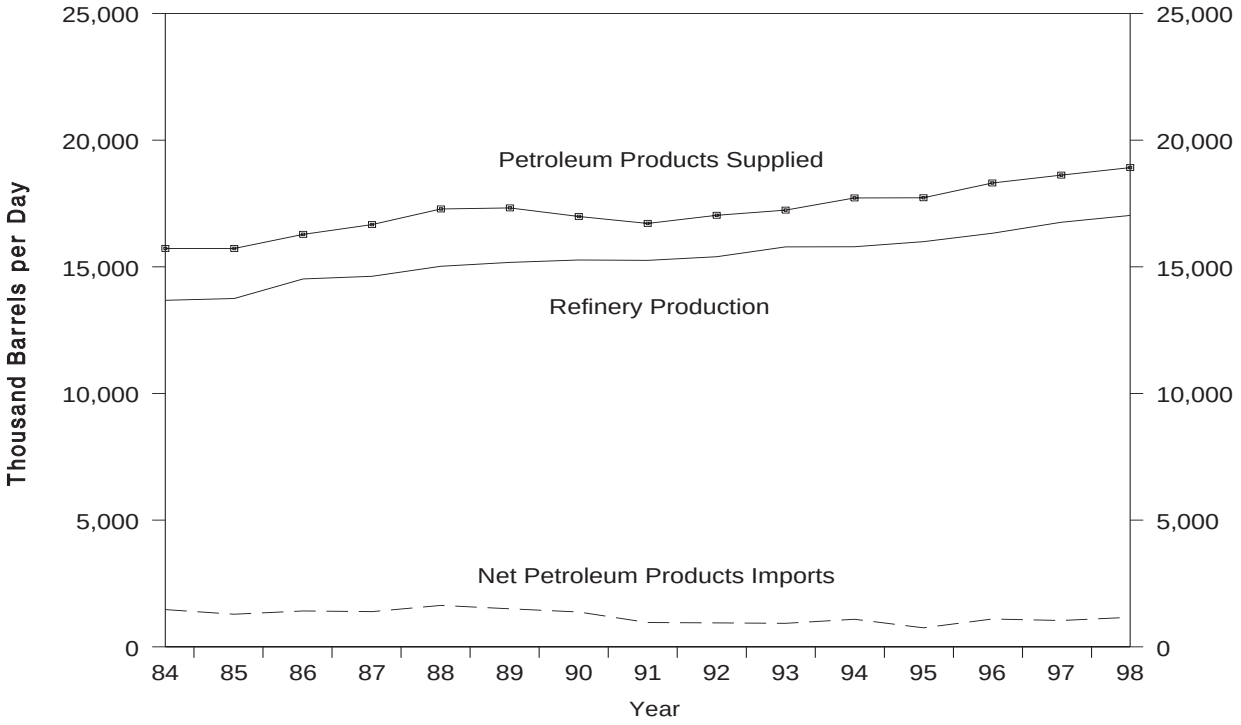
Year/Month	Imports			Exports			Net Imports[f]
	Total	Crude Oil[e]	Petroleum Products	Total	Crude Oil	Petroleum Products	
1984 Average	**5,437**	**3,426**	**2,011**	**722**	**181**	**541**	**4,715**
1985 Average	**5,067**	**3,201**	**1,866**	**781**	**204**	**577**	**4,286**
1986 Average	**6,224**	**4,178**	**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 Average	**7,627**	**5,782**	**1,844**	**1,001**	**116**	**885**	**6,626**
1992 Average	**7,888**	**6,083**	**1,805**	**950**	**89**	**861**	**6,938**
1993 Average	**8,620**	**6,787**	**1,833**	**1,003**	**98**	**904**	**7,618**
1994 Average	**8,996**	**7,063**	**1,933**	**942**	**99**	**843**	**8,054**
1995 Average	**8,835**	**7,230**	**1,605**	**949**	**95**	**855**	**7,886**
1996 January	9,364	7,303	2,061	1,070	89	981	8,294
February	8,390	6,612	1,778	1,048	92	956	7,342
March	9,092	7,215	1,877	867	94	773	8,225
April	9,429	7,371	2,058	976	148	828	8,453
May	10,007	8,029	1,977	891	37	854	9,116
June	9,938	7,958	1,980	895	130	766	9,043
July	9,820	7,800	2,020	945	139	806	8,876
August	9,986	8,041	1,944	896	44	852	9,090
September	9,142	7,353	1,789	1,104	147	957	8,038
October	9,837	7,701	2,136	1,045	134	911	8,792
November	9,244	7,344	1,900	1,024	172	852	8,220
December	9,417	7,307	2,110	1,013	96	917	8,404
Average	**9,478**	**7,508**	**1,971**	**981**	**110**	**871**	**8,498**
1997 January	9,763	7,492	2,271	1,038	141	897	8,725
February	9,561	7,434	2,127	1,017	229	787	8,544
March	9,833	7,754	2,079	933	136	796	8,900
April	10,114	7,987	2,127	937	92	845	9,177
May	10,818	8,653	2,165	876	26	851	9,941
June	10,736	8,759	1,978	955	57	898	9,782
July	10,008	8,178	1,830	1,012	70	942	8,996
August	10,465	8,621	1,844	1,074	110	964	9,390
September	10,537	8,840	1,697	997	122	875	9,540
October	10,792	8,927	1,865	1,066	152	914	9,726
November	9,948	8,366	1,582	934	32	901	9,014
December	9,328	7,653	1,675	1,197	131	1,066	8,130
Average	**10,162**	**8,225**	**1,936**	**1,003**	**108**	**896**	**9,158**
1998 January	10,127	8,339	1,788	1,133	231	902	8,994
February	9,991	8,045	1,946	1,003	197	806	8,988
March	10,034	8,124	1,911	948	99	848	9,087
April	11,105	8,985	2,120	1,048	163	885	10,057
May	11,104	8,987	2,117	1,053	144	909	10,051
June	10,926	8,795	2,132	987	63	924	9,939
July	11,649	9,507	2,142	998	104	894	10,651
August	11,032	9,177	1,855	780	51	729	10,252
September	10,499	8,500	1,998	863	34	828	9,636
October	10,861	8,667	2,194	851	87	763	10,011
November	10,860	8,940	1,920	782	60	721	10,078
December	10,258	8,352	1,906	893	90	803	9,365
Average	**10,708**	**8,706**	**2,002**	**945**	**110**	**835**	**9,764**

Footnotes continued.

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

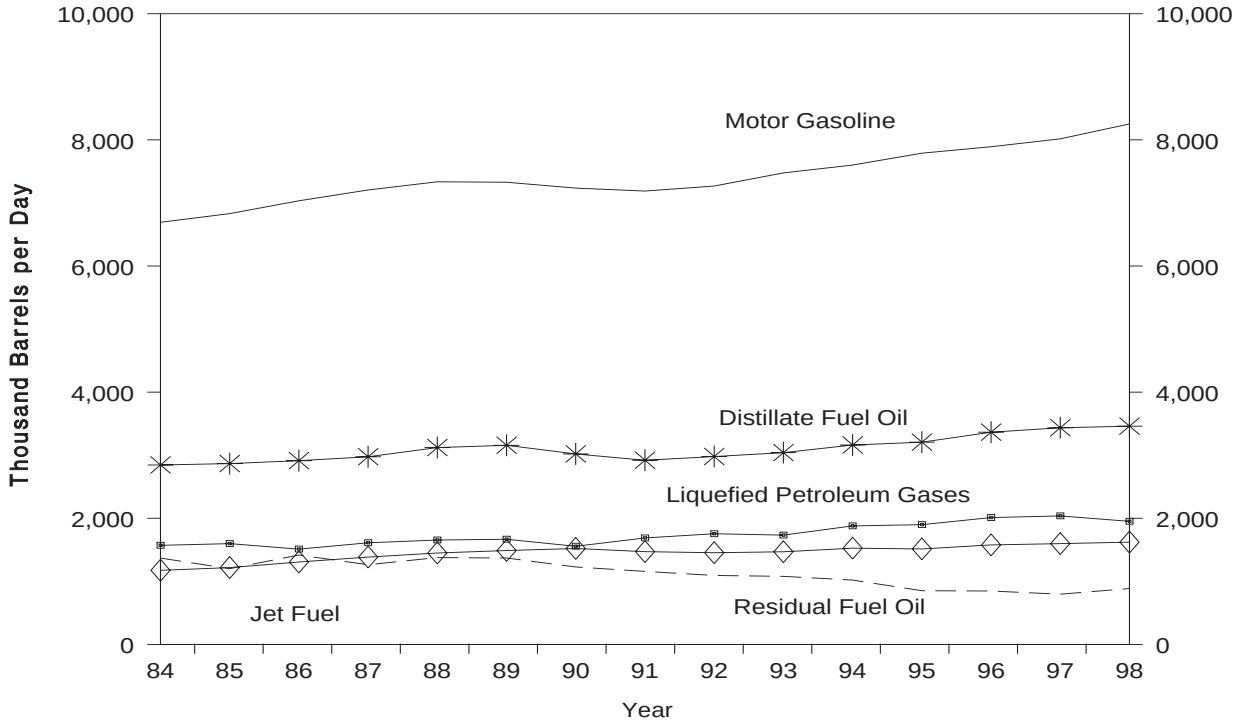
Source: See Summary Statistics Table and Figure Sources.

Figure S1. Petroleum Overview, 1984 - Present



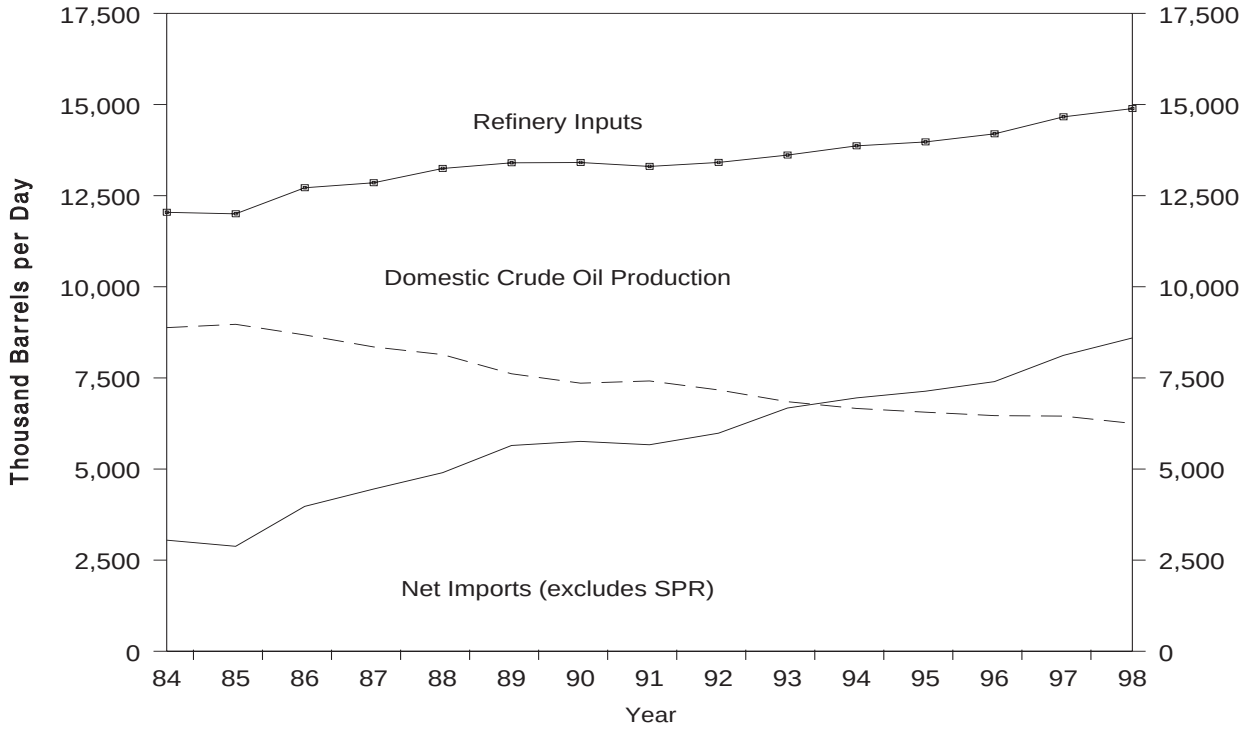
Source: Energy Information Administration, *Petroleum Supply Annual*, Table S1. See Summary Statistics Table and Figure Sources.

Figure S2. Petroleum Products Supplied, 1984 - Present



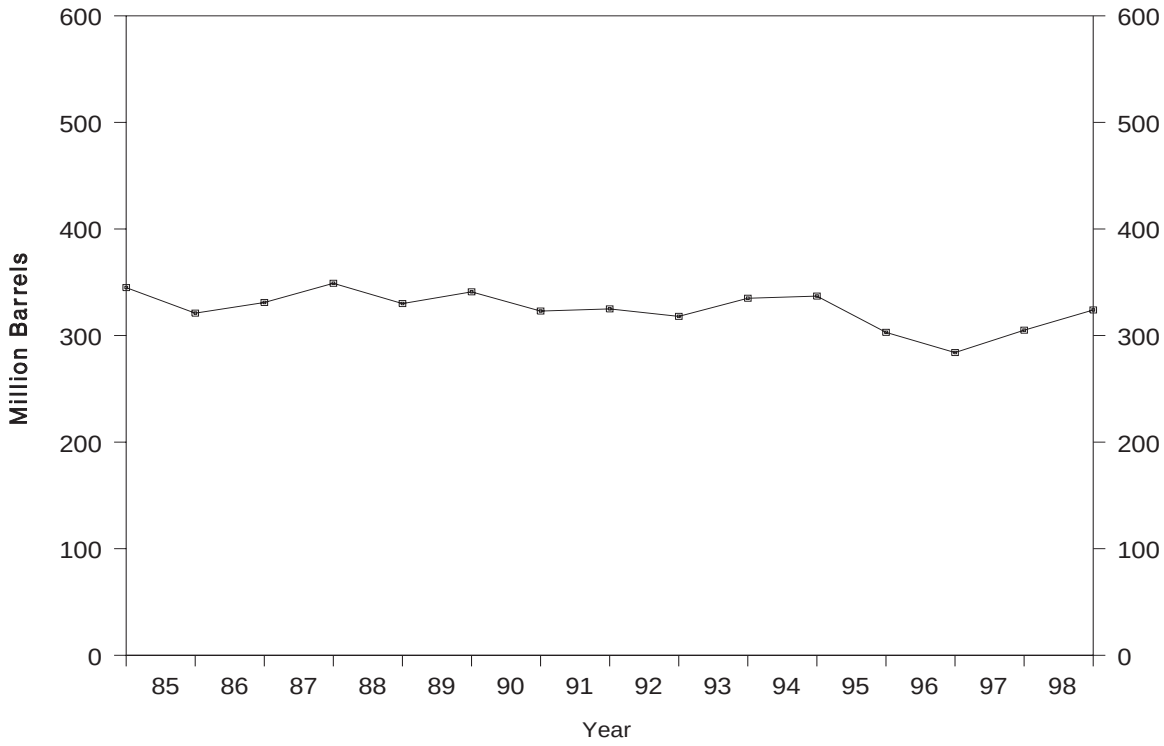
Source: Energy Information Administration, *Petroleum Supply Annual*, Tables S4 - S8. See Summary Statistics Table and Figure Sources.

Figure S3. Crude Oil Supply and Disposition, 1984 - Present



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

Figure S4. Crude Oil Ending Stocks,[1] 1984 - Present



[1]Excludes stocks held in the Strategic Petroleum Reserve (SPR).
Source: Energy Information Administration, *Petroleum Supply Annual*, Table S2. See Summary Statistics Table and Figure Sources.

Table S2. Crude Oil Supply and Disposition, 1984 - Present

(Thousand Barrels per Day, Except Where Noted)

Year/Month	Supply						Disposition
	Field Production		Imports			Unaccounted for Crude Oil[a]	Crude Losses
	Total Domestic	Alaskan	Total	SPR	Other		
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 Average	**7,417**	**1,798**	**5,782**	**0**	**5,782**	**195**	**(s)**
1992 Average	**7,171**	**1,714**	**6,083**	**10**	**6,073**	**258**	**(s)**
1993 Average	**6,847**	**1,582**	**6,787**	**15**	**6,772**	**168**	**(s)**
1994 Average	**6,662**	**1,559**	**7,063**	**12**	**7,051**	**266**	**(s)**
1995 Average	**6,560**	**1,484**	**7,230**	**0**	**7,230**	**193**	**(s)**
1996 January	6,495	1,444	7,303	0	7,303	20	0
February	6,577	1,482	6,612	0	6,612	413	0
March	6,571	1,454	7,215	0	7,215	-25	0
April	6,444	1,367	7,371	0	7,371	665	(s)
May	6,394	1,341	8,029	0	8,029	61	0
June	6,458	1,419	7,958	0	7,958	594	0
July	6,338	1,317	7,800	0	7,800	121	(s)
August	6,360	1,327	8,041	0	8,041	54	0
September	6,482	1,401	7,353	0	7,353	303	0
October	6,481	1,379	7,701	0	7,701	420	0
November	6,476	1,403	7,344	0	7,344	148	0
December	6,506	1,392	7,307	0	7,307	-153	0
Average	**6,465**	**1,393**	**7,508**	**0**	**7,508**	**215**	**(s)**
1997 January	6,402	1,380	7,492	0	7,492	378	0
February	6,514	1,384	7,434	0	7,434	-350	0
March	6,452	1,331	7,754	0	7,754	501	0
April	6,441	1,330	7,987	0	7,987	167	0
May	6,474	1,303	8,653	0	8,653	257	0
June	6,442	1,260	8,759	0	8,759	-170	0
July	6,409	1,238	8,178	0	8,178	136	0
August	6,347	1,200	8,621	0	8,621	130	0
September	6,486	1,276	8,840	0	8,840	199	0
October	6,467	1,286	8,927	0	8,927	5	0
November	6,459	1,278	8,366	0	8,366	164	0
December	6,531	1,290	7,653	0	7,653	267	0
Average	**6,452**	**1,296**	**8,225**	**0**	**8,225**	**145**	**0**
1998 January	6,541	1,229	8,339	0	8,339	60	0
February	6,476	1,238	8,045	0	8,045	-264	0
March	6,408	1,221	8,124	0	8,124	745	0
April	6,483	1,200	8,985	0	8,985	336	0
May	6,347	1,173	8,987	0	8,987	122	0
June	6,267	1,135	8,795	0	8,795	-135	0
July	6,194	1,155	9,507	0	9,507	144	(s)
August	6,203	1,133	9,177	0	9,177	96	0
September	5,789	1,093	8,500	0	8,500	-44	(s)
October	6,143	1,197	8,667	0	8,667	-52	(s)
November	6,140	1,168	8,940	0	8,940	74	0
December	6,043	1,160	8,352	0	8,352	250	0
Average	**6,252**	**1,175**	**8,706**	**0**	**8,706**	**115**	**(s)**

a Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.
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 Crude oil stocks in the Strategic Petroleum Reserve include non-U.S. stocks held under foreign or commercial storage agreements.
e Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 2.
f Previously published as crude used directly.

Footnotes continued on following page.

Table S2. Crude Oil Supply and Disposition, 1984 - Present (Continued)

(Thousand Barrels per Day, Except Where Noted)

Year/Month	Disposition					Ending Stocks[c] (Million Barrels)		
	Stock Change[b]		Refinery Inputs	Exports	Product Supplied	Total	SPR[d]	Other Primary
	SPR	Other						
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 Average	**-47**	**5**	**13,301**	**116**	**18**	**893**	**569**	**325**
1992 Average	**17**	**-18**	**13,411**	**89**	**13**	**893**	**575**	**318**
1993 Average	**34**	**47**	**13,613**	**98**	**10**	**922**	**587**	**335**
1994 Average	**13**	**5**	**13,866**	**99**	**9**	**929**	**592**	**303**
1995 Average	**(s)**	**-93**	**13,973**	**95**	**7**	**895**	**592**	**303**
1996 January	(s)	-8	13,728	89	11	895	592	303
February	(s)	-62	13,564	92	8	893	592	301
March	-80	-52	13,793	94	7	889	589	300
April	-88	117	14,295	148	6	890	586	303
May	-22	24	14,439	37	7	890	586	304
June	-45	350	14,569	130	6	899	584	314
July	-50	-194	14,359	139	5	891	583	308
August	-172	153	14,424	44	6	891	578	313
September	-130	-368	14,484	147	6	876	574	302
October	-1	187	14,277	134	5	882	574	308
November	-127	-288	14,204	172	5	869	570	299
December	-129	-498	14,185	96	6	850	566	284
Average	**-71**	**-53**	**14,195**	**110**	**6**	**—**	**—**	**—**
1997 January	-75	537	13,664	141	5	864	563	301
February	(s)	-121	13,485	229	6	861	563	297
March	(s)	520	14,047	136	5	877	563	313
April	(s)	197	14,303	92	3	883	563	319
May	(s)	230	15,123	26	4	890	563	326
June	(s)	-199	15,170	57	2	884	563	320
July	(s)	-343	14,994	70	2	873	563	310
August	(s)	-283	15,271	110	(s)	864	563	301
September	(s)	95	15,308	122	(s)	867	563	304
October	(s)	393	14,854	152	0	879	563	316
November	(s)	252	14,706	32	0	887	563	324
December	(s)	-607	14,928	131	0	868	563	305
Average	**-7**	**57**	**14,662**	**108**	**2**	**—**	**—**	**—**
1998 January	(s)	389	14,319	231	0	880	563	317
February	(s)	38	14,023	197	0	881	563	318
March	0	538	14,639	99	0	898	563	334
April	0	556	15,085	163	0	915	563	351
May	(s)	-9	15,321	144	0	914	563	351
June	(s)	-620	15,485	63	0	896	563	332
July	(s)	187	15,554	104	0	901	563	338
August	0	-293	15,717	51	0	892	563	329
September	0	-641	14,851	34	0	873	563	310
October	19	658	13,994	87	0	894	564	330
November	150	170	14,772	60	0	904	569	335
December	93	-378	14,840	90	0	895	571	324
Average	**22**	**52**	**14,889**	**110**	**0**	**—**	**—**	**—**

Footnotes continued.

SPR = Strategic Petroleum Reserve.

(s)=Less than 500 barrels per day.

Notes: • Crude oil includes lease condensate. • 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, 1984 - Present
(Thousand Barrels per Day)

Year/Month		Imports from Arab-OPEC Sources							
		Algeria		Iraq		Kuwait[b]		Libya	
		Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
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	**Average**	**253**	**44**	**0**	**0**	**6**	**6**	**0**	**0**
1992	**Average**	**196**	**24**	**0**	**0**	**51**	**39**	**0**	**0**
1993	**Average**	**220**	**24**	**0**	**0**	**353**	**344**	**0**	**0**
1994	**Average**	**243**	**21**	**0**	**0**	**312**	**307**	**0**	**0**
1995	**Average**	**234**	**27**	**0**	**0**	**218**	**213**	**0**	**0**
1996	January	313	38	0	0	148	145	0	0
	February	200	16	0	0	216	216	0	0
	March	241	38	0	0	127	127	0	0
	April	211	2	0	0	201	201	0	0
	May	340	0	0	0	230	230	0	0
	June	313	0	0	0	388	388	0	0
	July	305	0	0	0	266	266	0	0
	August	323	0	0	0	271	266	0	0
	September	186	0	0	0	236	236	0	0
	October	209	0	0	0	260	260	0	0
	November	214	3	0	0	228	228	0	0
	December	214	0	14	14	262	262	0	0
	Average	**256**	**8**	**1**	**1**	**236**	**235**	**0**	**0**
1997	January	282	0	0	0	209	209	0	0
	February	319	0	0	0	172	172	0	0
	March	309	0	35	35	315	315	0	0
	April	320	23	84	84	204	204	0	0
	May	290	0	102	102	128	128	0	0
	June	349	0	115	115	361	361	0	0
	July	291	0	88	88	331	331	0	0
	August	261	4	(s)	(s)	229	229	0	0
	September	259	6	0	0	322	322	0	0
	October	272	3	177	177	349	349	0	0
	November	267	7	220	220	220	220	0	0
	December	208	28	240	240	188	188	0	0
	Average	**285**	**6**	**89**	**89**	**253**	**253**	**0**	**0**
1998	January	316	0	36	36	252	252	0	0
	February	295	0	0	0	338	338	0	0
	March	255	0	127	127	374	374	0	0
	April	336	0	254	254	311	311	0	0
	May	330	0	137	137	399	399	0	0
	June	362	21	270	270	275	275	0	0
	July	308	20	286	286	435	435	0	0
	August	264	0	713	713	273	273	0	0
	September	306	0	517	517	259	259	0	0
	October	289	21	636	636	241	227	0	0
	November	219	22	542	542	224	224	0	0
	December	200	31	486	486	228	228	0	0
	Average	**290**	**10**	**336**	**336**	**301**	**300**	**0**	**0**

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)

(Thousand Barrels per Day)

Year/Month	Imports from Arab-OPEC Sources						Total Arab OPEC	
	Qatar		Saudi Arabia[b]		United Arab Emirates			
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
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 Average	**0**	**0**	**1,802**	**1,703**	**3**	**2**	**2,064**	**1,754**
1992 Average	**1**	**0**	**1,720**	**1,597**	**6**	**0**	**1,974**	**1,660**
1993 Average	**1**	**0**	**1,414**	**1,282**	**14**	**12**	**2,000**	**1,661**
1994 Average	**0**	**0**	**1,402**	**1,297**	**13**	**11**	**1,970**	**1,636**
1995 Average	**0**	**0**	**1,344**	**1,260**	**10**	**5**	**1,806**	**1,505**
1996 January	0	0	1,398	1,334	0	0	1,859	1,517
February	0	0	1,128	1,053	0	0	1,544	1,285
March	0	0	1,422	1,318	0	0	1,790	1,484
April	0	0	1,288	1,200	0	0	1,700	1,403
May	0	0	1,518	1,414	0	0	2,087	1,643
June	0	0	1,138	1,035	11	11	1,850	1,433
July	0	0	1,548	1,371	4	4	2,123	1,642
August	0	0	1,477	1,333	0	0	2,070	1,599
September	0	0	1,355	1,255	0	0	1,777	1,491
October	0	0	1,357	1,209	17	17	1,844	1,486
November	0	0	1,297	1,201	0	0	1,738	1,432
December	0	0	1,400	1,236	0	0	1,889	1,511
Average	**0**	**0**	**1,363**	**1,248**	**3**	**3**	**1,859**	**1,496**
1997 January	0	0	1,344	1,253	0	0	1,835	1,462
February	0	0	1,361	1,250	0	0	1,852	1,421
March	0	0	1,292	1,157	0	0	1,950	1,506
April	15	0	1,573	1,408	0	0	2,197	1,720
May	0	0	1,475	1,333	0	0	1,996	1,564
June	0	0	1,299	1,174	6	0	2,130	1,650
July	0	0	1,313	1,188	14	0	2,037	1,607
August	0	0	1,636	1,516	0	0	2,127	1,750
September	0	0	1,599	1,511	0	0	2,180	1,839
October	16	0	1,377	1,282	0	0	2,191	1,812
November	0	0	1,308	1,257	0	0	2,015	1,704
December	15	0	1,311	1,192	0	0	1,962	1,649
Average	**4**	**0**	**1,407**	**1,293**	**2**	**0**	**2,040**	**1,641**
1998 January	0	0	1,515	1,438	0	0	2,119	1,726
February	18	18	1,470	1,360	0	0	2,121	1,716
March	0	0	1,552	1,406	13	13	2,321	1,920
April	0	0	1,527	1,348	20	20	2,446	1,933
May	0	0	1,362	1,279	0	0	2,228	1,815
June	15	0	1,647	1,566	0	0	2,569	2,132
July	15	0	1,615	1,575	0	0	2,660	2,315
August	0	0	1,500	1,468	0	0	2,750	2,453
September	0	0	1,606	1,532	0	0	2,689	2,308
October	0	0	1,316	1,228	0	0	2,483	2,113
November	0	0	1,386	1,323	0	0	2,371	2,111
December	0	0	1,402	1,326	0	0	2,316	2,071
Average	**4**	**1**	**1,491**	**1,404**	**3**	**3**	**2,424**	**2,053**

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)
(Thousand Barrels per Day)

Year/Month	Imports from Other-OPEC Sources							
	Ecuador[c]		Gabon		Indonesia		Iran	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
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**	**[g] (s)**	**[g] (s)**
1989 Average	**89**	**80**	**50**	**49**	**183**	**158**	**0**	**0**
1990 Average	**49**	**38**	**64**	**64**	**114**	**98**	**0**	**0**
1991 Average	**63**	**53**	**84**	**84**	**111**	**102**	**32**	**32**
1992 Average	**65**	**62**	**124**	**123**	**78**	**70**	**0**	**0**
1993 Average	**81**	**78**	**152**	**151**	**81**	**65**	**0**	**0**
1994 Average	**(c)**	**(c)**	**194**	**194**	**111**	**92**	**0**	**0**
1995 Average	**(c)**	**(c)**	**(d)**	**(d)**	**88**	**64**	**0**	**0**
1996 January	(c)	(c)	(d)	(d)	52	43	0	0
February	(c)	(c)	(d)	(d)	44	43	0	0
March	(c)	(c)	(d)	(d)	58	55	0	0
April	(c)	(c)	(d)	(d)	57	57	0	0
May	(c)	(c)	(d)	(d)	49	15	0	0
June	(c)	(c)	(d)	(d)	72	65	0	0
July	(c)	(c)	(d)	(d)	56	48	0	0
August	(c)	(c)	(d)	(d)	53	49	0	0
September	(c)	(c)	(d)	(d)	26	26	0	0
October	(c)	(c)	(d)	(d)	125	82	0	0
November	(c)	(c)	(d)	(d)	36	12	0	0
December	(c)	(c)	(d)	(d)	81	32	0	0
Average	**(c)**	**(c)**	**(d)**	**(d)**	**59**	**44**	**0**	**0**
1997 January	(c)	(c)	(d)	(d)	55	38	0	0
February	(c)	(c)	(d)	(d)	51	39	0	0
March	(c)	(c)	(d)	(d)	18	15	0	0
April	(c)	(c)	(d)	(d)	40	32	0	0
May	(c)	(c)	(d)	(d)	86	86	0	0
June	(c)	(c)	(d)	(d)	57	50	0	0
July	(c)	(c)	(d)	(d)	73	66	0	0
August	(c)	(c)	(d)	(d)	24	21	0	0
September	(c)	(c)	(d)	(d)	90	83	0	0
October	(c)	(c)	(d)	(d)	42	42	0	0
November	(c)	(c)	(d)	(d)	79	74	0	0
December	(c)	(c)	(d)	(d)	84	68	0	0
Average	**(c)**	**(c)**	**(d)**	**(d)**	**58**	**51**	**0**	**0**
1998 January	(c)	(c)	(d)	(d)	36	33	0	0
February	(c)	(c)	(d)	(d)	24	24	0	0
March	(c)	(c)	(d)	(d)	50	47	0	0
April	(c)	(c)	(d)	(d)	44	26	0	0
May	(c)	(c)	(d)	(d)	21	21	0	0
June	(c)	(c)	(d)	(d)	0	0	0	0
July	(c)	(c)	(d)	(d)	96	84	0	0
August	(c)	(c)	(d)	(d)	59	41	0	0
September	(c)	(c)	(d)	(d)	73	54	0	0
October	(c)	(c)	(d)	(d)	102	89	0	0
November	(c)	(c)	(d)	(d)	183	138	0	0
December	(c)	(c)	(d)	(d)	102	43	0	0
Average	**(c)**	**(c)**	**(d)**	**(d)**	**66**	**50**	**0**	**0**

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)

(Thousand Barrels per Day)

Year/Month	Imports from Other-OPEC Sources						Total OPEC[c,d]	
	Nigeria		Venezuela		Total Other OPEC[c]			
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
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**	**793**	**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**	**1,025**	**666**	**2,052**	**1,650**	**4,296**	**3,514**
1991 Average	**703**	**683**	**1,035**	**668**	**2,028**	**1,622**	**4,092**	**3,377**
1992 Average	**681**	**665**	**1,170**	**826**	**2,117**	**1,746**	**4,092**	**3,406**
1993 Average	**740**	**722**	**1,300**	**1,010**	**2,354**	**2,026**	**4,354**	**3,687**
1994 Average	**637**	**624**	**1,334**	**1,034**	**2,277**	**1,944**	**4,247**	**3,580**
1995 Average	**627**	**621**	**1,480**	**1,151**	**2,196**	**1,835**	**4,002**	**3,341**
1996 January	690	663	1,518	1,148	2,261	1,854	4,120	3,371
February	647	639	1,495	1,166	2,185	1,849	3,730	3,133
March	594	548	1,719	1,341	2,371	1,943	4,161	3,427
April	518	497	1,732	1,288	2,307	1,842	4,007	3,245
May	705	705	1,700	1,333	2,454	2,054	4,541	3,697
June	711	697	1,642	1,236	2,425	1,999	4,275	3,432
July	750	696	1,690	1,332	2,496	2,076	4,619	3,718
August	793	785	1,749	1,431	2,595	2,265	4,665	3,865
September	694	677	1,708	1,269	2,428	1,972	4,204	3,463
October	521	488	1,781	1,448	2,427	2,019	4,271	3,504
November	465	453	1,728	1,303	2,229	1,767	3,967	3,199
December	320	298	1,641	1,324	2,042	1,654	3,931	3,166
Average	**617**	**595**	**1,676**	**1,303**	**2,353**	**1,942**	**4,211**	**3,438**
1997 January	548	522	1,641	1,215	2,243	1,775	4,078	3,237
February	625	620	1,601	1,262	2,278	1,920	4,130	3,341
March	542	541	1,769	1,348	2,329	1,904	4,279	3,410
April	756	747	1,695	1,319	2,491	2,098	4,688	3,818
May	992	975	1,927	1,449	3,005	2,510	5,001	4,073
June	919	919	1,893	1,508	2,869	2,478	4,999	4,128
July	580	571	1,738	1,418	2,391	2,055	4,429	3,662
August	882	866	1,794	1,394	2,700	2,280	4,827	4,030
September	769	769	1,822	1,478	2,680	2,329	4,860	4,168
October	688	675	1,991	1,605	2,722	2,323	4,913	4,134
November	649	649	1,689	1,418	2,416	2,141	4,431	3,845
December	423	423	1,699	1,304	2,205	1,795	4,168	3,444
Average	**698**	**689**	**1,773**	**1,394**	**2,529**	**2,134**	**4,569**	**3,775**
1998 January	630	625	1,597	1,319	2,262	1,977	4,382	3,703
February	560	560	1,764	1,357	2,348	1,941	4,469	3,657
March	845	845	1,698	1,313	2,594	2,205	4,915	4,126
April	822	822	1,743	1,423	2,610	2,272	5,056	4,205
May	899	892	1,911	1,549	2,831	2,463	5,058	4,278
June	771	755	1,616	1,374	2,387	2,129	4,956	4,261
July	873	871	1,779	1,445	2,747	2,400	5,407	4,716
August	736	726	1,703	1,349	2,498	2,116	5,247	4,569
September	502	496	1,490	1,199	2,064	1,749	4,753	4,057
October	633	626	1,963	1,548	2,699	2,263	5,181	4,376
November	574	545	1,708	1,367	2,466	2,050	4,837	4,161
December	490	483	1,651	1,271	2,244	1,797	4,560	3,868
Average	**696**	**689**	**1,719**	**1,377**	**2,481**	**2,116**	**4,905**	**4,169**

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)

(Thousand Barrels per Day)

Year/Month	Imports from Non-OPEC Sources[a]											
	Angola		Australia		Bahama Islands		Brazil		Canada		China, Peoples Republic of	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
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 Average	**254**	**254**	**26**	**21**	**35**	**0**	**22**	**0**	**1,033**	**743**	**91**	**87**
1992 Average	**336**	**336**	**19**	**17**	**36**	**0**	**20**	**0**	**1,069**	**797**	**90**	**84**
1993 Average	**336**	**336**	**19**	**18**	**28**	**0**	**33**	**0**	**1,181**	**900**	**51**	**50**
1994 Average	**331**	**322**	**17**	**16**	**29**	**0**	**31**	**1**	**1,272**	**983**	**65**	**64**
1995 Average	**367**	**360**	**16**	**16**	**2**	**0**	**8**	**0**	**1,332**	**1,040**	**53**	**53**
1996 January	312	312	21	21	0	0	1	0	1,490	1,117	86	86
February	195	195	0	0	0	0	4	0	1,413	1,026	42	42
March	257	257	0	0	12	0	1	0	1,322	1,001	53	53
April	244	233	22	22	0	0	(s)	0	1,427	1,030	18	18
May	403	379	22	22	0	0	9	0	1,373	1,056	19	19
June	356	356	56	47	1	0	10	0	1,395	1,091	37	37
July	292	292	11	0	0	0	28	0	1,393	1,093	78	78
August	480	456	43	43	0	0	38	0	1,393	1,042	73	73
September	391	391	47	27	0	0	13	0	1,276	1,000	64	64
October	502	485	79	65	0	0	1	0	1,407	1,059	36	36
November	353	353	35	25	0	0	1	0	1,516	1,151	104	104
December	420	405	39	21	0	0	3	0	1,675	1,232	78	78
Average	**351**	**344**	**31**	**25**	**1**	**0**	**9**	**0**	**1,424**	**1,075**	**57**	**57**
1997 January	485	485	21	21	0	0	1	0	1,571	1,162	84	84
February	422	422	0	0	13	0	0	0	1,605	1,155	65	65
March	467	461	37	37	0	0	4	0	1,508	1,158	120	120
April	435	422	22	22	0	0	0	0	1,454	1,063	46	46
May	374	369	61	44	0	0	0	0	1,571	1,203	21	21
June	480	480	23	23	0	0	20	0	1,546	1,184	44	44
July	416	416	77	48	0	0	21	0	1,547	1,201	0	0
August	323	323	91	60	0	0	4	0	1,630	1,275	42	42
September	428	428	67	27	0	0	3	0	1,577	1,250	49	43
October	537	537	92	53	0	0	6	0	1,503	1,175	48	47
November	480	480	23	23	0	0	2	0	1,559	1,213	22	22
December	286	286	59	14	0	0	0	0	1,689	1,333	45	45
Average	**427**	**425**	**48**	**31**	**1**	**0**	**5**	**0**	**1,563**	**1,198**	**49**	**48**
1998 January	430	427	10	0	0	0	6	0	1,703	1,336	15	14
February	434	434	57	48	4	0	2	0	1,738	1,366	41	41
March	353	351	44	30	0	0	27	0	1,464	1,132	64	63
April	457	452	68	14	0	0	11	0	1,586	1,241	62	62
May	516	508	82	60	21	0	42	0	1,600	1,302	70	70
June	399	399	77	33	11	0	55	0	1,688	1,404	81	81
July	591	591	69	48	0	0	29	0	1,669	1,364	73	73
August	427	427	42	21	0	0	38	0	1,564	1,248	57	57
September	506	502	77	23	10	0	33	0	1,575	1,227	20	20
October	470	457	71	30	0	0	29	0	1,570	1,202	25	24
November	524	520	31	31	0	0	19	0	1,495	1,199	0	0
December	509	505	57	36	0	0	22	0	1,542	1,184	1	0
Average	**468**	**465**	**57**	**31**	**4**	**0**	**26**	**0**	**1,598**	**1,266**	**42**	**42**

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)

(Thousand Barrels per Day)

Year/Month	Imports from Non-OPEC Sources[a]											
	Colombia		Ecuador[c]		Gabon[d]		Italy		Malaysia		Mexico	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984 Average	**8**	**0**	(c)	(c)	(d)	(d)	**45**	**(s)**	**1**	**0**	**748**	**659**
1985 Average	**23**	**0**	(c)	(c)	(d)	(d)	**60**	**(s)**	**3**	**1**	**816**	**715**
1986 Average	**87**	**57**	(c)	(c)	(d)	(d)	**76**	**0**	**12**	**11**	**699**	**621**
1987 Average	**148**	**115**	(c)	(c)	(d)	(d)	**54**	**1**	**13**	**12**	**655**	**602**
1988 Average	**134**	**106**	(c)	(c)	(d)	(d)	**65**	**5**	**19**	**19**	**747**	**674**
1989 Average	**172**	**136**	(c)	(c)	(d)	(d)	**34**	**3**	**39**	**39**	**767**	**716**
1990 Average	**182**	**140**	(c)	(c)	(d)	(d)	**58**	**2**	**41**	**40**	**755**	**689**
1991 Average	**163**	**123**	(c)	(c)	(d)	(d)	**47**	**3**	**24**	**24**	**807**	**759**
1992 Average	**126**	**102**	(c)	(c)	(d)	(d)	**55**	**0**	**10**	**10**	**830**	**787**
1993 Average	**171**	**141**	(c)	(c)	(d)	(d)	**31**	**0**	**11**	**10**	**919**	**863**
1994 Average	**161**	**146**	**91**	**91**	(d)	(d)	**22**	**0**	**10**	**6**	**984**	**939**
1995 Average	**219**	**207**	**97**	**96**	**229**	**229**	**5**	**0**	**8**	**6**	**1,068**	**1,027**
1996 January	186	183	126	120	171	171	2	0	0	0	1,281	1,245
February	149	139	81	81	191	191	0	0	24	17	1,083	1,062
March	262	250	131	125	154	154	13	0	4	0	1,176	1,165
April	280	280	158	143	212	212	(s)	0	0	0	1,303	1,273
May	263	249	100	95	154	154	0	0	47	40	1,288	1,222
June	250	247	138	133	218	218	16	0	19	11	1,351	1,274
July	204	198	113	96	191	191	19	0	0	0	1,216	1,186
August	221	217	83	71	156	156	8	0	5	0	1,157	1,142
September	213	213	48	48	104	104	15	0	0	0	1,355	1,306
October	265	252	66	60	226	226	4	0	31	0	1,213	1,189
November	267	267	111	111	253	253	13	0	7	0	1,157	1,110
December	246	218	89	72	184	184	8	0	0	0	1,346	1,301
Average	**234**	**226**	**104**	**96**	**184**	**184**	**8**	**0**	**11**	**6**	**1,244**	**1,207**
1997 January	227	226	112	107	62	62	8	0	32	0	1,324	1,280
February	248	248	110	110	262	262	27	0	7	7	1,277	1,241
March	260	257	148	148	217	217	5	0	33	0	1,310	1,249
April	255	255	73	73	203	203	26	0	33	0	1,448	1,416
May	272	266	109	104	210	210	9	0	9	0	1,429	1,408
June	228	228	132	132	226	226	0	0	32	24	1,401	1,382
July	235	225	122	122	335	335	0	0	28	0	1,366	1,347
August	250	250	128	128	203	203	2	0	23	15	1,452	1,448
September	289	289	143	143	271	271	0	0	37	29	1,410	1,395
October	321	321	143	143	235	235	8	0	19	19	1,526	1,500
November	322	322	91	91	256	256	0	0	8	0	1,460	1,453
December	350	350	66	66	288	288	5	0	7	0	1,215	1,192
Average	**271**	**270**	**115**	**114**	**230**	**230**	**7**	**0**	**23**	**8**	**1,385**	**1,360**
1998 January	345	345	89	89	277	277	26	0	17	11	1,444	1,432
February	301	294	103	103	278	278	6	0	64	49	1,250	1,233
March	296	296	75	75	235	235	17	0	10	10	1,272	1,248
April	358	358	88	81	244	244	2	0	82	66	1,538	1,507
May	401	385	125	116	194	194	35	0	95	87	1,361	1,343
June	321	313	75	67	126	126	18	0	35	19	1,400	1,379
July	238	229	89	89	211	211	8	0	46	38	1,416	1,389
August	367	363	158	158	118	118	10	0	11	4	1,153	1,139
September	363	362	107	96	202	202	0	0	16	0	1,417	1,367
October	411	409	130	125	115	115	18	0	9	0	1,179	1,163
November	352	352	134	134	270	270	0	0	25	16	1,417	1,357
December	488	479	41	38	220	220	6	0	19	10	1,371	1,301
Average	**354**	**349**	**101**	**98**	**207**	**207**	**12**	**0**	**35**	**26**	**1,351**	**1,321**

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)

(Thousand Barrels per Day)

Year/Month	Imports from Non-OPEC Sources[a]											
	Netherlands		Netherlands Antilles		Norway		Puerto Rico		Russia[f]		Spain	
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984 Average	**65**	**3**	**188**	**0**	**114**	**112**	**42**	**0**	**13**	**(s)**	**11**	**0**
1985 Average	**58**	**0**	**40**	**0**	**32**	**31**	**28**	**0**	**8**	**(s)**	**29**	**1**
1986 Average	**54**	**0**	**25**	**0**	**60**	**53**	**21**	**0**	**18**	**(s)**	**53**	**0**
1987 Average	**60**	**0**	**29**	**0**	**80**	**70**	**21**	**0**	**11**	**0**	**55**	**0**
1988 Average	**61**	**0**	**36**	**0**	**67**	**62**	**22**	**0**	**29**	**0**	**68**	**0**
1989 Average	**49**	**0**	**42**	**0**	**138**	**127**	**32**	**0**	**48**	**0**	**67**	**0**
1990 Average	**55**	**0**	**31**	**0**	**102**	**96**	**32**	**0**	**45**	**1**	**47**	**0**
1991 Average	**29**	**0**	**81**	**0**	**82**	**74**	**27**	**0**	**29**	**1**	**33**	**0**
1992 Average	**26**	**0**	**65**	**0**	**127**	**119**	**26**	**0**	**18**	**5**	**32**	**0**
1993 Average	**10**	**0**	**82**	**0**	**142**	**137**	**29**	**0**	**55**	**36**	**37**	**0**
1994 Average	**32**	**0**	**98**	**0**	**202**	**190**	**22**	**0**	**30**	**27**	**37**	**0**
1995 Average	**15**	**0**	**52**	**0**	**273**	**258**	**15**	**0**	**25**	**14**	**16**	**1**
1996 January	16	0	59	0	199	178	6	0	11	0	23	0
February	38	0	101	0	236	221	17	0	14	0	23	0
March	35	0	35	0	284	264	24	0	18	0	58	0
April	20	0	50	0	375	357	17	0	0	0	36	0
May	9	0	47	0	380	364	22	0	63	63	21	0
June	26	0	52	0	434	408	25	0	14	14	12	0
July	7	0	45	0	375	359	25	0	42	33	47	10
August	14	0	53	0	369	362	33	0	32	32	21	0
September	13	0	56	0	274	254	22	0	39	37	21	0
October	24	0	97	0	389	359	14	0	42	33	34	0
November	18	0	79	0	249	220	20	0	0	0	33	0
December	14	0	98	0	187	166	18	0	26	0	13	0
Average	**19**	**0**	**64**	**0**	**313**	**293**	**20**	**0**	**25**	**18**	**29**	**1**
1997 January	40	0	94	0	244	230	18	0	21	0	31	0
February	33	0	60	0	204	179	16	0	19	0	36	0
March	40	0	102	0	295	276	7	0	13	0	6	0
April	20	0	114	0	307	294	12	0	20	0	9	0
May	13	0	116	0	388	366	21	0	0	0	23	0
June	37	0	66	0	329	318	13	0	8	0	45	0
July	5	0	61	0	386	360	24	0	9	0	6	0
August	15	0	65	0	321	320	20	0	32	19	41	0
September	54	0	71	0	285	265	14	0	0	0	21	0
October	13	0	46	0	346	312	19	0	13	6	12	0
November	28	0	33	0	316	276	23	0	21	7	19	0
December	1	0	54	0	275	249	10	0	0	0	5	0
Average	**25**	**0**	**74**	**0**	**309**	**288**	**16**	**0**	**13**	**3**	**21**	**0**
1998 January	10	0	97	0	217	208	18	0	0	0	22	0
February	25	0	101	0	169	169	21	0	12	0	13	0
March	5	0	80	0	210	198	5	0	3	0	4	0
April	40	0	73	0	232	232	7	0	(s)	0	9	0
May	36	0	67	0	196	172	18	0	0	0	14	0
June	31	0	103	0	283	252	13	0	34	34	26	0
July	59	0	84	0	369	361	21	0	69	69	34	0
August	21	0	45	0	287	260	23	0	1	0	17	0
September	26	0	69	0	201	162	12	0	34	0	16	0
October	49	0	95	0	199	186	20	0	15	0	4	0
November	53	0	124	0	262	252	12	0	54	0	28	0
December	14	0	46	0	202	199	15	0	63	0	33	0
Average	**31**	**0**	**82**	**0**	**236**	**221**	**15**	**0**	**24**	**9**	**18**	**0**

See footnotes at end of table.

Table S3. Crude Oil and Petroleum Product Imports, 1984 - Present (Continued)

(Thousand Barrels per Day)

Year/Month	Imports from Non-OPEC Sources[a]										Total Imports	
	Trinidad and Tobago		United Kingdom		Virgin Islands		Other Non-OPEC		Total Non-OPEC[c]			
	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil	Total	Crude Oil
1984 Average	**94**	**87**	**402**	**378**	**294**	**0**	**411**	**210**	**3,388**	**1,914**	**5,437**	**3,426**
1985 Average	**113**	**98**	**310**	**278**	**247**	**0**	**394**	**137**	**3,237**	**1,888**	**5,067**	**3,201**
1986 Average	**125**	**93**	**350**	**317**	**244**	**0**	**426**	**144**	**3,387**	**2,065**	**6,224**	**4,178**
1987 Average	**106**	**75**	**352**	**304**	**272**	**0**	**459**	**196**	**3,617**	**2,274**	**6,678**	**4,674**
1988 Average	**97**	**71**	**315**	**254**	**242**	**0**	**487**	**196**	**3,882**	**2,411**	**7,402**	**5,107**
1989 Average	**94**	**73**	**215**	**160**	**321**	**0**	**457**	**197**	**3,921**	**2,467**	**8,061**	**5,843**
1990 Average	**96**	**76**	**189**	**155**	**282**	**0**	**417**	**180**	**3,721**	**2,381**	**8,018**	**5,894**
1991 Average	**88**	**72**	**138**	**106**	**243**	**0**	**282**	**137**	**3,535**	**2,405**	**7,627**	**5,782**
1992 Average	**95**	**70**	**230**	**200**	**249**	**0**	**335**	**149**	**3,796**	**2,676**	**7,888**	**6,083**
1993 Average	**74**	**55**	**350**	**312**	**254**	**0**	**452**	**240**	**4,266**	**3,100**	**8,620**	**6,787**
1994 Average	**77**	**62**	**458**	**396**	**328**	**0**	**450**	**239**	**4,749**	**3,483**	**8,996**	**7,063**
1995 Average	**70**	**62**	**383**	**341**	**278**	**0**	**302**	**181**	**4,833**	**3,889**	**8,835**	**7,230**
1996 January	92	71	364	238	390	0	406	188	5,244	3,932	9,364	7,303
February	56	56	374	280	343	0	275	169	4,660	3,479	8,390	6,612
March	63	52	346	252	311	0	373	215	4,932	3,788	9,092	7,215
April	87	55	481	347	359	0	333	157	5,421	4,125	9,429	7,371
May	97	71	421	316	298	0	429	282	5,465	4,332	10,007	8,029
June	86	54	312	234	292	0	561	402	5,663	4,526	9,938	7,958
July	70	58	244	195	344	0	456	292	5,201	4,082	9,820	7,800
August	81	59	274	177	279	0	508	348	5,321	4,177	9,986	8,041
September	51	37	165	90	268	0	502	318	4,938	3,891	9,142	7,353
October	70	55	264	136	325	0	477	240	5,566	4,196	9,837	7,701
November	96	75	199	160	253	0	513	318	5,277	4,145	9,244	7,344
December	58	54	253	167	294	0	438	245	5,487	4,142	9,417	7,307
Average	**76**	**58**	**308**	**216**	**313**	**0**	**440**	**265**	**5,267**	**4,070**	**9,478**	**7,508**
1997 January	74	55	400	333	335	0	502	210	5,685	4,255	9,763	7,492
February	69	61	236	172	341	0	380	170	5,431	4,093	9,561	7,434
March	56	55	236	161	254	0	437	206	5,554	4,344	9,833	7,754
April	69	62	159	70	321	0	401	242	5,426	4,169	10,114	7,987
May	70	66	261	181	300	0	558	341	5,817	4,579	10,818	8,653
June	55	55	372	311	300	0	380	225	5,737	4,631	10,736	8,759
July	62	54	198	165	310	0	370	243	5,579	4,515	10,008	8,178
August	41	37	268	220	319	0	368	251	5,638	4,591	10,465	8,621
September	66	58	166	110	248	0	476	364	5,677	4,672	10,537	8,840
October	58	55	154	119	301	0	479	271	5,879	4,793	10,792	8,927
November	65	57	127	87	260	0	403	236	5,517	4,521	9,948	8,366
December	53	53	135	98	314	0	304	235	5,160	4,208	9,328	7,653
Average	**61**	**56**	**226**	**169**	**300**	**0**	**422**	**250**	**5,593**	**4,450**	**10,162**	**8,225**
1998 January	64	54	249	166	283	0	424	276	5,745	4,636	10,127	8,339
February	60	60	170	89	296	0	378	224	5,522	4,388	9,991	8,045
March	63	53	95	70	334	0	464	236	5,119	3,998	10,034	8,124
April	78	48	309	221	272	0	533	254	6,048	4,780	11,105	8,985
May	69	53	248	133	292	0	561	287	6,046	4,709	11,104	8,987
June	64	56	231	125	310	0	589	245	5,970	4,533	10,926	8,795
July	90	56	171	36	360	0	545	235	6,242	4,791	11,649	9,507
August	79	53	384	295	281	0	703	466	5,785	4,607	11,032	9,177
September	44	38	154	109	277	0	589	335	5,746	4,443	10,499	8,500
October	65	57	384	278	268	0	554	245	5,680	4,291	10,861	8,667
November	38	38	400	283	266	0	520	327	6,023	4,779	10,860	8,940
December	79	72	199	119	274	0	498	321	5,698	4,484	10,258	8,352
Average	**66**	**53**	**250**	**161**	**293**	**0**	**531**	**288**	**5,803**	**4,537**	**10,708**	**8,706**

[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] On December 31, 1992, Ecuador withdrew as a member of OPEC. As of January 1, 1994, imports of petroleum from Ecuador appear under imports from Non-OPEC Sources.

[d] On December 31, 1994, Gabon withdrew as a member of OPEC. As of January 1, 1995, imports of petroleum from Gabon appear under imports from Non-OPEC Sources.

[e] 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.

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

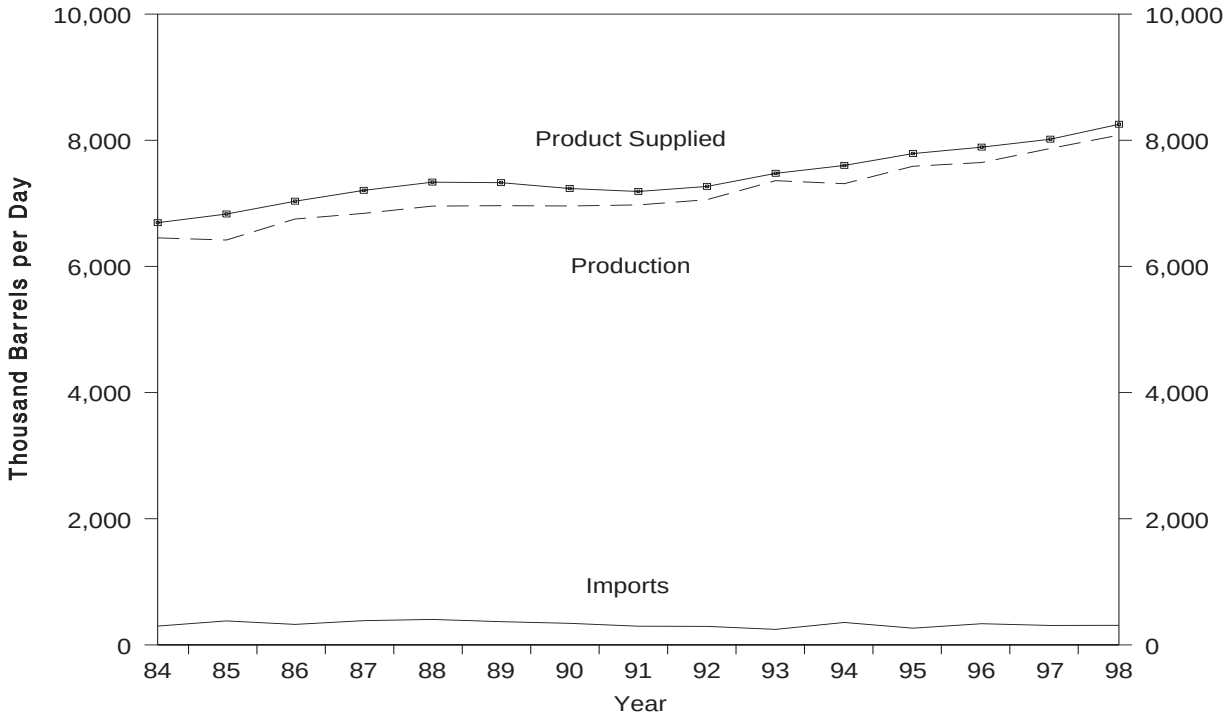
[g] A small amount of Iranian crude oil entered the United States in January 1988 from the Virgin Islands. This oil originated in Iran and was exported to the Virgin Islands prior to the signing of Executive Order 12613 on October 29, 1987.

(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.

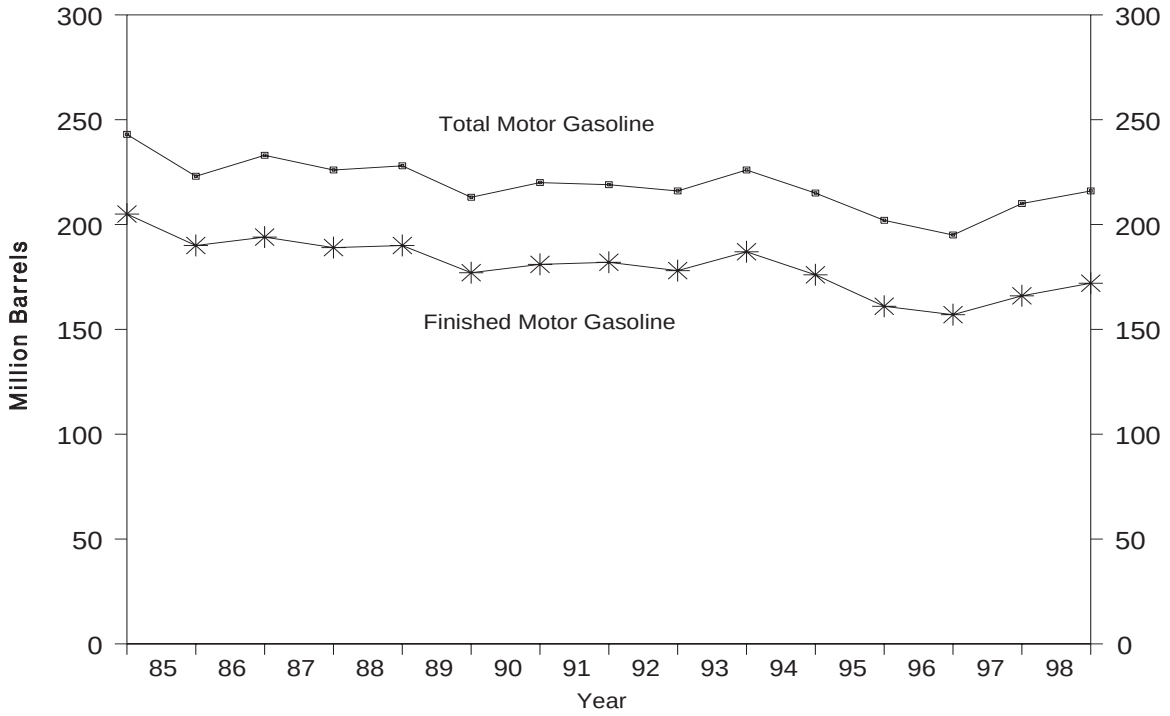
Source: See Summary Statistics Table and Figure Sources.

Figure S5. Finished Motor Gasoline Supply and Disposition, 1984 - Present



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

Figure S6. Motor Gasoline Ending Stocks, 1984 - Present



Note: Total motor gasoline includes motor gasoline blending components and finished motor gasoline.
Source: Energy Information Administration, *Petroleum Supply Annual*, Table S4. See Summary Statistics Table and Figure Sources.

Table S4. Finished Motor Gasoline Supply and Disposition, 1984 - Present

(Thousand Barrels per Day, Except Where Noted)

Year/Month	Supply		Disposition			Ending Stocks[a] (Million Barrels)		Ending Stocks (Million Barrels)
						Motor Gasoline		
	Total Production[b]	Imports[c]	Stock Change[c,d]	Exports	Product Supplied[b]	Total[e]	Finished	Oxygenates
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 Average	**6,975**	**297**	**3**	**82**	**7,188**	**219**	**182**	**—**
1992 Average	**7,058**	**294**	**-11**	**96**	**7,268**	**216**	**178**	**—**
1993 Average	**7,360**	**247**	**26**	**105**	**7,476**	**226**	**187**	**13**
1994 Average	**7,312**	**356**	**-31**	**97**	**7,601**	**215**	**176**	**17**
1995 Average	**7,588**	**265**	**-40**	**104**	**7,789**	**202**	**161**	**12**
1996 January	7,370	303	240	163	7,271	215	169	12
February	7,369	293	-10	72	7,599	214	168	12
March	7,289	303	-327	128	7,792	203	158	13
April	7,497	501	49	77	7,873	203	160	13
May	7,804	414	66	81	8,071	205	162	12
June	7,858	393	68	95	8,088	205	164	11
July	7,924	359	-5	123	8,165	202	164	11
August	7,796	346	-284	82	8,343	191	155	12
September	7,606	339	215	68	7,662	200	161	11
October	7,557	253	-396	113	8,093	189	149	11
November	7,864	234	55	128	7,915	188	151	12
December	7,815	298	202	117	7,794	195	157	13
Average	**7,647**	**336**	**-12**	**104**	**7,891**	**—**	**—**	**—**
1997 January	7,307	320	250	75	7,301	208	165	13
February	7,341	324	-114	111	7,668	204	162	13
March	7,302	370	-247	123	7,796	200	154	14
April	7,811	300	-70	117	8,064	197	152	13
May	8,081	362	203	101	8,139	202	158	13
June	8,186	387	189	96	8,288	204	164	12
July	7,954	291	-414	164	8,496	190	151	13
August	8,075	292	-41	175	8,233	187	150	13
September	8,158	269	275	130	8,023	198	158	13
October	8,037	291	1	186	8,141	200	158	12
November	7,999	239	122	151	7,965	203	162	12
December	8,160	265	154	206	8,065	210	166	12
Average	**7,870**	**309**	**26**	**137**	**8,017**	**—**	**—**	**—**
1998 January	7,744	259	256	128	7,618	221	174	13
February	7,476	316	-43	124	7,711	221	173	14
March	7,640	281	-203	121	8,004	216	167	14
April	8,144	294	45	81	8,312	215	168	14
May	8,224	342	185	103	8,279	220	174	13
June	8,474	318	113	159	8,520	222	177	14
July	8,300	328	-169	117	8,680	216	172	14
August	8,228	331	-151	141	8,568	210	167	13
September	8,048	310	-116	163	8,310	207	164	13
October	7,992	379	-128	121	8,378	203	160	12
November	8,269	239	253	89	8,167	212	168	13
December	8,406	336	137	153	8,451	216	172	14
Average	**8,082**	**311**	**15**	**125**	**8,253**	**—**	**—**	**—**

[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. Refer to Appendix B, Explanatory Note 10 for 1992 new basis product supplied.

[c] Beginning in 1981, excludes blending components.

[d] A negative number indicates a decrease in stocks and a positive number indicates an increase.

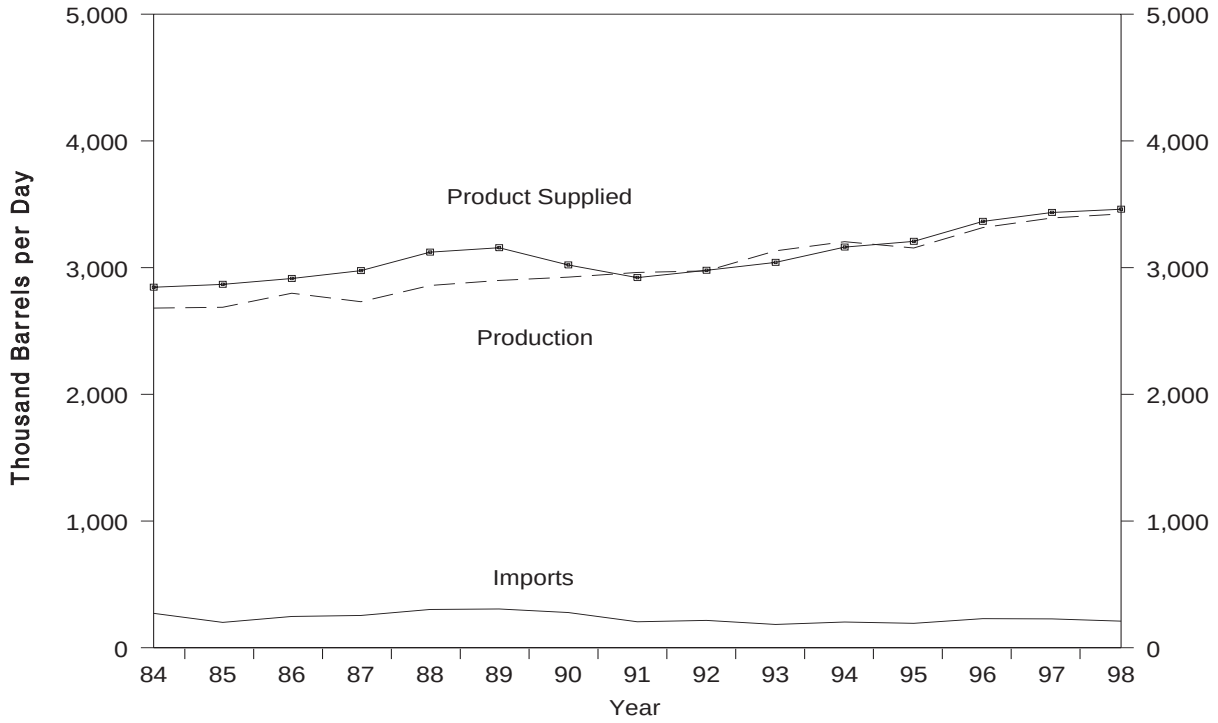
[e] Includes motor gasoline blending components but excludes stocks of oxygenates.

[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 2.

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

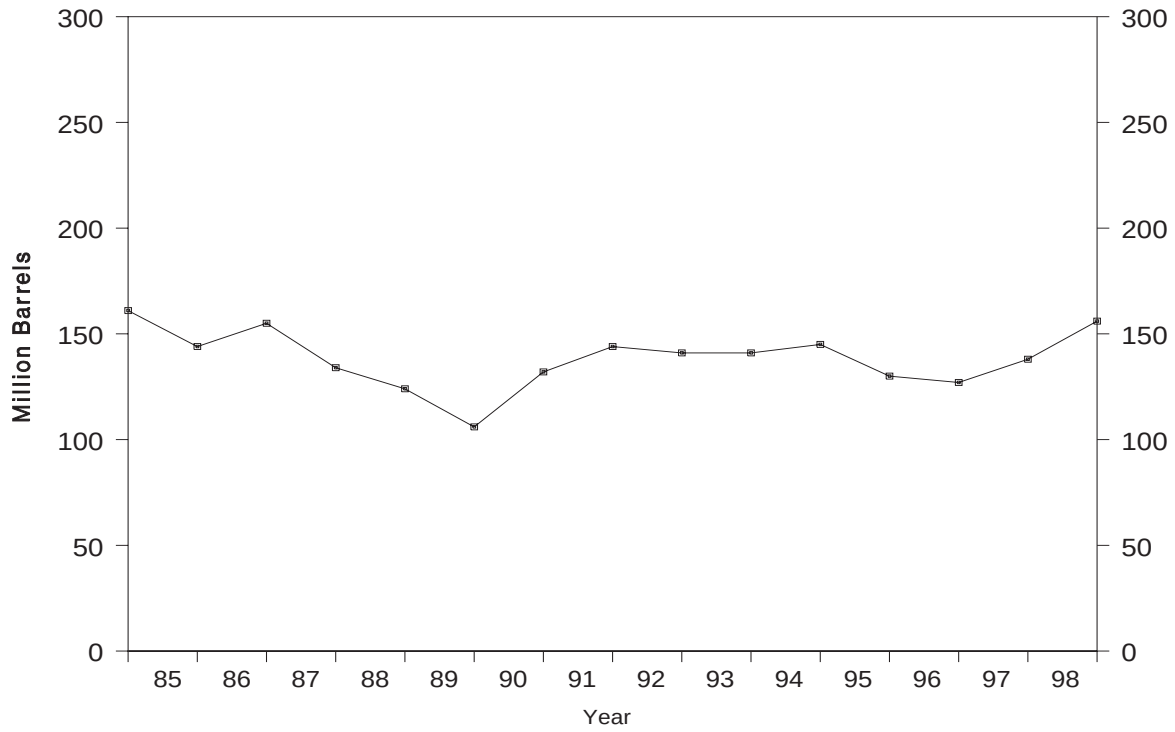
Source: See Summary Statistics Table and Figure Sources.

Figure S7. Distillate Fuel Oil Supply and Disposition, 1984 - Present



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

Figure S8. Distillate Fuel Oil Ending Stocks, 1984 - Present



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

Table S5. Distillate Fuel Oil Supply and Disposition, 1984 - Present

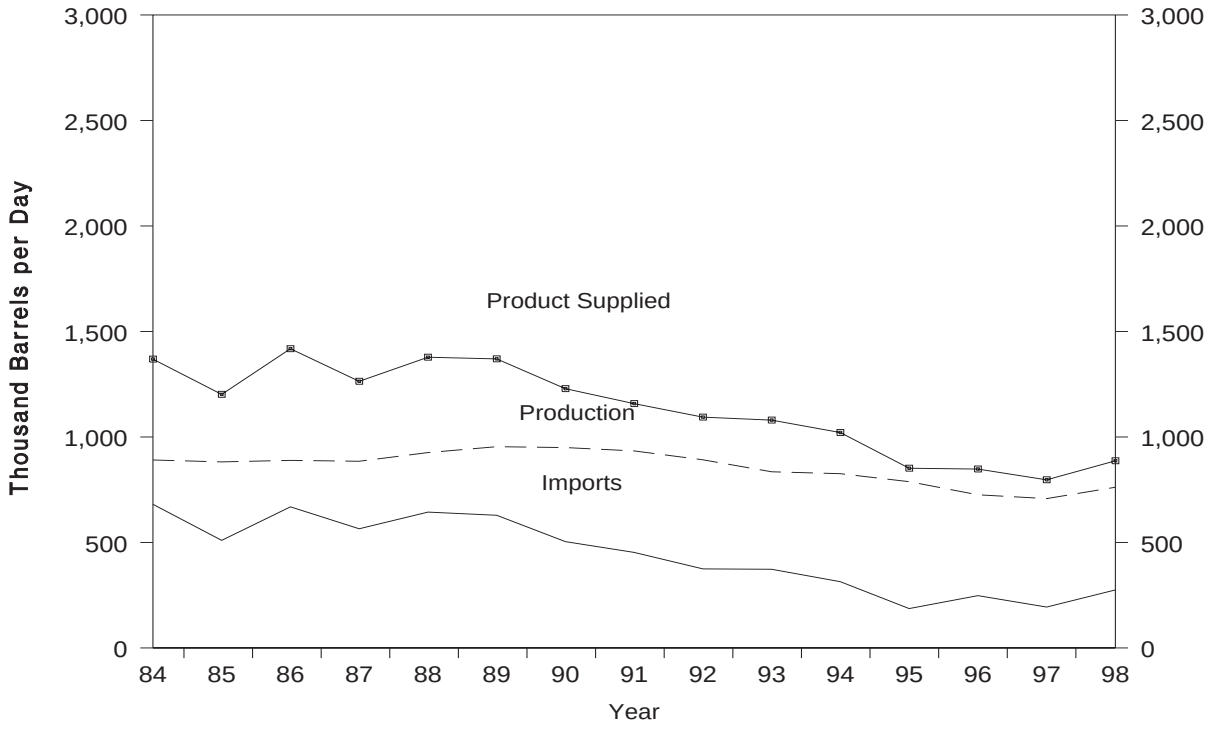
(Thousand Barrels per Day, Except Where Noted)

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
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 Average	**2,962**	**205**	**31**	**215**	**2,921**	**144**	**—**	**—**
1992 Average	**2,974**	**216**	**-8**	**219**	**2,979**	**141**	**—**	**—**
1993 Average	**3,132**	**184**	**1**	**274**	**3,041**	**141**	**64**	**77**
1994 Average	**3,205**	**203**	**12**	**234**	**3,162**	**145**	**73**	**73**
1995 Average	**3,155**	**193**	**-41**	**183**	**3,207**	**130**	**67**	**63**
1996 January	3,105	267	-528	216	3,684	114	58	55
February	3,133	279	-570	256	3,727	97	53	44
March	3,107	256	-247	139	3,471	90	49	40
April	3,300	258	13	166	3,379	90	52	38
May	3,256	231	182	176	3,128	96	57	39
June	3,283	185	198	81	3,189	102	60	41
July	3,127	194	166	134	3,021	107	62	45
August	3,280	195	112	182	3,180	110	62	49
September	3,392	193	157	256	3,172	115	64	51
October	3,627	246	-8	300	3,581	115	60	54
November	3,641	205	234	171	3,442	122	65	57
December	3,536	253	160	206	3,422	127	68	58
Average	**3,316**	**230**	**-10**	**190**	**3,365**	**—**	**—**	**—**
1997 January	3,119	293	-508	133	3,786	111	60	51
February	3,090	246	-197	107	3,427	105	56	49
March	3,244	245	-137	120	3,505	101	58	43
April	3,280	256	-134	166	3,504	97	59	39
May	3,527	220	359	153	3,235	108	63	45
June	3,523	219	326	174	3,243	118	65	53
July	3,365	223	161	151	3,275	123	64	59
August	3,439	202	320	185	3,136	133	69	64
September	3,445	210	189	160	3,306	139	69	70
October	3,480	213	-89	133	3,650	136	63	73
November	3,566	175	156	149	3,435	141	68	73
December	3,604	232	-70	192	3,714	138	68	70
Average	**3,392**	**228**	**32**	**152**	**3,435**	**—**	**—**	**—**
1998 January	3,323	195	-182	133	3,566	133	68	65
February	3,280	213	-184	79	3,598	128	65	63
March	3,397	237	-100	129	3,606	125	64	61
April	3,468	209	26	186	3,465	125	63	63
May	3,560	185	355	121	3,268	136	68	68
June	3,520	202	(s)	149	3,574	136	68	68
July	3,569	229	343	161	3,294	147	73	74
August	3,482	181	67	150	3,446	149	72	77
September	3,399	203	118	107	3,377	153	73	80
October	3,215	239	-169	75	3,547	147	69	79
November	3,438	179	242	54	3,320	155	74	81
December	3,431	245	47	145	3,484	156	77	79
Average	**3,424**	**210**	**48**	**124**	**3,461**	**—**	**—**	**—**

[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 2.

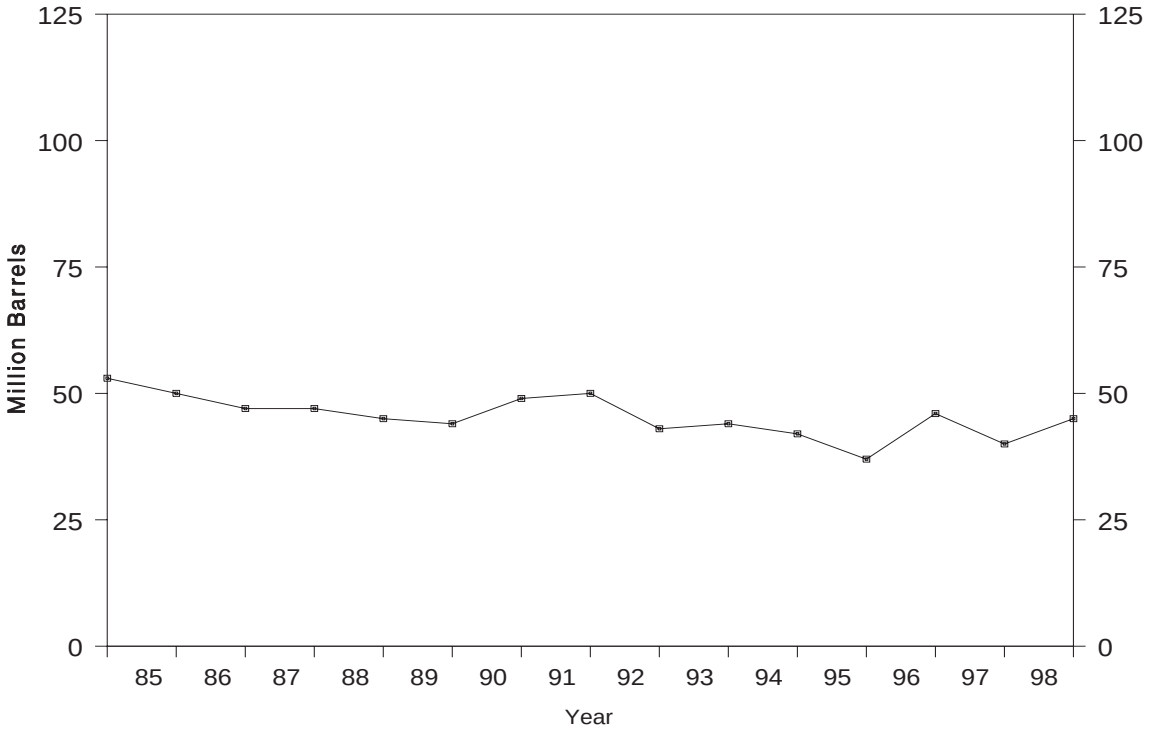
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals may not equal sum of components due to independent rounding.
Source: See Summary Statistics Table and Figure Sources.

Figure S9. Residual Fuel Oil Supply and Disposition, 1984 - Present



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

Figure S10. Residual Fuel Oil Ending Stocks, 1984 - Present



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

Table S6. Residual Fuel Oil Supply and Disposition, 1984 - 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]	
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 Average	**934**	**453**	**4**	**226**	**1,158**	**50**
1992 Average	**892**	**375**	**-20**	**193**	**1,094**	**43**
1993 Average	**835**	**373**	**4**	**123**	**1,080**	**44**
1994 Average	**826**	**314**	**-6**	**125**	**1,021**	**42**
1995 Average	**788**	**187**	**-13**	**136**	**852**	**37**
1996 January	799	320	-54	108	1,064	36
February	798	222	-132	114	1,038	32
March	700	227	-4	95	836	32
April	671	237	69	96	743	34
May	732	203	18	89	827	34
June	731	168	21	144	735	35
July	646	335	-3	88	896	35
August	732	227	32	56	871	36
September	713	197	68	125	717	38
October	694	260	16	104	835	38
November	714	270	139	101	744	42
December	778	307	112	102	872	46
Average	**726**	**248**	**24**	**102**	**848**	**—**
1997 January	801	211	-131	171	972	42
February	795	253	-66	137	977	40
March	638	239	46	89	742	41
April	617	250	-29	105	791	41
May	618	175	-44	102	736	39
June	727	168	(s)	130	765	39
July	643	177	-119	159	781	35
August	644	187	31	80	720	36
September	687	146	-54	91	797	35
October	723	158	41	133	707	36
November	789	204	61	122	809	38
December	818	167	83	120	781	40
Average	**708**	**194**	**-15**	**120**	**797**	**—**
1998 January	765	268	-25	131	927	40
February	672	218	-53	120	824	38
March	790	231	79	135	808	41
April	857	302	-47	168	1,038	39
May	766	206	-13	227	757	39
June	739	277	30	152	835	40
July	778	422	-4	124	1,080	40
August	782	305	71	105	911	42
September	749	288	-70	133	974	40
October	676	256	38	139	755	41
November	753	274	61	110	857	43
December	805	254	72	108	879	45
Average	**762**	**275**	**12**	**138**	**887**	**—**

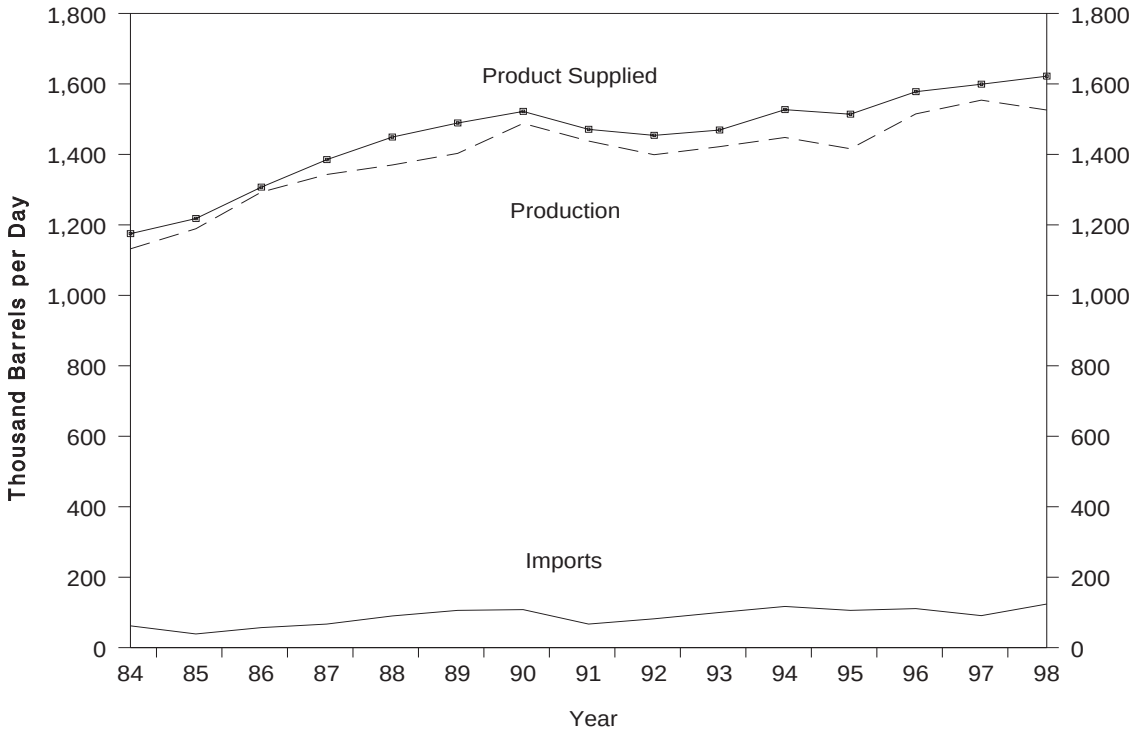
[a] Excludes 48,000 barrels per day in 1981 and 1982 previously published as crude used directly.
[b] A negative number indicates a decrease in stocks and a positive number indicates an increase.
[c] Stocks are totals as of end of period.
[d] In January 1981 and 1983, numerous respondents were added to surveys affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 2.

(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.

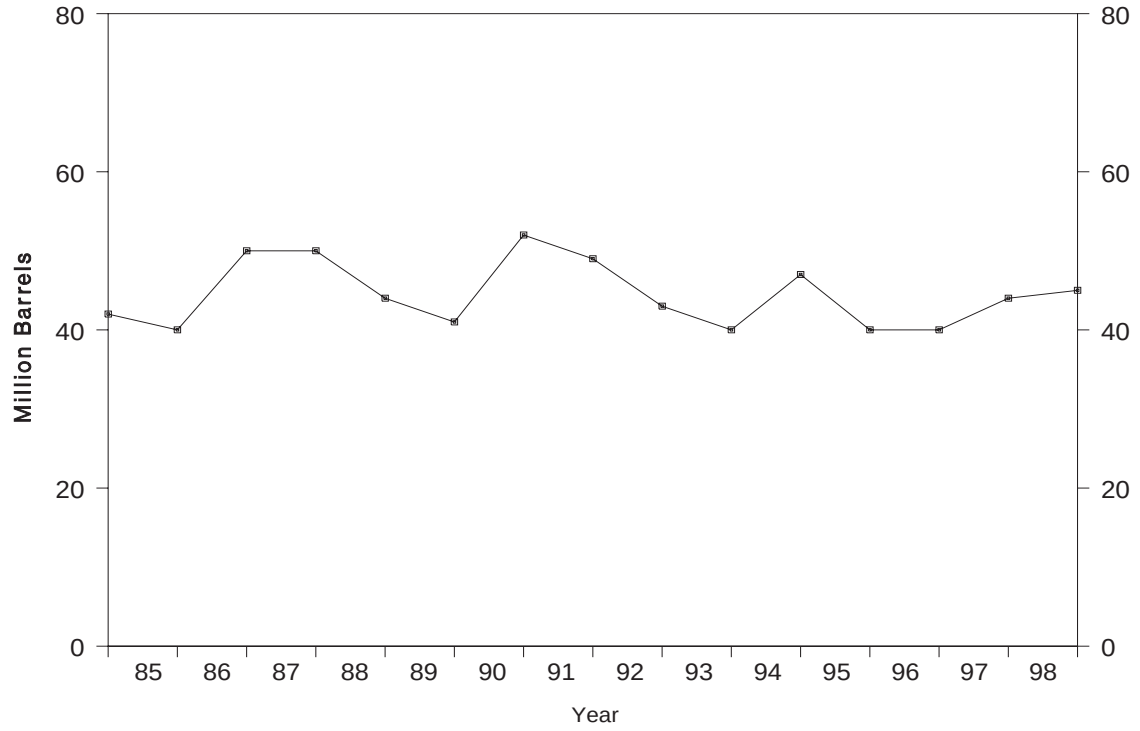
Source: See Summary Statistics Table and Figure Sources.

Figure S11. Jet Fuel Supply and Disposition, 1984 - Present



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

Figure S12. Jet Fuel Ending Stocks, 1984 - Present



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

Table S7. Jet Fuel Supply and Disposition, 1984 - Present

(Thousand Barrels per Day, Except Where Noted)

Year/Month	Supply			Disposition				Ending Stocks[a] (Million Barrels)	
	Production					Product Supplied			
	Total	Kerosene-Type	Imports	Stock Change[b]	Exports	Total	Kerosene-Type	Total	Kerosene Type
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 Average	**1,438**	**1,274**	**67**	**-9**	**43**	**1,471**	**1,296**	**49**	**44**
1992 Average	**1,399**	**1,254**	**82**	**-16**	**43**	**1,454**	**1,310**	**43**	**39**
1993 Average	**1,422**	**1,309**	**100**	**-7**	**59**	**1,469**	**1,357**	**40**	**38**
1994 Average	**1,448**	**1,410**	**117**	**18**	**20**	**1,527**	**1,480**	**47**	**46**
1995 Average	**1,416**	**1,407**	**106**	**-19**	**26**	**1,514**	**1,497**	**40**	**39**
1996 January	1,596	1,593	89	-49	111	1,624	1,607	38	38
February	1,499	1,495	100	-129	67	1,661	1,658	35	35
March	1,470	1,468	105	-24	59	1,541	1,547	34	34
April	1,466	1,464	113	51	11	1,517	1,515	36	35
May	1,419	1,418	122	39	13	1,489	1,467	37	37
June	1,514	1,512	127	71	11	1,558	1,556	39	39
July	1,496	1,493	89	-14	27	1,572	1,569	38	38
August	1,510	1,507	104	-2	34	1,582	1,580	38	38
September	1,650	1,647	159	152	51	1,606	1,604	43	43
October	1,485	1,484	126	-55	35	1,631	1,636	41	41
November	1,501	1,500	87	-45	45	1,588	1,588	40	40
December	1,575	1,574	110	(s)	115	1,570	1,573	40	40
Average	**1,515**	**1,513**	**111**	**(s)**	**48**	**1,578**	**1,575**	**—**	**—**
1997 January	1,491	1,491	100	-101	78	1,615	1,614	37	37
February	1,511	1,510	116	31	23	1,572	1,571	38	38
March	1,488	1,487	106	55	11	1,529	1,528	39	39
April	1,493	1,492	98	11	21	1,559	1,558	40	40
May	1,515	1,514	91	46	9	1,551	1,551	41	41
June	1,581	1,580	108	77	38	1,574	1,573	43	43
July	1,619	1,618	86	-14	33	1,685	1,685	43	43
August	1,580	1,579	103	7	27	1,648	1,648	43	43
September	1,593	1,592	87	78	16	1,586	1,585	46	46
October	1,581	1,580	77	19	40	1,599	1,599	46	46
November	1,609	1,608	55	8	44	1,612	1,612	46	46
December	1,588	1,588	63	-75	78	1,647	1,647	44	44
Average	**1,554**	**1,554**	**91**	**11**	**35**	**1,599**	**1,598**	**—**	**—**
1998 January	1,513	1,512	85	3	37	1,559	1,558	44	44
February	1,443	1,443	127	-61	25	1,606	1,605	42	42
March	1,504	1,503	144	23	36	1,589	1,596	43	43
April	1,524	1,523	106	-56	32	1,654	1,654	41	41
May	1,494	1,493	151	54	25	1,567	1,568	43	43
June	1,555	1,554	116	35	25	1,611	1,611	44	44
July	1,504	1,503	117	-65	28	1,658	1,659	42	42
August	1,608	1,608	146	141	8	1,605	1,605	46	46
September	1,482	1,482	91	-17	26	1,564	1,565	46	46
October	1,448	1,447	140	-102	22	1,667	1,668	43	43
November	1,617	1,617	131	89	25	1,634	1,634	45	45
December	1,611	1,611	130	-26	17	1,749	1,750	45	45
Average	**1,526**	**1,525**	**124**	**2**	**26**	**1,622**	**1,623**	**—**	**—**

[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.

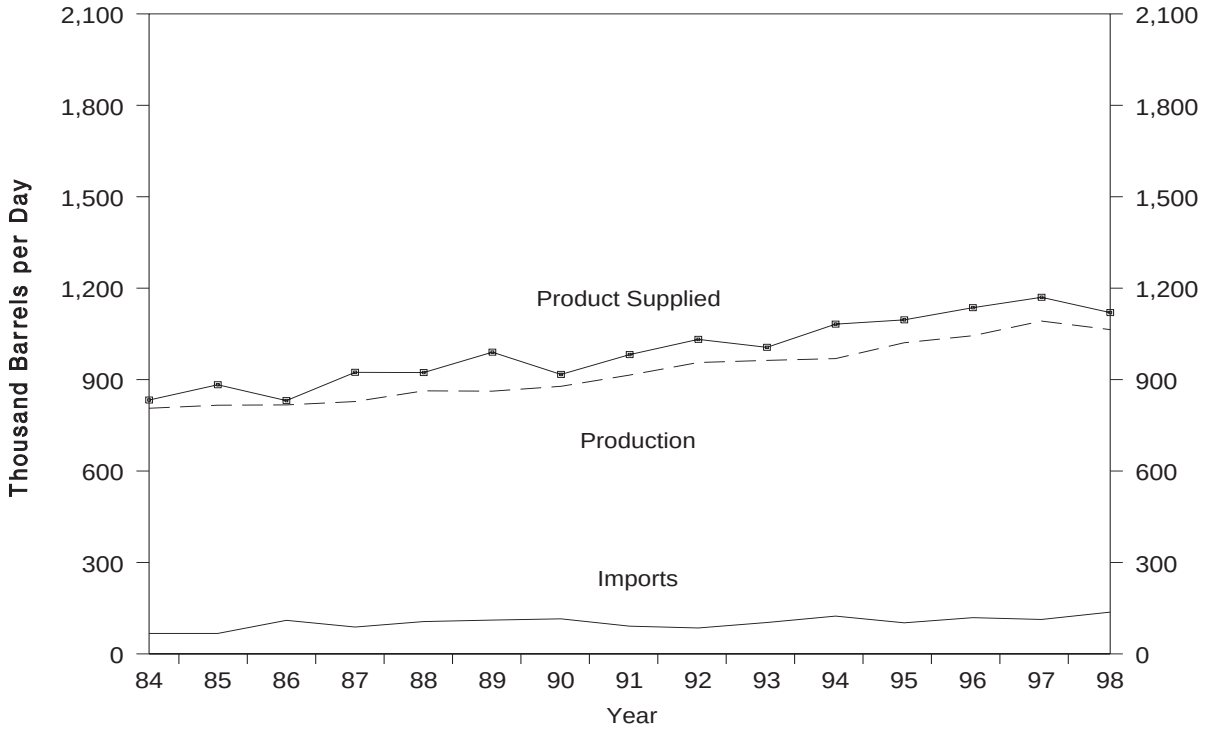
[c] In January 1981, and 1983, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 2.

(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.

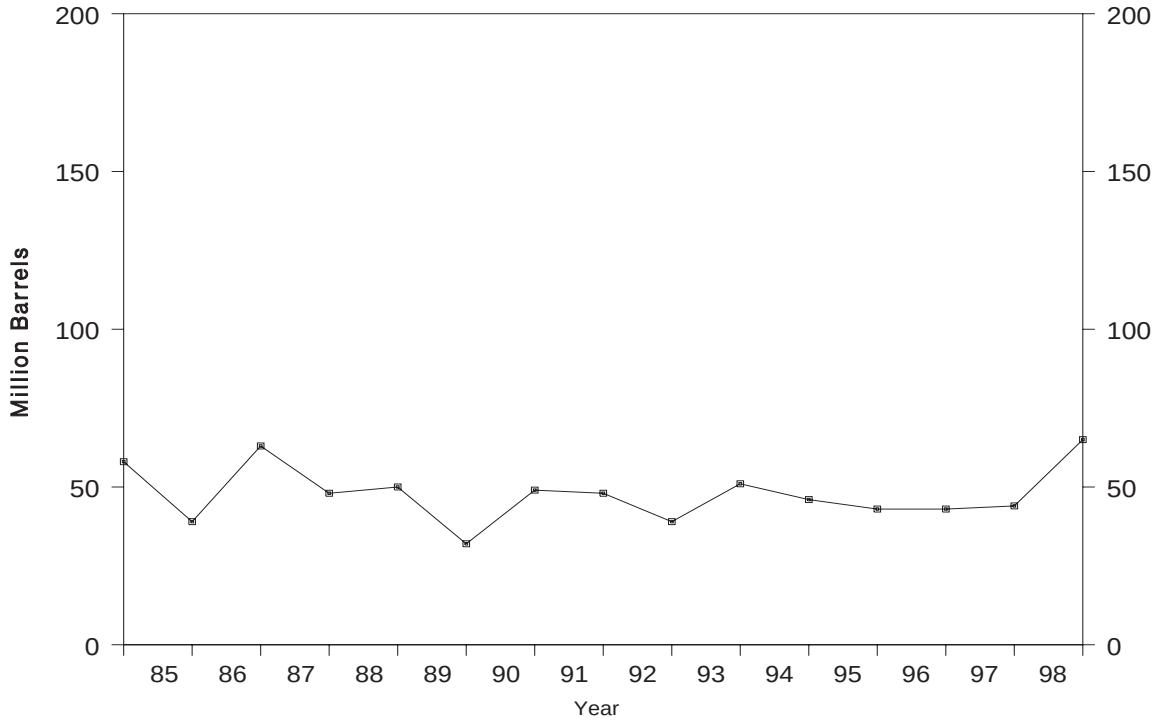
Source: See Summary Statistics Table and Figure Sources.

Figure S13. Propane/Propylene Supply and Disposition, 1984 - Present



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

Figure S14. Propane/Propylene Ending Stocks, 1984 - Present



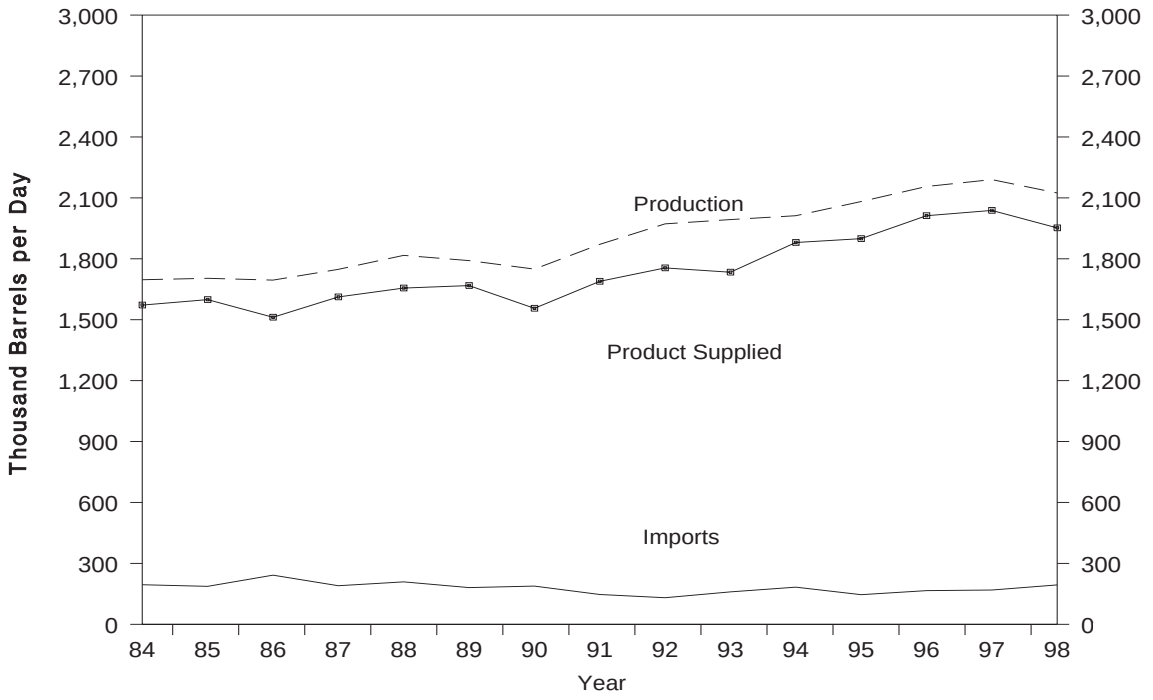
Source: Energy Information Administration, *Petroleum Supply Annual*, Table S8. See Summary Statistics Table and Figure Sources.

Table S8. Propane/Propylene Supply and Disposition, 1984 - Present
(Thousand Barrels per Day, Except Where Noted)

Year/Month	Supply		Disposition				
	Total Production	Imports	Stock Change[a]	Refinery Inputs	Exports	Product Supplied	Ending Stocks[b] (Million Barrels)
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 Average	**915**	**91**	**-3**	**(s)**	**28**	**982**	**48**
1992 Average	**956**	**85**	**-24**	**(s)**	**33**	**1,032**	**39**
1993 Average	**963**	**103**	**34**	**(s)**	**26**	**1,006**	**51**
1994 Average	**969**	**124**	**-13**	**0**	**24**	**1,082**	**46**
1995 Average	**1,021**	**102**	**-10**	**0**	**38**	**1,096**	**43**
1996 January	995	151	-353	0	30	1,468	32
February	1,001	106	-347	0	39	1,415	22
March	1,043	116	-1	0	25	1,135	22
April	1,047	78	114	0	31	981	25
May	1,048	104	209	0	21	922	32
June	1,031	122	293	0	21	839	41
July	1,043	114	188	0	29	940	46
August	1,051	126	83	0	24	1,069	49
September	1,057	95	97	0	21	1,034	52
October	1,058	151	-37	0	29	1,218	51
November	1,063	147	-148	0	34	1,324	46
December	1,093	122	-106	0	31	1,289	43
Average	**1,044**	**119**	**(s)**	**0**	**28**	**1,136**	**—**
1997 January	1,039	149	-340	0	28	1,501	32
February	1,044	126	-276	0	42	1,404	25
March	1,059	114	92	0	40	1,041	28
April	1,112	109	150	0	32	1,039	32
May	1,114	92	252	0	23	930	40
June	1,110	88	250	0	31	916	47
July	1,083	87	231	0	24	916	55
August	1,095	108	172	0	24	1,007	60
September	1,110	89	30	0	16	1,152	61
October	1,110	122	17	0	29	1,185	61
November	1,099	114	-223	0	48	1,388	55
December	1,127	159	-342	0	53	1,576	44
Average	**1,092**	**113**	**3**	**0**	**32**	**1,170**	**—**
1998 January	1,060	137	-310	0	29	1,478	34
February	1,052	204	-58	0	28	1,286	33
March	1,086	132	-98	0	28	1,288	30
April	1,112	183	252	0	22	1,021	37
May	1,093	136	428	0	22	779	51
June	1,059	179	336	0	13	889	61
July	1,004	124	215	0	17	896	67
August	1,056	157	186	0	15	1,012	73
September	1,047	81	118	0	15	994	77
October	1,047	123	-45	0	35	1,180	75
November	1,086	92	-96	0	41	1,233	72
December	1,060	108	-250	0	32	1,385	65
Average	**1,064**	**137**	**56**	**0**	**25**	**1,120**	**—**

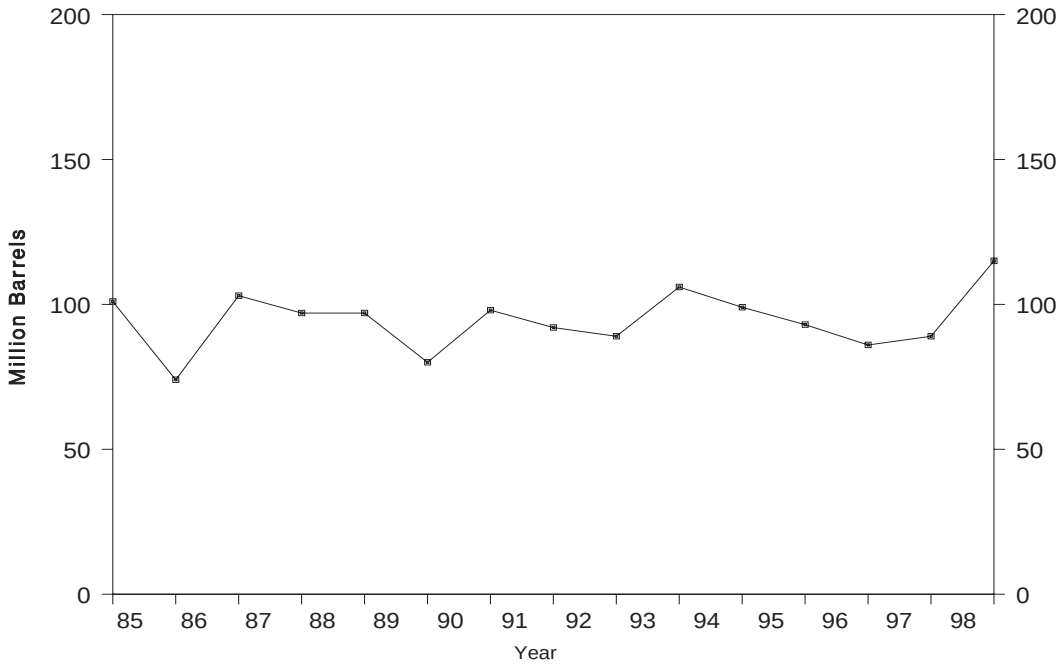
[a] A negative number indicates a decrease in stocks and a positive number indicates an increase.
[b] Stocks are totals as of end of period.
[c] In January 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock change calculations. Stock changes are calculated using new basis stock levels. See Summary Statistics Explanatory Note 2.
(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 S15. Liquefied Petroleum Gases Supply and Disposition, 1984 - Present



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

Figure S16. Liquefied Petroleum Gases Ending Stocks, 1984 - Present



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

Table S9. Liquefied Petroleum Gases Supply and Disposition, 1984 - 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	
1984 Average	**1,697**	**195**	[c] **-19**	**291**	**48**	**1,572**	**101**
1985 Average	**1,704**	**187**	**-75**	**304**	**62**	**1,599**	**74**
1986 Average	**1,695**	**242**	**80**	**302**	**42**	**1,512**	**103**
1987 Average	**1,748**	**190**	**-15**	**304**	**38**	**1,612**	**97**
1988 Average	**1,817**	**209**	**1**	**321**	**49**	**1,656**	**97**
1989 Average	**1,791**	**181**	**-47**	**315**	**35**	**1,668**	**80**
1990 Average	**1,749**	**188**	**48**	**293**	**40**	**1,556**	**98**
1991 Average	**1,871**	**147**	**-15**	**304**	**41**	**1,689**	**92**
1992 Average	**1,972**	**131**	**-10**	**309**	**49**	**1,755**	**89**
1993 Average	**1,993**	**160**	**49**	**327**	**43**	**1,734**	**106**
1994 Average	**2,012**	**183**	**-19**	**296**	**38**	**1,880**	**99**
1995 Average	**2,082**	**146**	**-17**	**289**	**58**	**1,899**	**93**
1996 January	1,906	208	-649	419	49	2,295	73
February	1,912	138	-596	320	60	2,267	56
March	2,181	165	15	246	38	2,047	56
April	2,305	122	279	226	56	1,867	65
May	2,287	156	315	215	67	1,846	74
June	2,285	184	439	211	36	1,783	87
July	2,264	182	385	201	72	1,787	99
August	2,271	166	321	201	50	1,864	109
September	2,194	150	165	260	47	1,871	114
October	2,133	183	-103	309	37	2,073	111
November	2,041	177	-466	377	41	2,265	97
December	2,086	159	-352	355	56	2,186	86
Average	**2,156**	**166**	**-19**	**278**	**51**	**2,012**	**—**
1997 January	2,009	193	-543	344	36	2,365	69
February	2,072	178	-450	321	78	2,301	57
March	2,210	163	214	244	62	1,854	63
April	2,355	169	349	211	41	1,923	74
May	2,364	161	481	200	40	1,804	89
June	2,369	160	534	203	43	1,748	105
July	2,331	151	433	195	56	1,798	118
August	2,348	175	408	190	37	1,888	131
September	2,196	150	54	247	29	2,017	133
October	2,074	168	-100	302	42	1,998	129
November	1,926	155	-535	345	66	2,206	113
December	2,020	205	-770	354	74	2,567	89
Average	**2,190**	**169**	**9**	**263**	**50**	**2,038**	**—**
1998 January	2,000	200	-534	340	53	2,340	73
February	2,088	277	-122	303	52	2,132	70
March	2,262	192	-14	229	41	2,199	69
April	2,414	234	527	193	39	1,889	85
May	2,358	219	726	193	31	1,627	107
June	2,245	249	546	193	28	1,727	124
July	2,106	199	328	187	34	1,756	134
August	2,220	196	407	190	25	1,793	147
September	2,032	144	212	222	28	1,713	153
October	1,983	168	-225	313	49	2,015	146
November	1,945	118	-402	358	61	2,046	134
December	1,835	133	-608	317	67	2,191	115
Average	**2,124**	**194**	**70**	**253**	**42**	**1,952**	**—**

[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 2.

Notes: • Liquefied petroleum gases includes ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene. 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, 1984 - Present

(Thousand Barrels per Day, Except Where Noted)

Year/Month	Supply		Disposition				
	Total Production	Imports	Stock Change[a]	Refinery Inputs	Exports	Products Supplied	Ending Stocks[b] (Million Barrels)
1984 Average	**2,500**	**503**	[c] **-32**	**791**	**236**	**2,007**	**198**
1985 Average	**2,532**	**550**	**22**	**886**	**227**	**1,947**	**206**
1986 Average	**2,704**	**504**	**-15**	**888**	**0**	**2,045**	**201**
1987 Average	**2,737**	**543**	**-1**	**829**	**264**	**2,187**	**200**
1988 Average	**2,773**	**645**	**22**	**799**	**294**	**2,303**	**208**
1989 Average	**2,771**	**627**	**12**	**797**	**305**	**2,285**	**213**
1990 Average	**2,842**	**705**	**-32**	**887**	**289**	**2,402**	**201**
1991 Average	**2,826**	**675**	**18**	**936**	**277**	**2,269**	**208**
1992 Average	**2,928**	**707**	**-3**	**906**	**263**	**2,470**	[c] **207**
1993 Average	**3,035**	**770**	**-2**	**1,081**	**300**	**2,426**	**206**
1994 Average	**2,973**	**761**	**24**	**861**	**329**	**2,518**	**215**
1995 Average	**3,031**	**708**	**-23**	**958**	**348**	**2,457**	**206**
1996 January	2,833	873	[c] 448	613	335	2,311	220
February	2,817	745	-18	872	388	2,320	219
March	2,983	820	122	759	315	2,607	223
April	3,108	828	174	841	421	2,500	228
May	3,128	852	-45	1,010	427	2,588	227
June	3,227	923	-203	1,207	399	2,748	221
July	3,223	862	-170	1,131	361	2,764	216
August	3,332	907	-311	1,289	448	2,812	206
September	3,306	751	-56	1,083	410	2,620	204
October	3,146	1,068	-84	1,023	323	2,952	202
November	3,093	928	-34	1,113	366	2,576	201
December	3,088	982	42	1,224	321	2,485	202
Average	**3,108**	**879**	**-11**	**1,014**	**376**	**2,608**	**—**
1997 January	2,945	1,154	354	831	403	2,511	213
February	2,953	1,010	239	944	332	2,448	220
March	3,078	955	514	697	391	2,431	236
April	3,136	1,054	-122	1,203	395	2,715	232
May	3,329	1,156	127	1,089	446	2,823	236
June	3,355	936	-468	1,345	417	2,997	222
July	3,402	903	-214	1,069	380	3,069	215
August	3,426	886	-83	994	460	2,940	213
September	3,390	836	101	841	450	2,834	216
October	3,227	957	-87	915	381	2,976	213
November	3,078	754	-7	919	369	2,551	213
December	3,113	744	3	981	396	2,476	213
Average	**3,204**	**945**	**30**	**985**	**402**	**2,733**	**—**
1998 January	3,108	782	415	702	420	2,352	226
February	3,100	794	384	659	406	2,446	236
March	3,081	825	269	770	387	2,481	245
April	3,153	975	-145	1,209	378	2,686	240
May	3,285	1,014	-75	1,095	402	2,876	238
June	3,365	969	-147	1,155	412	2,914	234
July	3,492	847	-271	1,182	431	2,998	225
August	3,575	697	-5	953	300	3,023	225
September	3,344	962	-33	1,012	370	2,957	224
October	3,240	1,012	-190	1,259	357	2,825	218
November	3,234	978	181	1,000	382	2,649	224
December	3,043	808	-138	1,012	312	2,665	219
Average	**3,253**	**888**	**18**	**1,002**	**380**	**2,741**	**—**

[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 2.

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, and crude oil product supplied. • 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 Tables and Figures 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* (1984 through 1998).
- Data on crude oil production 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. Crude oil production data for 1998 reflect data received as of April 1999. Data for 1998 received after April will be published as an appendix in the following year's *Petroleum Supply Annual*.
- Data on exports of crude oil and petroleum products are received from the U.S. Bureau of the Census. Export statistics reflect 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.

Summary Statistics Explanatory Notes

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

Note 1. 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.

Currently, all except four crude oil producing States (New York, Pennsylvania, Ohio, and West Virginia) report production on a monthly basis. These four States report crude oil 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, and the Mineral Management Service. The EIA incorporates production data into its Crude Oil Production System (COPS) as the data are received from the reporting agencies. Tables S1 and S2 present the 1998 crude oil production data received by the EIA as of April 1999. Crude oil production data for 1998 received after April 1999 will be published later as an appendix in the following year's *Petroleum Supply Annual* (PSA). Table C1 of this publication presents the 1997 crude oil production a year after it was published in the *PSA* 1997.

Note 2. 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.

In response to changes in the Clean Air Act Amendments of 1990 requiring that all gasoline sold in carbon monoxide nonattainment areas have an oxygen content of 2.7 percent (by weight) during winter months, the Energy Information Administration (EIA) conducted a frame identifier survey in 1991 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 did not affect stocks reported and therefore did not cause a new basis stock level to be calculated.

Table 1. U.S. Petroleum Balance, 1998

	Commodity	Thousand Barrels	Thousand Barrels per Day
	Crude Oil		
	Field Production		
(1)	Alaska	428,851	1,175
(2)	Lower 48 States	1,853,069	5,077
(3)	**Total U.S.**	**2,281,919**	**6,252**
	Net Imports		
(4)	Imports (Gross Excluding Strategic Petroleum Reserve (SPR))	3,177,584	8,706
(5)	SPR Imports	0	0
(6)	Exports	40,102	110
(7)	**Imports (Net Including SPR)**	**3,137,482**	**8,596**
	Other Sources		
(8)	SPR Stock Change (Withdrawal (+), Addition (-))	-7,976	-22
(9)	Other Stock Change (Withdrawal (+), Addition (-))	-18,853	-52
(10)	Product Supplied and Losses	-3	(s)
(11)	Unaccounted for[a]	41,814	115
(12)	**Total Other Sources**	**14,982**	**41**
(13)	**Crude Input to Refineries**	**5,434,383**	**14,889**
	(13) = (3) + (7) + (12)		
	Natural Gas Liquids (NGL)		
(14)	Field Production[b]	711,629	1,950
(15)	Net Imports[c]	8,343	23
(16)	Stock Change (Withdrawal (+), Addition (-))[c]	-2,963	-8
(17)	**Total NGL Supply**	**717,009**	**1,964**
	Other Liquids		
	Unfinished Oils and Gasoline Blending Components, Total		
(18)	Stock Change (Withdrawal (+), Addition (-))	-4,265	-12
(19)	Net Imports	192,942	529
(20)	Other Liquids New Supply(Field Production)	69,477	190
(21)	Refinery Processing Gain[a]	323,447	886
(22)	Crude Oil Product Supplied	0	0
(23)	**Total Other Liquids**	**581,601**	**1,593**
	(23) = (18) through (22)		
(24)	**Total Production of Products**	**6,732,993**	**18,447**
	(24) = (13) + (17) + (23)		
	Net Imports of Refined Products		
(25)	Imports (Gross)	508,178	1,392
(26)	Exports	283,256	776
(27)	**Imports (Net)**	**224,922**	**616**
(28)	**Total New Supply of Products**	**6,957,915**	**19,063**
	(28) = (24) + (27)		
(29)	Refined Products Stock Change (Withdrawal (+), Addition (-))	-53,159	-146
(30)	**Total Petroleum Products Supplied for Domestic Use**	**6,904,756**	**18,917**
	(30) = (28) + (29)		
(31)	Finished Motor Gasoline	3,012,497	8,253
(32)	Distillate Fuel Oil	1,263,427	3,461
(33)	Residual Fuel Oil	323,799	887
(34)	Jet Fuel	592,006	1,622
(35)	Liquefied Petroleum Gases	712,514	1,952
(36)	Other[d]	1,000,513	2,741
(37)	Crude Oil	0	0
(38)	**Total Products Supplied**	**6,904,756**	**18,917**
	(38) = (31) through (37)		
	Ending Stocks, All Oils		
(39)	Crude Oil (Excluding SPR)	323,543	—
(40)	Strategic Petroleum Reserve[e]	571,405	—
(41)	Finished Motor Gasoline	171,796	—
(42)	Distillate Fuel Oil	156,075	—
(43)	Residual Fuel Oil	44,909	—
(44)	Jet Fuel	44,694	—
(45)	Liquefied Petroleum Gases	115,082	—
(46)	Other[d]	219,471	—
(47)	**Total Stocks**	**1,646,975**	**—**
	(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.

[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.

[e] Crude oil stocks in the Strategic Petroleum Reserve include non-U.S. stocks held under foreign or commercial storage agreements.

(s) = Less than 500 barrels per day.

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, 1998

(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	**2,281,919**	**—**	**3,177,584**	**41,814**	**26,829**	**3**	**5,434,383**	**40,102**	**0**	**894,948**
Natural Gas Liquids and LRGs	**642,202**	**245,918**	**82,081**	**—**	**28,564**	**—**	**146,921**	**18,563**	**776,153**	**123,760**
Pentanes Plus	112,886	—	11,418	—	2,963	—	54,627	3,075	63,639	8,678
Liquefied Petroleum Gases	529,316	245,918	70,663	—	25,601	—	92,294	15,488	712,514	115,082
Ethane/Ethylene	221,675	11,444	6,230	—	2,129	—	0	0	237,220	21,036
Propane/Propylene	187,369	200,815	50,146	—	20,588	—	0	9,051	408,691	64,633
Normal Butane/Butylene	54,093	29,333	8,612	—	3,772	—	48,789	6,436	33,041	22,145
Isobutane/Isobutylene	66,179	4,326	5,675	—	-888	—	43,505	0	33,563	7,268
Other Liquids	**69,477**	**—**	**211,266**	**—**	**4,265**	**—**	**311,257**	**18,324**	**-53,103**	**149,082**
Other Hydrocarbons/Oxygenates	117,588	—	24,896	—	1,679	—	127,881	12,924	0	14,172
Unfinished Oils	—	—	110,121	—	2,081	—	161,936	0	-53,896	90,836
Motor Gasoline Blend. Comp.	-48,111	—	76,249	—	425	—	22,313	5,400	0	43,843
Aviation Gasoline Blend. Comp.	—	—	0	—	80	—	-873	0	793	231
Finished Petroleum Products	**69,427**	**5,970,090**	**437,515**	**—**	**27,558**	**—**	**—**	**267,768**	**6,181,706**	**479,185**
Finished Motor Gasoline	69,427	2,880,521	113,606	—	5,439	—	—	45,618	3,012,497	171,796
Reformulated	—	906,419	65,555	—	1,333	—	—	1,346	969,295	44,264
Oxygenated	213,160	30,233	0	—	-180	—	—	503	243,070	902
Other	-143,733	1,943,869	48,051	—	4,286	—	—	43,768	1,800,132	126,630
Finished Aviation Gasoline	—	7,118	43	—	129	—	—	0	7,032	1,826
Jet Fuel	—	556,834	45,143	—	651	—	—	9,320	592,006	44,694
Naphtha-Type	—	170	0	—	0	—	—	516	-346	34
Kerosene-Type	—	556,664	45,143	—	651	—	—	8,804	592,352	44,660
Kerosene	—	27,848	466	—	-351	—	—	175	28,490	6,943
Distillate Fuel Oil	—	1,249,881	76,618	—	17,648	—	—	45,424	1,263,427	156,075
0.05 percent sulfur and under	—	813,970	43,221	—	8,692	—	—	13,544	834,955	76,777
Greater than 0.05 percent sulfur	—	435,911	33,397	—	8,956	—	—	31,880	428,472	79,298
Residual Fuel Oil	—	277,957	100,537	—	4,447	—	—	50,248	323,799	44,909
Naphtha For Petro. Feed. Use	—	89,176	22,388	—	285	—	—	0	111,279	2,093
Other Oils For Petro. Feed. Use	—	78,858	61,554	—	-132	—	—	0	140,544	2,067
Special Naphthas	—	24,263	2,671	—	36	—	—	6,457	20,441	2,207
Lubricants	—	67,263	3,327	—	289	—	—	9,128	61,173	13,178
Waxes	—	8,355	613	—	159	—	—	1,157	7,652	993
Petroleum Coke	—	260,061	263	—	-237	—	—	97,519	163,042	9,200
Asphalt and Road Oil	—	181,910	10,183	—	-751	—	—	2,586	190,258	21,351
Still Gas	—	239,539	0	—	0	—	—	0	239,539	0
Miscellaneous Products	—	20,506	103	—	-54	—	—	134	20,529	1,853
Total	**3,063,025**	**6,216,008**	**3,908,446**	**41,814**	**87,216**	**3**	**5,892,561**	**344,757**	**6,904,756**	**1,646,975**

[a] Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.
[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.

LRG = Liquefied Refinery Gas.

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 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. Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1998

(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	**6,252**	**—**	**8,706**	**115**	**74**	**(s)**	**14,889**	**110**	**0**
Natural Gas Liquids and LRGs	**1,759**	**674**	**225**	**—**	**78**	**—**	**403**	**51**	**2,126**
Pentanes Plus	309	—	31	—	8	—	150	8	174
Liquefied Petroleum Gases	1,450	674	194	—	70	—	253	42	1,952
Ethane/Ethylene	607	31	17	—	6	—	0	0	650
Propane/Propylene	513	550	137	—	56	—	0	25	1,120
Normal Butane/Butylene	148	80	24	—	10	—	134	18	91
Isobutane/Isobutylene	181	12	16	—	-2	—	119	0	92
Other Liquids	**190**	**—**	**579**	**—**	**12**	**—**	**853**	**50**	**-145**
Other Hydrocarbons/Oxygenates	322	—	68	—	5	—	350	35	0
Unfinished Oils	—	—	302	—	6	—	444	0	-148
Motor Gasoline Blend. Comp.	-132	—	209	—	1	—	61	15	0
Aviation Gasoline Blend. Comp.	—	—	0	—	(s)	—	-2	0	2
Finished Petroleum Products	**190**	**16,356**	**1,199**	**—**	**76**	**—**	**—**	**734**	**16,936**
Finished Motor Gasoline	190	7,892	311	—	15	—	—	125	8,253
Reformulated	—	2,483	180	—	4	—	—	4	2,656
Oxygenated	584	83	0	—	(s)	—	—	1	666
Other	-394	5,326	132	—	12	—	—	120	4,932
Finished Aviation Gasoline	—	20	(s)	—	(s)	—	—	0	19
Jet Fuel	—	1,526	124	—	2	—	—	26	1,622
Naphtha-Type	—	(s)	0	—	0	—	—	1	-1
Kerosene-Type	—	1,525	124	—	2	—	—	24	1,623
Kerosene	—	76	1	—	-1	—	—	(s)	78
Distillate Fuel Oil	—	3,424	210	—	48	—	—	124	3,461
0.05 percent sulfur and under	—	2,230	118	—	24	—	—	37	2,288
Greater than 0.05 percent sulfur	—	1,194	91	—	25	—	—	87	1,174
Residual Fuel Oil	—	762	275	—	12	—	—	138	887
Naphtha For Petro. Feed. Use	—	244	61	—	1	—	—	0	305
Other Oils For Petro. Feed. Use	—	216	169	—	(s)	—	—	0	385
Special Naphthas	—	66	7	—	(s)	—	—	18	56
Lubricants	—	184	9	—	1	—	—	25	168
Waxes	—	23	2	—	(s)	—	—	3	21
Petroleum Coke	—	712	1	—	-1	—	—	267	447
Asphalt and Road Oil	—	498	28	—	-2	—	—	7	521
Still Gas	—	656	0	—	0	—	—	0	656
Miscellaneous Products	—	56	(s)	—	(s)	—	—	(s)	56
Total	**8,392**	**17,030**	**10,708**	**115**	**239**	**(s)**	**16,144**	**945**	**18,917**

[a] Unaccounted for crude oil represents the difference between the supply and disposition of crude oil.

[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.

LRG = Liquefied Refinery Gas.

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 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. PAD District I—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1998
(Thousand Barrels)

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]	Ending Stocks
Crude Oil	**9,643**	**—**	**557,114**	**11,314**	**-1,243**	**3,487**	**0**	**572,774**	**567**	**0**	**14,460**
Natural Gas Liquids and LRGs	**9,564**	**16,836**	**7,786**	**—**	**37,047**	**1,077**	**—**	**1,512**	**663**	**67,981**	**7,169**
Pentanes Plus	1,067	—	0	—	0	22	—	0	21	1,024	34
Liquefied Petroleum Gases	8,497	16,836	7,786	—	37,047	1,055	—	1,512	643	66,956	7,135
Ethane/Ethylene	2,971	0	0	—	0	0	—	0	0	2,971	0
Propane/Propylene	3,746	19,271	7,479	—	35,736	764	—	0	402	65,066	5,069
Normal Butane/Butylene	1,327	-1,018	307	—	1,025	502	—	684	240	215	1,871
Isobutane/Isobutylene	453	-1,417	0	—	286	-211	—	828	0	-1,295	195
Other Liquids	**-7,822**	**—**	**92,781**	**—**	**6,170**	**3,803**	**—**	**109,972**	**638**	**-23,284**	**22,620**
Other Hydrocarbons/Oxygenates	21,199	—	6,402	—	0	-2	—	27,100	503	0	2,234
Unfinished Oils	—	—	13,771	—	41	440	—	37,419	0	-24,047	10,546
Motor Gasoline Blend. Comp.	-29,021	—	72,608	—	6,129	3,271	—	46,310	135	0	9,667
Aviation Gasoline Blend. Comp.	—	—	0	—	0	94	—	-857	0	763	173
Finished Petroleum Products	**30,087**	**692,478**	**312,819**	**—**	**1,044,909**	**19,583**	**—**	**—**	**12,846**	**2,047,864**	**170,636**
Finished Motor Gasoline	30,087	354,392	104,108	—	604,935	1,273	—	—	704	1,091,545	52,060
Reformulated	—	223,823	57,457	—	123,919	2,820	—	—	95	402,284	22,282
Oxygenated	10,658	2	0	—	488	45	—	—	4	11,099	325
Other	19,429	130,567	46,651	—	480,528	-1,592	—	—	605	678,162	29,453
Finished Aviation Gasoline	—	43	3	—	926	32	—	—	0	940	260
Jet Fuel	—	36,397	28,109	—	157,326	-835	—	—	1,113	221,554	10,921
Naphtha-Type	—	0	0	—	0	0	—	—	241	-241	0
Kerosene-Type	—	36,397	28,109	—	157,326	-835	—	—	873	221,794	10,921
Kerosene	—	4,994	466	—	1,713	-673	—	—	33	7,813	3,903
Distillate Fuel Oil	—	161,089	71,980	—	246,943	16,435	—	—	1,839	461,738	76,367
0.05 percent sulfur and under	—	61,775	40,810	—	151,956	4,505	—	—	269	249,767	23,168
Greater than 0.05 percent sulfur	—	99,314	31,170	—	94,987	11,930	—	—	1,570	211,971	53,199
Residual Fuel Oil	—	49,804	90,969	—	16,124	3,315	—	—	3,858	149,724	20,062
Petrochemical Feedstocks[e]	—	4,520	2,817	—	1,303	-64	—	—	0	8,704	414
Special Naphthas	—	626	1,492	—	1,555	-17	—	—	583	3,107	99
Lubricants	—	6,440	2,917	—	8,952	49	—	—	1,610	16,650	2,490
Waxes	—	68	335	—	9	16	—	—	333	63	61
Petroleum Coke	—	18,715	0	—	0	94	—	—	2,584	16,037	361
Asphalt and Road Oil	—	31,711	9,572	—	5,123	-19	—	—	143	46,282	3,572
Still Gas	—	22,901	0	—	0	0	—	—	0	22,901	0
Miscellaneous Products	—	778	51	—	0	-23	—	—	46	806	66
Total	**41,472**	**709,314**	**970,500**	**11,314**	**1,086,883**	**27,950**	**0**	**684,258**	**14,715**	**2,092,561**	**214,885**

[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.
LRG = Liquefied Refinery Gas.
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 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. PAD District I—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1998

(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	**26**	**—**	**1,526**	**31**	**-3**	**10**	**0**	**1,569**	**2**	**0**
Natural Gas Liquids and LRGs	**26**	**46**	**21**	**—**	**101**	**3**	**—**	**4**	**2**	**186**
Pentanes Plus	3	—	0	—	0	(s)	—	0	(s)	3
Liquefied Petroleum Gases	23	46	21	—	101	3	—	4	2	183
Ethane/Ethylene	8	0	0	—	0	0	—	0	0	8
Propane/Propylene	10	53	20	—	98	2	—	0	1	178
Normal Butane/Butylene	4	-3	1	—	3	1	—	2	1	1
Isobutane/Isobutylene	1	-4	0	—	1	-1	—	2	0	-4
Other Liquids	**-21**	**—**	**254**	**—**	**17**	**10**	**—**	**301**	**2**	**-64**
Other Hydrocarbons/Oxygenates	58	—	18	—	0	(s)	—	74	1	0
Unfinished Oils	—	—	38	—	(s)	1	—	103	0	-66
Motor Gasoline Blend. Comp.	-80	—	199	—	17	9	—	127	(s)	0
Aviation Gasoline Blend. Comp.	—	—	0	—	0	(s)	—	-2	0	2
Finished Petroleum Products	**82**	**1,897**	**857**	**—**	**2,863**	**54**	**—**	**—**	**35**	**5,611**
Finished Motor Gasoline	82	971	285	—	1,657	3	—	—	2	2,991
Reformulated	—	613	157	—	340	8	—	—	(s)	1,102
Oxygenated	29	(s)	0	—	1	(s)	—	—	(s)	30
Other	53	358	128	—	1,317	-4	—	—	2	1,858
Finished Aviation Gasoline	—	(s)	(s)	—	3	(s)	—	—	0	3
Jet Fuel	—	100	77	—	431	-2	—	—	3	607
Naphtha-Type	—	0	0	—	0	0	—	—	1	-1
Kerosene-Type	—	100	77	—	431	-2	—	—	2	608
Kerosene	—	14	1	—	5	-2	—	—	(s)	21
Distillate Fuel Oil	—	441	197	—	677	45	—	—	5	1,265
0.05 percent sulfur and under	—	169	112	—	416	12	—	—	1	684
Greater than 0.05 percent sulfur	—	272	85	—	260	33	—	—	4	581
Residual Fuel Oil	—	136	249	—	44	9	—	—	11	410
Petrochemical Feedstocks[e]	—	12	8	—	4	(s)	—	—	0	24
Special Naphthas	—	2	4	—	4	(s)	—	—	2	9
Lubricants	—	18	8	—	25	(s)	—	—	4	46
Waxes	—	(s)	1	—	(s)	(s)	—	—	1	(s)
Petroleum Coke	—	51	0	—	0	(s)	—	—	7	44
Asphalt and Road Oil	—	87	26	—	14	(s)	—	—	(s)	127
Still Gas	—	63	0	—	0	0	—	—	0	63
Miscellaneous Products	—	2	(s)	—	0	(s)	—	—	(s)	2
Total	**114**	**1,943**	**2,659**	**31**	**2,978**	**77**	**0**	**1,875**	**40**	**5,733**

[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.

LRG = Liquefied Refinery Gas.

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 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 II—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1998
(Thousand Barrels)

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]	Ending Stocks
Crude Oil	**187,838**	**—**	**308,650**	**1,741**	**750,874**	**-1,188**	**0**	**1,230,521**	**19,770**	**0**	**72,393**
Natural Gas Liquids and LRGs	**104,652**	**41,730**	**30,327**	**—**	**1,670**	**11,603**	**—**	**34,119**	**5,851**	**126,806**	**41,122**
Pentanes Plus	14,306	—	445	—	9,301	688	—	11,508	3,010	8,846	2,462
Liquefied Petroleum Gases	90,346	41,730	29,882	—	-7,631	10,915	—	22,611	2,841	117,960	38,660
Ethane/Ethylene	34,446	0	131	—	-22,122	1,866	—	0	0	10,589	4,844
Propane/Propylene	36,608	38,632	24,857	—	10,857	9,023	—	0	820	101,111	26,995
Normal Butane/Butylene	12,951	2,512	2,309	—	-1,094	283	—	12,156	2,021	2,218	5,085
Isobutane/Isobutylene	6,341	586	2,585	—	4,728	-257	—	10,455	0	4,042	1,736
Other Liquids	**-10,897**	**—**	**235**	**—**	**24,971**	**367**	**—**	**25,395**	**111**	**-11,564**	**25,153**
Other Hydrocarbons/Oxygenates	13,289	—	0	—	0	170	—	13,008	111	0	2,120
Unfinished Oils	—	—	202	—	48	-384	—	12,206	0	-11,572	11,925
Motor Gasoline Blend. Comp.	-24,186	—	33	—	24,923	603	—	167	(s)	0	11,094
Aviation Gasoline Blend. Comp.	—	—	0	—	0	-22	—	14	0	8	14
Finished Petroleum Products	**40,386**	**1,307,302**	**4,373**	**—**	**301,004**	**2,037**	**—**	**—**	**6,812**	**1,644,216**	**105,470**
Finished Motor Gasoline	40,386	672,565	1,057	—	172,844	477	—	—	714	885,661	42,363
Reformulated	—	110,780	388	—	6,113	-286	—	—	29	117,538	909
Oxygenated	162,002	19,610	0	—	-629	-118	—	—	180	180,921	419
Other	-121,616	542,175	669	—	167,360	881	—	—	505	587,202	41,035
Finished Aviation Gasoline	—	1,593	23	—	946	128	—	—	0	2,434	510
Jet Fuel	—	78,064	0	—	44,807	457	—	—	411	122,003	9,602
Naphtha-Type	—	28	0	—	0	0	—	—	3	25	0
Kerosene-Type	—	78,036	0	—	44,807	457	—	—	409	121,977	9,602
Kerosene	—	6,275	0	—	91	-376	—	—	17	6,725	1,211
Distillate Fuel Oil	—	317,499	1,344	—	77,515	2,214	—	—	401	393,743	33,440
0.05 percent sulfur and under	—	224,977	996	—	63,588	1,490	—	—	169	287,902	23,720
Greater than 0.05 percent sulfur	—	92,522	348	—	13,927	724	—	—	232	105,841	9,720
Residual Fuel Oil	—	23,651	443	—	-4,994	-250	—	—	328	19,022	2,335
Petrochemical Feedstocks[e]	—	15,780	405	—	1,399	-129	—	—	0	17,713	234
Special Naphthas	—	8,769	458	—	1,997	-37	—	—	135	11,126	441
Lubricants	—	8,592	277	—	2,429	-150	—	—	704	10,744	1,585
Waxes	—	1,271	134	—	0	-65	—	—	271	1,199	79
Petroleum Coke	—	51,875	0	—	0	542	—	—	1,988	49,345	3,756
Asphalt and Road Oil	—	67,821	222	—	3,970	-689	—	—	1,840	70,862	9,639
Still Gas	—	49,664	0	—	0	0	—	—	0	49,664	0
Miscellaneous Products	—	3,883	10	—	0	-85	—	—	5	3,973	275
Total	**321,980**	**1,349,032**	**343,585**	**1,741**	**1,078,519**	**12,819**	**0**	**1,290,035**	**32,545**	**1,759,457**	**244,138**

[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.
LRG = Liquefied Refinery Gas.
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 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 II—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1998

(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	**515**	**—**	**846**	**5**	**2,057**	**-3**	**0**	**3,371**	**54**	**0**
Natural Gas Liquids and LRGs	**287**	**114**	**83**	**—**	**5**	**32**	**—**	**93**	**16**	**347**
Pentanes Plus	39	—	1	—	25	2	—	32	8	24
Liquefied Petroleum Gases	248	114	82	—	-21	30	—	62	8	323
Ethane/Ethylene	94	0	(s)	—	-61	5	—	0	0	29
Propane/Propylene	100	106	68	—	30	25	—	0	2	277
Normal Butane/Butylene	35	7	6	—	-3	1	—	33	6	6
Isobutane/Isobutylene	17	2	7	—	13	-1	—	29	0	11
Other Liquids	**-30**	**—**	**1**	**—**	**68**	**1**	**—**	**70**	**(s)**	**-32**
Other Hydrocarbons/Oxygenates	36	—	0	—	0	(s)	—	36	(s)	0
Unfinished Oils	—	—	1	—	(s)	-1	—	33	0	-32
Motor Gasoline Blend. Comp.	-66	—	(s)	—	68	2	—	(s)	(s)	0
Aviation Gasoline Blend. Comp.	—	—	0	—	0	(s)	—	(s)	0	(s)
Finished Petroleum Products	**111**	**3,582**	**12**	**—**	**825**	**6**	**—**	**—**	**19**	**4,505**
Finished Motor Gasoline	111	1,843	3	—	474	1	—	—	2	2,426
Reformulated	—	304	1	—	17	-1	—	—	(s)	322
Oxygenated	444	54	0	—	-2	(s)	—	—	(s)	496
Other	-333	1,485	2	—	459	2	—	—	1	1,609
Finished Aviation Gasoline	—	4	(s)	—	3	(s)	—	—	0	7
Jet Fuel	—	214	0	—	123	1	—	—	1	334
Naphtha-Type	—	(s)	0	—	0	0	—	—	(s)	(s)
Kerosene-Type	—	214	0	—	123	1	—	—	1	334
Kerosene	—	17	0	—	(s)	-1	—	—	(s)	18
Distillate Fuel Oil	—	870	4	—	212	6	—	—	1	1,079
0.05 percent sulfur and under	—	616	3	—	174	4	—	—	(s)	789
Greater than 0.05 percent sulfur	—	253	1	—	38	2	—	—	1	290
Residual Fuel Oil	—	65	1	—	-14	-1	—	—	1	52
Petrochemical Feedstocks[e]	—	43	1	—	4	(s)	—	—	0	49
Special Naphthas	—	24	1	—	5	(s)	—	—	(s)	30
Lubricants	—	24	1	—	7	(s)	—	—	2	29
Waxes	—	3	(s)	—	0	(s)	—	—	1	3
Petroleum Coke	—	142	0	—	0	1	—	—	5	135
Asphalt and Road Oil	—	186	1	—	11	-2	—	—	5	194
Still Gas	—	136	0	—	0	0	—	—	0	136
Miscellaneous Products	—	11	(s)	—	0	(s)	—	—	(s)	11
Total	**882**	**3,696**	**941**	**5**	**2,955**	**35**	**0**	**3,534**	**89**	**4,820**

[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.
LRG = Liquefied Refinery Gas.
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 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 III—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1998
(Thousand Barrels)

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]	Ending Stocks
Crude Oil	**1,202,023**	**—**	**2,062,740**	**-9,158**	**-686,875**	**29,433**	**2**	**2,539,289**	**6**	**0**	**739,483**
Natural Gas Liquids and LRGs	**445,042**	**160,276**	**39,751**	**—**	**6,073**	**16,441**	**—**	**75,462**	**7,670**	**551,569**	**69,751**
Pentanes Plus	71,258	—	9,365	—	-4,149	2,233	—	27,638	(s)	46,603	5,911
Liquefied Petroleum Gases	373,784	160,276	30,386	—	10,222	14,208	—	47,824	7,670	504,966	63,840
Ethane/Ethylene	170,276	11,439	6,099	—	38,799	266	—	0	0	226,347	15,982
Propane/Propylene	125,680	122,433	15,956	—	-32,244	11,174	—	0	5,645	215,006	29,972
Normal Butane/Butylene	28,297	21,753	5,242	—	5,203	3,095	—	22,261	2,025	33,114	13,109
Isobutane/Isobutylene	49,531	4,651	3,089	—	-1,536	-327	—	25,563	0	30,499	4,777
Other Liquids	**58,528**	**—**	**89,995**	**—**	**-32,856**	**1,315**	**—**	**120,627**	**16,528**	**-22,803**	**64,692**
Other Hydrocarbons/Oxygenates	50,118	—	64	—	0	434	—	38,345	11,403	0	5,470
Unfinished Oils	—	—	87,538	—	617	2,288	—	108,692	0	-22,825	45,578
Motor Gasoline Blend. Comp.	8,409	—	2,393	—	-33,473	-1,403	—	-26,392	5,124	0	13,622
Aviation Gasoline Blend. Comp.	—	—	0	—	0	-4	—	-18	0	22	22
Finished Petroleum Products	**-6,704**	**2,749,654**	**96,225**	**—**	**-1,405,266**	**6,482**	**—**	**—**	**163,595**	**1,263,832**	**135,527**
Finished Motor Gasoline	-6,704	1,269,535	6,268	—	-810,009	4,271	—	—	36,825	417,994	50,751
Reformulated	—	226,881	6,268	—	-131,480	645	—	—	440	100,584	9,277
Oxygenated	17,053	1,082	0	—	-1,967	1	—	—	2	16,165	1
Other	-23,757	1,041,572	0	—	-676,562	3,625	—	—	36,383	301,245	41,473
Finished Aviation Gasoline	—	4,004	0	—	-2,225	-81	—	—	0	1,860	350
Jet Fuel	—	281,880	135	—	-219,296	1,033	—	—	4,274	57,412	14,088
Naphtha-Type	—	6	0	—	0	0	—	—	253	-247	1
Kerosene-Type	—	281,874	135	—	-219,296	1,033	—	—	4,021	57,659	14,087
Kerosene	—	14,066	0	—	-1,709	605	—	—	74	11,678	1,573
Distillate Fuel Oil	—	553,707	199	—	-334,661	-801	—	—	29,030	191,016	31,164
0.05 percent sulfur and under	—	354,392	89	—	-224,190	2,379	—	—	8,911	119,001	18,614
Greater than 0.05 percent sulfur	—	199,315	110	—	-110,471	-3,180	—	—	20,119	72,015	12,550
Residual Fuel Oil	—	128,488	7,780	—	-11,130	1,340	—	—	31,561	92,237	16,085
Petrochemical Feedstocks[e]	—	143,256	80,621	—	-2,600	314	—	—	0	220,963	3,155
Special Naphthas	—	13,501	718	—	-3,552	102	—	—	456	10,109	1,622
Lubricants	—	44,736	133	—	-11,092	713	—	—	5,573	27,491	7,686
Waxes	—	4,809	38	—	-9	85	—	—	391	4,362	557
Petroleum Coke	—	124,978	0	—	0	-1,051	—	—	55,058	70,971	3,043
Asphalt and Road Oil	—	46,404	299	—	-9,093	-86	—	—	348	37,348	4,148
Still Gas	—	107,165	0	—	0	0	—	—	0	107,165	0
Miscellaneous Products	—	13,125	34	—	110	38	—	—	5	13,226	1,305
Total	**1,698,888**	**2,909,930**	**2,288,711**	**-9,158**	**-2,118,924**	**53,671**	**2**	**2,735,378**	**187,798**	**1,792,598**	**1,009,453**

[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.
LRG = Liquefied Refinery Gas.
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 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 III—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1998

(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	**3,293**	**—**	**5,651**	**-25**	**-1,882**	**81**	**(s)**	**6,957**	**(s)**	**0**
Natural Gas Liquids and LRGs	**1,219**	**439**	**109**	**—**	**17**	**45**	**—**	**207**	**21**	**1,511**
Pentanes Plus	195	—	26	—	-11	6	—	76	(s)	128
Liquefied Petroleum Gases	1,024	439	83	—	28	39	—	131	21	1,383
Ethane/Ethylene	467	31	17	—	106	1	—	0	0	620
Propane/Propylene	344	335	44	—	-88	31	—	0	15	589
Normal Butane/Butylene	78	60	14	—	14	8	—	61	6	91
Isobutane/Isobutylene	136	13	8	—	-4	-1	—	70	0	84
Other Liquids	**160**	**—**	**247**	**—**	**-90**	**4**	**—**	**330**	**45**	**-62**
Other Hydrocarbons/Oxygenates	137	—	(s)	—	0	1	—	105	31	0
Unfinished Oils	—	—	240	—	2	6	—	298	0	-63
Motor Gasoline Blend. Comp.	23	—	7	—	-92	-4	—	-72	14	0
Aviation Gasoline Blend. Comp.	—	—	0	—	0	(s)	—	(s)	0	(s)
Finished Petroleum Products	**-18**	**7,533**	**264**	**—**	**-3,850**	**18**	**—**	**—**	**448**	**3,463**
Finished Motor Gasoline	-18	3,478	17	—	-2,219	12	—	—	101	1,145
Reformulated	—	622	17	—	-360	2	—	—	1	276
Oxygenated	47	3	0	—	-5	(s)	—	—	(s)	44
Other	-65	2,854	0	—	-1,854	10	—	—	100	825
Finished Aviation Gasoline	—	11	0	—	-6	(s)	—	—	0	5
Jet Fuel	—	772	(s)	—	-601	3	—	—	12	157
Naphtha-Type	—	(s)	0	—	0	0	—	—	1	-1
Kerosene-Type	—	772	(s)	—	-601	3	—	—	11	158
Kerosene	—	39	0	—	-5	2	—	—	(s)	32
Distillate Fuel Oil	—	1,517	1	—	-917	-2	—	—	80	523
0.05 percent sulfur and under	—	971	(s)	—	-614	7	—	—	24	326
Greater than 0.05 percent sulfur	—	546	(s)	—	-303	-9	—	—	55	197
Residual Fuel Oil	—	352	21	—	-30	4	—	—	86	253
Petrochemical Feedstocks[e]	—	392	221	—	-7	1	—	—	0	605
Special Naphthas	—	37	2	—	-10	(s)	—	—	1	28
Lubricants	—	123	(s)	—	-30	2	—	—	15	75
Waxes	—	13	(s)	—	(s)	(s)	—	—	1	12
Petroleum Coke	—	342	0	—	0	-3	—	—	151	194
Asphalt and Road Oil	—	127	1	—	-25	(s)	—	—	1	102
Still Gas	—	294	0	—	0	0	—	—	0	294
Miscellaneous Products	—	36	(s)	—	(s)	(s)	—	—	(s)	36
Total	**4,654**	**7,972**	**6,270**	**-25**	**-5,805**	**147**	**(s)**	**7,494**	**515**	**4,911**

[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.
LRG = Liquefied Refinery Gas.
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 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 IV—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1998
(Thousand Barrels)

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]	Ending Stocks
Crude Oil	**122,828**	**—**	**66,881**	**24,291**	**-40,468**	**-1,698**	**0**	**175,096**	**135**	**0**	**11,141**
Natural Gas Liquids and LRGs	**51,188**	**1,427**	**4,184**	**—**	**-44,790**	**45**	**—**	**5,433**	**50**	**6,481**	**1,414**
Pentanes Plus	9,500	—	1,608	—	-5,152	-15	—	2,234	43	3,694	212
Liquefied Petroleum Gases	41,688	1,427	2,576	—	-39,638	60	—	3,199	7	2,787	1,202
Ethane/Ethylene	13,955	5	0	—	-16,677	-3	—	0	0	-2,714	210
Propane/Propylene	17,191	3,004	1,821	—	-14,349	-1	—	0	7	7,661	488
Normal Butane/Butylene	6,875	-633	754	—	-5,134	9	—	2,123	(s)	-270	315
Isobutane/Isobutylene	3,667	-949	1	—	-3,478	55	—	1,076	0	-1,890	189
Other Liquids	**3,160**	**—**	**0**	**—**	**0**	**633**	**—**	**3,498**	**6**	**-977**	**4,982**
Other Hydrocarbons/Oxygenates	1,016	—	0	—	0	11	—	999	6	0	263
Unfinished Oils	—	—	0	—	0	449	—	528	0	-977	2,657
Motor Gasoline Blend. Comp.	2,144	—	0	—	0	173	—	1,971	0	0	2,062
Aviation Gasoline Blend. Comp.	—	—	0	—	0	0	—	0	0	0	0
Finished Petroleum Products	**-1,718**	**188,744**	**2,244**	**—**	**18,680**	**-100**	**—**	**—**	**150**	**207,900**	**11,261**
Finished Motor Gasoline	-1,718	93,634	200	—	3,632	-185	—	—	4	95,930	4,682
Reformulated	—	0	0	—	0	0	—	—	0	0	0
Oxygenated	4,263	6,276	0	—	141	-111	—	—	2	10,789	153
Other	-5,981	87,358	200	—	3,491	-74	—	—	1	85,141	4,529
Finished Aviation Gasoline	—	161	2	—	141	-6	—	—	0	310	35
Jet Fuel	—	8,904	0	—	10,898	-44	—	—	(s)	19,846	795
Naphtha-Type	—	0	0	—	0	0	—	—	0	0	0
Kerosene-Type	—	8,904	0	—	10,898	-44	—	—	(s)	19,846	795
Kerosene	—	969	0	—	-95	63	—	—	0	811	130
Distillate Fuel Oil	—	50,159	1,971	—	4,104	229	—	—	(s)	56,005	3,053
0.05 percent sulfur and under	—	40,574	736	—	4,124	194	—	—	0	45,240	2,538
Greater than 0.05 percent sulfur	—	9,585	1,235	—	-20	35	—	—	(s)	10,765	515
Residual Fuel Oil	—	4,470	0	—	0	-125	—	—	0	4,595	467
Petrochemical Feedstocks[e]	—	215	0	—	0	-1	—	—	0	216	0
Special Naphthas	—	0	0	—	0	0	—	—	4	-4	0
Lubricants	—	0	0	—	0	0	—	—	98	-98	0
Waxes	—	1,424	0	—	0	28	—	—	32	1,364	48
Petroleum Coke	—	6,018	0	—	0	124	—	—	(s)	5,894	228
Asphalt and Road Oil	—	14,811	71	—	0	-189	—	—	12	15,059	1,803
Still Gas	—	7,282	0	—	0	0	—	—	0	7,282	0
Miscellaneous Products	—	697	0	—	0	6	—	—	(s)	691	20
Total	**175,459**	**190,171**	**73,309**	**24,291**	**-66,578**	**-1,120**	**0**	**184,027**	**341**	**213,404**	**28,798**

[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.
LRG = Liquefied Refinery Gas.
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 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 IV—Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1998

(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	**337**	**—**	**183**	**67**	**-111**	**-5**	**0**	**480**	**(s)**	**0**
Natural Gas Liquids and LRGs	**140**	**4**	**11**	**—**	**-123**	**(s)**	**—**	**15**	**(s)**	**18**
Pentanes Plus	26	—	4	—	-14	(s)	—	6	(s)	10
Liquefied Petroleum Gases	114	4	7	—	-109	(s)	—	9	(s)	8
Ethane/Ethylene	38	(s)	0	—	-46	(s)	—	0	0	-7
Propane/Propylene	47	8	5	—	-39	(s)	—	0	(s)	21
Normal Butane/Butylene	19	-2	2	—	-14	(s)	—	6	(s)	-1
Isobutane/Isobutylene	10	-3	(s)	—	-10	(s)	—	3	0	-5
Other Liquids	**9**	**—**	**0**	**—**	**0**	**2**	**—**	**10**	**(s)**	**-3**
Other Hydrocarbons/Oxygenates	3	—	0	—	0	(s)	—	3	(s)	0
Unfinished Oils	—	—	0	—	0	1	—	1	0	-3
Motor Gasoline Blend. Comp.	6	—	0	—	0	(s)	—	5	0	0
Aviation Gasoline Blend. Comp.	—	—	0	—	0	0	—	0	0	0
Finished Petroleum Products	**-5**	**517**	**6**	**—**	**51**	**(s)**	**—**	**—**	**(s)**	**570**
Finished Motor Gasoline	-5	257	1	—	10	-1	—	—	(s)	263
Reformulated	—	0	0	—	0	0	—	—	0	0
Oxygenated	12	17	0	—	(s)	(s)	—	—	(s)	30
Other	-16	239	1	—	10	(s)	—	—	(s)	233
Finished Aviation Gasoline	—	(s)	(s)	—	(s)	(s)	—	—	0	1
Jet Fuel	—	24	0	—	30	(s)	—	—	(s)	54
Naphtha-Type	—	0	0	—	0	0	—	—	0	0
Kerosene-Type	—	24	0	—	30	(s)	—	—	(s)	54
Kerosene	—	3	0	—	(s)	(s)	—	—	0	2
Distillate Fuel Oil	—	137	5	—	11	1	—	—	(s)	153
0.05 percent sulfur and under	—	111	2	—	11	1	—	—	0	124
Greater than 0.05 percent sulfur	—	26	3	—	(s)	(s)	—	—	(s)	29
Residual Fuel Oil	—	12	0	—	0	(s)	—	—	0	13
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	—	4	0	—	0	(s)	—	—	(s)	4
Petroleum Coke	—	16	0	—	0	(s)	—	—	(s)	16
Asphalt and Road Oil	—	41	(s)	—	0	-1	—	—	(s)	41
Still Gas	—	20	0	—	0	0	—	—	0	20
Miscellaneous Products	—	2	0	—	0	(s)	—	—	(s)	2
Total	**481**	**521**	**201**	**67**	**-182**	**-3**	**0**	**504**	**1**	**585**

[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.
LRG = Liquefied Refinery Gas.
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 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 V—Supply, Disposition, and Ending Stocks of Crude Oil and Petroleum Products, 1998

(Thousand Barrels)

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]	Ending Stocks
Crude Oil	**759,587**	**—**	**182,199**	**13,625**	**-22,288**	**-3,205**	**1**	**916,703**	**19,624**	**0**	**57,471**
Natural Gas Liquids and LRGs	**31,756**	**25,649**	**33**	**—**	**0**	**-602**	**—**	**30,395**	**4,328**	**23,317**	**4,304**
Pentanes Plus	16,755	—	0	—	0	35	—	13,247	1	3,472	59
Liquefied Petroleum Gases	15,001	25,649	33	—	0	-637	—	17,148	4,327	19,845	4,245
Ethane/Ethylene	27	0	0	—	0	0	—	0	0	27	0
Propane/Propylene	4,144	17,475	33	—	0	-372	—	0	2,178	19,846	2,109
Normal Butane/Butylene	4,643	6,719	0	—	0	-117	—	11,565	2,150	-2,236	1,765
Isobutane/Isobutylene	6,187	1,455	0	—	0	-148	—	5,583	0	2,207	371
Other Liquids	**26,508**	**—**	**28,255**	**—**	**1,715**	**-1,853**	**—**	**51,765**	**1,041**	**5,525**	**31,635**
Other Hydrocarbons/Oxygenates	31,965	—	18,430	—	0	1,066	—	48,429	900	0	4,085
Unfinished Oils	—	—	8,610	—	-706	-712	—	3,091	0	5,525	20,130
Motor Gasoline Blend. Comp.	-5,457	—	1,215	—	2,421	-2,219	—	257	141	0	7,398
Aviation Gasoline Blend. Comp.	—	—	0	—	0	12	—	-12	0	0	22
Finished Petroleum Products	**7,376**	**1,031,912**	**21,854**	**—**	**40,673**	**-444**	**—**	**—**	**84,364**	**1,017,894**	**56,291**
Finished Motor Gasoline	7,376	490,395	1,973	—	28,598	-397	—	—	7,371	521,367	21,940
Reformulated	—	344,935	1,442	—	1,448	-1,846	—	—	783	348,888	11,796
Oxygenated	19,184	3,263	0	—	1,967	3	—	—	314	24,097	4
Other	-11,809	142,197	531	—	25,183	1,446	—	—	6,274	148,382	10,140
Finished Aviation Gasoline	—	1,317	15	—	212	56	—	—	0	1,488	671
Jet Fuel	—	151,589	16,899	—	6,265	40	—	—	3,521	171,192	9,288
Naphtha-Type	—	136	0	—	0	0	—	—	19	117	33
Kerosene-Type	—	151,453	16,899	—	6,265	40	—	—	3,502	171,075	9,255
Kerosene	—	1,544	0	—	0	30	—	—	51	1,463	126
Distillate Fuel Oil	—	167,427	1,124	—	6,099	-429	—	—	14,154	160,925	12,051
0.05 percent sulfur and under	—	132,252	590	—	4,522	124	—	—	4,195	133,045	8,737
Greater than 0.05 percent sulfur	—	35,175	534	—	1,577	-553	—	—	9,959	27,880	3,314
Residual Fuel Oil	—	71,544	1,345	—	0	167	—	—	14,502	58,220	5,960
Petrochemical Feedstocks[e]	—	4,263	99	—	-102	33	—	—	0	4,227	357
Special Naphthas	—	1,367	3	—	0	-12	—	—	5,279	-3,897	45
Lubricants	—	7,495	0	—	-289	-323	—	—	1,143	6,386	1,417
Waxes	—	783	106	—	0	95	—	—	131	663	248
Petroleum Coke	—	58,475	263	—	0	54	—	—	37,889	20,795	1,812
Asphalt and Road Oil	—	21,163	19	—	0	232	—	—	243	20,707	2,189
Still Gas	—	52,527	0	—	0	0	—	—	0	52,527	0
Miscellaneous Products	—	2,023	8	—	-110	10	—	—	79	1,832	187
Total	**825,227**	**1,057,561**	**232,341**	**13,625**	**20,100**	**-6,104**	**1**	**998,863**	**109,357**	**1,046,736**	**149,701**

[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.
LRG = Liquefied Refinery Gas.
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 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 V — Daily Average Supply and Disposition of Crude Oil and Petroleum Products, 1998

(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	**2,081**	**—**	**499**	**37**	**-61**	**-9**	**(s)**	**2,512**	**54**	**0**
Natural Gas Liquids and LRGs	**87**	**70**	**(s)**	**—**	**0**	**-2**	**—**	**83**	**12**	**64**
Pentanes Plus	46	—	0	—	0	(s)	—	36	(s)	10
Liquefied Petroleum Gases	41	70	(s)	—	0	-2	—	47	12	54
Ethane/Ethylene	(s)	0	0	—	0	0	—	0	0	(s)
Propane/Propylene	11	48	(s)	—	0	-1	—	0	6	54
Normal Butane/Butylene	13	18	0	—	0	(s)	—	32	6	-6
Isobutane/Isobutylene	17	4	0	—	0	(s)	—	15	0	6
Other Liquids	**73**	**—**	**77**	**—**	**5**	**-5**	**—**	**142**	**3**	**15**
Other Hydrocarbons/Oxygenates	88	—	50	—	0	3	—	133	2	0
Unfinished Oils	—	—	24	—	-2	-2	—	8	0	15
Motor Gasoline Blend. Comp.	-15	—	3	—	7	-6	—	1	(s)	0
Aviation Gasoline Blend. Comp.	—	—	0	—	0	(s)	—	(s)	0	0
Finished Petroleum Products	**20**	**2,827**	**60**	**—**	**111**	**-1**	**—**	**—**	**231**	**2,789**
Finished Motor Gasoline	20	1,344	5	—	78	-1	—	—	20	1,428
Reformulated	—	945	4	—	4	-5	—	—	2	956
Oxygenated	53	9	0	—	5	(s)	—	—	1	66
Other	-32	390	1	—	69	4	—	—	17	407
Finished Aviation Gasoline	—	4	(s)	—	1	(s)	—	—	0	4
Jet Fuel	—	415	46	—	17	(s)	—	—	10	469
Naphtha-Type	—	(s)	0	—	0	0	—	—	(s)	(s)
Kerosene-Type	—	415	46	—	17	(s)	—	—	10	469
Kerosene	—	4	0	—	0	(s)	—	—	(s)	4
Distillate Fuel Oil	—	459	3	—	17	-1	—	—	39	441
0.05 percent sulfur and under	—	362	2	—	12	(s)	—	—	11	365
Greater than 0.05 percent sulfur	—	96	1	—	4	-2	—	—	27	76
Residual Fuel Oil	—	196	4	—	0	(s)	—	—	40	160
Petrochemical Feedstocks[e]	—	12	(s)	—	(s)	(s)	—	—	0	12
Special Naphthas	—	4	(s)	—	0	(s)	—	—	14	-11
Lubricants	—	21	0	—	-1	-1	—	—	3	17
Waxes	—	2	(s)	—	0	(s)	—	—	(s)	2
Petroleum Coke	—	160	1	—	0	(s)	—	—	104	57
Asphalt and Road Oil	—	58	(s)	—	0	1	—	—	1	57
Still Gas	—	144	0	—	0	0	—	—	0	144
Miscellaneous Products	—	6	(s)	—	(s)	(s)	—	—	(s)	5
Total	**2,261**	**2,897**	**637**	**37**	**55**	**-17**	**(s)**	**2,737**	**300**	**2,868**

[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.
LRG = Liquefied Refinery Gas.
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 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. Production of Crude Oil by PAD District and State, 1998
(Thousand Barrels)

PAD District and State	Total	Daily Average
PAD District I	**9,643**	**26**
Florida	5,971	16
New York	217	1
Pennsylvania	1,978	5
Virginia	6	(s)
West Virginia	1,470	4
PAD District II	**187,838**	**515**
Illinois	13,732	38
Indiana	2,210	6
Kansas	35,541	97
Kentucky	2,919	8
Michigan	8,995	25
Missouri	93	(s)
Nebraska	3,176	9
North Dakota	35,562	97
Ohio	6,541	18
Oklahoma	77,577	213
South Dakota	1,206	3
Tennessee	287	1
PAD District III	**1,202,023**	**3,293**
Alabama	12,397	34
Arkansas	7,998	22
Louisiana[a]	134,219	368
Mississippi	22,031	60
New Mexico	72,328	198
Texas[a]	504,661	1,383
Federal Offshore PAD District III	448,388	1,228
PAD District IV	**122,828**	**337**
Colorado	22,365	61
Montana	16,483	45
Utah	19,198	53
Wyoming	64,782	177
PAD District V	**759,587**	**2,081**
Alaska[a]	428,851	1,175
South Alaska	11,802	32
North Slope	417,049	1,143
Arizona	78	(s)
California[a]	283,628	777
Nevada	799	2
Federal Offshore PAD District V	46,232	127
U.S. Total[a]	**2,281,919**	**6,252**

[a] Includes the following offshore production (thousand barrels): Alaska: State - 79,842; California: State - 21,007; Louisiana: State - 21,435; Texas: State - 734; U.S. Total, including Federal offshore - 617,641.

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

Note: • A final revision to the State data for 1998 will appear in the 1999 Petroleum Supply Annual. • 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 EIA Reserves and Production Division estimates based on Form EIA-182, "Domestic Crude Oil First Purchase Report" data.

Revised 1997 crude oil production statistics are available in Appendix C.

Table 15. Natural Gas Plant Net Production and Stocks of Petroleum Products by PAD and Refining Districts, 1998

(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	**1,536**	**8,028**	**9,564**	**5,903**	**4,036**	**94,713**	**104,652**
Pentanes Plus	155	912	1,067	1,082	1,043	12,181	14,306
Liquefied Petroleum Gases	1,381	7,116	8,497	4,821	2,993	82,532	90,346
Ethane	538	2,433	2,971	1,402	0	33,044	34,446
Propane	513	3,233	3,746	2,042	1,877	32,689	36,608
Normal Butane	330	997	1,327	772	1,116	11,063	12,951
Isobutane	0	453	453	605	0	5,736	6,341
	Stocks						
Natural Gas Liquids	**5**	**48**	**53**	**86**	**52**	**1,727**	**1,865**
Pentanes Plus	0	11	11	10	12	465	487
Liquefied Petroleum Gases	5	37	42	76	40	1,262	1,378
Ethane	0	0	0	17	0	236	253
Propane	1	19	20	32	21	817	870
Normal Butane	4	15	19	12	19	113	144
Isobutane	0	3	3	15	0	96	111

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	**220,986**	**46,557**	**97,412**	**6,167**	**73,920**	**445,042**	**51,188**	**31,756**	**642,202**
Pentanes Plus	37,069	6,802	17,182	2,075	8,130	71,258	9,500	16,755	112,886
Liquefied Petroleum Gases	183,917	39,755	80,230	4,092	65,790	373,784	41,688	15,001	529,316
Ethane	83,029	19,475	32,466	560	34,746	170,276	13,955	27	221,675
Propane	63,223	11,883	28,530	1,771	20,273	125,680	17,191	4,144	187,369
Normal Butane	26,026	-16,080	10,067	1,143	7,141	28,297	6,875	4,643	54,093
Isobutane	11,639	24,477	9,167	618	3,630	49,531	3,667	6,187	66,179
	Stocks								
Natural Gas Liquids	**166**	**1,864**	**1,411**	**47**	**67**	**3,555**	**290**	**110**	**5,873**
Pentanes Plus	65	269	483	8	22	847	122	21	1,488
Liquefied Petroleum Gases	101	1,595	928	39	45	2,708	168	89	4,385
Ethane	8	697	63	18	0	786	3	0	1,042
Propane	59	502	118	10	30	719	82	63	1,754
Normal Butane	25	246	468	10	7	756	67	16	1,002
Isobutane	9	150	279	1	8	447	16	10	587

Note: • Stocks are reported as of the end of December. • Refer to Appendix A for Refining District descriptions.
Source: Energy Information Administration (EIA) Form EIA-816, "Monthly Natural Gas Liquids Report."

Table 16. Refinery Input of Crude Oil and Petroleum Products by PAD and Refining Districts, 1998

(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	**540,175**	**32,599**	**572,774**	**826,128**	**154,621**	**249,772**	**1,230,521**
Natural Gas Liquids	**1,512**	**0**	**1,512**	**18,007**	**2,235**	**13,877**	**34,119**
Pentanes Plus	0	0	0	2,156	1,311	8,041	11,508
Liquefied Petroleum Gases	1,512	0	1,512	15,851	924	5,836	22,611
Ethane	0	0	0	0	0	0	0
Propane	0	0	0	0	0	0	0
Normal Butane	684	0	684	8,808	561	2,787	12,156
Isobutane	828	0	828	7,043	363	3,049	10,455
Other Liquids	**109,930**	**42**	**109,972**	**26,756**	**5,354**	**-6,715**	**25,395**
Other Hydrocarbons/Hydrogen/Oxygenates	27,095	5	27,100	9,038	2,985	985	13,008
Other Hydrocarbons/Hydrogen	0	0	0	406	0	360	766
Oxygenates	W	W	27,100	8,632	2,985	625	12,242
Fuel Ethanol	W	W	W	W	W	W	10,278
Methanol	W	W	W	W	W	W	W
MTBE	W	W	26,061	W	W	W	W
Other Oxygenates[a]	W	W	W	W	W	W	W
Unfinished Oils (net)	37,353	66	37,419	20,185	123	-8,102	12,206
Motor Gasoline Blend. Comp. (net)	46,339	-29	46,310	-2,481	2,246	402	167
Aviation Gasoline Blend. Comp. (net)	-857	0	-857	14	0	0	14
Total Input to Refineries	**651,617**	**32,641**	**684,258**	**870,891**	**162,210**	**256,934**	**1,290,035**
Atmospheric Crude Oil Distillation							
Gross Input (daily average)	1,455	89	1,545	2,310	423	688	3,421
Operable Capacity (daily average)	1,549	98	1,646	2,404	414	701	3,519
Operable Utilization Rate (percent)[b]	94.0	91.6	93.8	96.1	102.3	98.1	97.2
Downstream Processing							
Fresh Feed Input (daily average)							
Catalytic Cracking	623	18	641	777	133	198	1,108
Catalytic Hydrocracking	53	0	53	135	0	4	139
Delayed and Fluid Coking	78	0	78	184	60	76	320
Crude Oil Qualities							
Sulfur Content, Weighted Average (percent)	0.92	1.05	0.93	1.19	2.19	0.79	1.23
API Gravity, Weighted Average (degrees)	33.35	34.59	33.42	33.05	28.75	35.19	32.94
Operable Capacity (daily average)	**1,549**	**98**	**1,646**	**2,404**	**414**	**701**	**3,519**
Operating	1,458	98	1,556	2,397	414	701	3,513
Idle	90	0	90	6	0	0	6
Alaskan Crude Oil Receipts	**0**	**0**	**0**	**1,510**	**0**	**0**	**1,510**

See footnotes at end of table.

Table 16. Refinery Input of Crude Oil and Petroleum Products by PAD and Refining Districts, 1998 (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	**212,513**	**1,274,024**	**952,047**	**67,247**	**33,458**	**2,539,289**	**175,096**	**916,703**	**5,434,383**
Natural Gas Liquids	**12,846**	**34,527**	**22,951**	**2,388**	**2,750**	**75,462**	**5,433**	**30,395**	**146,921**
Pentanes Plus	6,677	14,205	3,532	1,859	1,365	27,638	2,234	13,247	54,627
Liquefied Petroleum Gases	6,169	20,322	19,419	529	1,385	47,824	3,199	17,148	92,294
Ethane	0	0	0	0	0	0	0	0	0
Propane	0	0	0	0	0	0	0	0	0
Normal Butane	5,315	6,680	10,108	158	0	22,261	2,123	11,565	48,789
Isobutane	854	13,642	9,311	371	1,385	25,563	1,076	5,583	43,505
Other Liquids	**-572**	**71,476**	**51,565**	**-927**	**-915**	**120,627**	**3,498**	**51,765**	**311,257**
Other Hydrocarbons/Hydrogen/Oxygenates	1,478	26,146	10,421	7	293	38,345	999	48,429	127,881
Other Hydrocarbons/Hydrogen	1,367	4,808	5,679	0	0	11,854	56	10,083	22,759
Oxygenates	111	21,338	4,742	W	W	26,491	943	38,346	105,122
Fuel Ethanol	W	W	W	W	W	W	W	W	11,722
Methanol	W	W	W	W	W	W	W	W	675
MTBE	W	20,231	W	W	W	24,571	W	36,730	89,362
Other Oxygenates[a]	W	W	W	W	W	W	W	W	3,363
Unfinished Oils (net)	1,404	68,975	38,354	-742	701	108,692	528	3,091	161,936
Motor Gasoline Blend. Comp. (net)	-3,437	-23,645	2,791	-192	-1,909	-26,392	1,971	257	22,313
Aviation Gasoline Blend. Comp. (net)	-17	0	-1	0	0	-18	0	-12	-873
Total Input to Refineries	**224,787**	**1,380,027**	**1,026,563**	**68,708**	**35,293**	**2,735,378**	**184,027**	**998,863**	**5,892,561**
Atmospheric Crude Oil Distillation									
Gross Input (daily average)	582	3,466	2,638	176	92	6,953	486	2,708	15,113
Operable Capacity (daily average)	593	3,484	2,820	201	95	7,192	524	2,921	15,802
Operable Utilization Rate (percent)[b]	98.1	99.5	93.5	87.8	96.9	96.7	92.7	92.7	95.6
Downstream Processing									
Fresh Feed Input (daily average)									
Catalytic Cracking	187	1,348	915	28	29	2,507	147	719	5,123
Catalytic Hydrocracking	43	251	218	0	0	512	4	426	1,134
Delayed and Fluid Coking	5	426	378	8	0	817	41	497	1,752
Crude Oil Qualities									
Sulfur Content, Weighted Average (percent)	0.79	1.58	1.44	1.69	0.52	1.45	1.35	1.22	1.31
API Gravity, Weighted Average (degrees)	38.09	30.62	30.95	30.89	39.17	31.49	33.18	25.22	30.98
Operable Capacity (daily average)	**593**	**3,484**	**2,820**	**201**	**95**	**7,192**	**524**	**2,921**	**15,802**
Operating	593	3,453	2,767	201	95	7,109	524	2,894	15,596
Idle	(s)	30	52	0	0	83	0	27	207
Alaskan Crude Oil Receipts	**0**	**0**	**0**	**0**	**4**	**4**	**0**	**432,292**	**433,806**

[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.

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 17. Refinery Net Production of Finished Petroleum Products by PAD and Refining Districts, 1998

(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	16,524	312	16,836	32,932	2,576	6,222	41,730
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	18,838	433	19,271	28,478	3,726	6,428	38,632
Propane	W	W	W	22,998	W	W	W
Propylene	W	W	W	5,480	W	W	W
Normal Butane/Butylene	-952	-66	-1,018	3,239	-773	46	2,512
Normal Butane	W	W	W	W	W	W	W
Butylene	W	W	W	W	W	W	W
Isobutane/Isobutylene	-1,362	-55	-1,417	1,215	-377	-252	586
Isobutane	W	W	W	W	W	W	W
Isobutylene	W	W	W	W	W	W	W
Finished Motor Gasoline	341,415	12,977	354,392	455,142	84,893	132,530	672,565
Reformulated	223,823	0	223,823	99,115	11,665	0	110,780
Oxygenated	0	2	2	2,741	16,809	60	19,610
Other	117,592	12,975	130,567	353,286	56,419	132,470	542,175
Finished Aviation Gasoline	43	0	43	660	422	511	1,593
Jet Fuel	35,923	474	36,397	53,991	11,273	12,800	78,064
Naphtha-Type	0	0	0	28	0	0	28
Kerosene-Type	35,923	474	36,397	53,963	11,273	12,800	78,036
Commercial	35,923	334	36,257	51,159	10,432	11,431	73,022
Military	0	140	140	2,804	841	1,369	5,014
Kerosene	4,228	766	4,994	5,191	497	587	6,275
Distillate Fuel Oil	152,923	8,166	161,089	198,675	39,140	79,684	317,499
0.05 percent sulfur and under	54,727	7,048	61,775	140,184	27,595	57,198	224,977
Greater than 0.05 percent sulfur	98,196	1,118	99,314	58,491	11,545	22,486	92,522
Residual Fuel Oil	49,002	802	49,804	18,884	3,904	863	23,651
Less than 0.31 percent sulfur	14,798	302	15,100	0	0	0	0
0.31 to 1.00 percent sulfur	27,427	500	27,927	4,071	0	-103	3,968
Greater than 1.00 percent sulfur	6,777	0	6,777	14,813	3,904	966	19,683
Naphtha for Petrochemical Feedstock Use	4,168	0	4,168	7,427	0	85	7,512
Other Oils for Petrochemical Feedstock Use	352	0	352	7,497	0	771	8,268
Special Naphthas	369	257	626	7,852	0	917	8,769
Lubricants	3,781	2,659	6,440	5,475	0	3,117	8,592
Naphthenic	0	0	0	0	0	0	0
Paraffinic	3,781	2,659	6,440	5,475	0	3,117	8,592
Waxes	0	68	68	684	0	587	1,271
Petroleum Coke	18,384	331	18,715	32,297	9,571	10,007	51,875
Marketable	7,236	0	7,236	19,450	6,897	7,778	34,125
Catalyst	11,148	331	11,479	12,847	2,674	2,229	17,750
Asphalt and Road Oil	26,872	4,839	31,711	45,931	14,110	7,780	67,821
Still Gas	21,998	903	22,901	34,517	5,654	9,493	49,664
Miscellaneous Products	358	420	778	2,344	877	662	3,883
Fuel Use	0	0	0	0	0	0	0
Nonfuel Use	358	420	778	2,344	877	662	3,883
Total	**676,340**	**32,974**	**709,314**	**909,499**	**172,917**	**266,616**	**1,349,032**
Processing Gain(-) or Loss(+)[a]	-24,723	-333	-25,056	-38,608	-10,707	-9,682	-58,997

See footnotes at end of table.

Table 17. Refinery Net Production of Finished Petroleum Products by PAD and Refining Districts, 1998 (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	10,782	98,001	49,961	622	910	160,276	1,427	25,649	245,918
Ethane/Ethylene	326	9,378	1,735	0	0	11,439	5	0	11,444
Ethane	W	W	W	W	W	W	W	W	9,479
Ethylene	W	W	W	W	W	W	W	W	1,965
Propane/Propylene	7,415	69,783	43,385	1,115	735	122,433	3,004	17,475	200,815
Propane	W	32,282	29,467	W	W	67,976	W	W	133,940
Propylene	W	37,501	13,918	W	W	54,457	W	W	66,875
Normal Butane/Butylene	3,331	15,551	3,063	-367	175	21,753	-633	6,719	29,333
Normal Butane	W	W	W	W	W	W	W	W	27,277
Butylene	W	W	W	W	W	W	W	W	2,056
Isobutane/Isobutylene	-290	3,289	1,778	-126	0	4,651	-949	1,455	4,326
Isobutane	W	W	W	W	W	W	W	W	2,914
Isobutylene	W	W	W	W	W	W	W	W	1,412
Finished Motor Gasoline	119,714	635,168	474,563	20,343	19,747	1,269,535	93,634	490,395	2,880,521
Reformulated	8,609	173,912	44,360	0	0	226,881	0	344,935	906,419
Oxygenated	0	0	287	0	795	1,082	6,276	3,263	30,233
Other	111,105	461,256	429,916	20,343	18,952	1,041,572	87,358	142,197	1,943,869
Finished Aviation Gasoline	1,502	1,527	975	0	0	4,004	161	1,317	7,118
Jet Fuel	18,599	129,652	127,859	3,088	2,682	281,880	8,904	151,589	556,834
Naphtha-Type	6	0	0	0	0	6	0	136	170
Kerosene-Type	18,593	129,652	127,859	3,088	2,682	281,874	8,904	151,453	556,664
Commercial	14,016	112,600	121,395	2,226	0	250,237	7,359	138,632	505,507
Military	4,577	17,052	6,464	862	2,682	31,637	1,545	12,821	51,157
Kerosene	34	10,861	2,457	697	17	14,066	969	1,544	27,848
Distillate Fuel Oil	54,023	268,135	206,847	15,644	9,058	553,707	50,159	167,427	1,249,881
0.05 percent sulfur and under	41,846	190,147	105,926	7,674	8,799	354,392	40,574	132,252	813,970
Greater than 0.05 percent sulfur	12,177	77,988	100,921	7,970	259	199,315	9,585	35,175	435,911
Residual Fuel Oil	4,080	68,100	53,606	2,471	231	128,488	4,470	71,544	277,957
Less than 0.31 percent sulfur	2,288	992	4,630	0	0	7,910	745	1,878	25,633
0.31 to 1.00 percent sulfur	894	12,259	10,141	2,161	231	25,686	1,194	14,882	73,657
Greater than 1.00 percent sulfur	898	54,849	38,835	310	0	94,892	2,531	54,784	178,667
Naphtha for Petrochemical Feedstock Use	1,322	62,584	12,105	0	14	76,025	0	1,471	89,176
Other Oils for Petrochemical Feedstock Use	1,671	35,176	30,384	0	0	67,231	215	2,792	78,858
Special Naphthas	1,182	8,322	2,109	1,888	0	13,501	0	1,367	24,263
Lubricants	W	21,150	W	W	W	44,736	0	7,495	67,263
Naphthenic	W	3,983	W	W	W	10,756	0	3,283	14,039
Paraffinic	W	17,167	W	W	W	33,980	0	4,212	53,224
Waxes	0	2,364	1,329	1,116	0	4,809	1,424	783	8,355
Petroleum Coke	3,516	70,038	50,184	898	342	124,978	6,018	58,475	260,061
Marketable	360	46,153	36,923	690	0	84,126	3,566	45,028	174,081
Catalyst	3,156	23,885	13,261	208	342	40,852	2,452	13,447	85,980
Asphalt and Road Oil	6,332	13,166	12,812	12,405	1,689	46,404	14,811	21,163	181,910
Still Gas	8,971	55,425	39,732	2,127	910	107,165	7,282	52,527	239,539
Miscellaneous Products	661	6,115	6,349	0	0	13,125	697	2,023	20,506
Fuel Use	52	0	2,984	0	0	3,036	0	-282	2,754
Nonfuel Use	609	6,115	3,365	0	0	10,089	697	2,305	17,752
Total	**232,974**	**1,485,784**	**1,086,481**	**69,091**	**35,600**	**2,909,930**	**190,171**	**1,057,561**	**6,216,008**
Processing Gain(-) or Loss(+)[a]	-8,187	-105,757	-59,918	-383	-307	-174,552	-6,144	-58,698	-323,447

[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 18. Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining Districts, 1998

(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
Crude Oil	**13,433**	**279**	**13,712**	**8,964**	**1,737**	**2,672**	**13,373**
Petroleum Products	**59,540**	**1,989**	**61,529**	**37,585**	**9,514**	**12,258**	**59,357**
Pentanes Plus	0	0	0	6	45	363	414
Liquefied Petroleum Gases	1,905	8	1,913	2,661	325	1,359	4,345
Ethane/Ethylene	0	0	0	2	0	0	2
Propane/Propylene	472	2	474	1,592	31	769	2,392
Normal Butane/Butylene	1,247	0	1,247	805	248	414	1,467
Isobutane/Isobutylene	186	6	192	262	46	176	484
Other Hydrocarbons/Hydrogen/Oxygenates	1,877	6	1,883	549	106	8	663
Other Hydrocarbons/Hydrogen	0	0	0	19	0	0	19
Oxygenates	W	W	1,883	530	106	8	644
Fuel Ethanol	W	W	W	W	W	W	436
Methanol	W	W	W	W	W	W	W
MTBE	W	W	1,437	W	W	W	W
Other Oxygenates [a]	W	W	W	W	W	W	W
Unfinished Oils	10,067	479	10,546	8,033	461	3,431	11,925
Naphthas and Lighter	1,750	180	1,930	2,358	143	928	3,429
Kerosene and Light Gas Oils	2,518	3	2,521	1,216	52	324	1,592
Heavy Gas Oils	4,318	269	4,587	2,787	189	893	3,869
Residuum	1,481	27	1,508	1,672	77	1,286	3,035
Motor Gasoline Blending Components	7,801	15	7,816	6,298	1,301	931	8,530
Aviation Gasoline Blending Components	173	0	173	14	0	0	14
Finished Motor Gasoline	9,342	312	9,654	5,804	944	2,043	8,791
Reformulated	5,637	0	5,637	422	0	0	422
Oxygenated	0	17	17	0	251	0	251
Other	3,705	295	4,000	5,382	693	2,043	8,118
Finished Aviation Gasoline	23	0	23	35	51	33	119
Jet Fuel	1,352	24	1,376	2,413	91	489	2,993
Naphtha-Type	0	0	0	0	0	0	0
Kerosene-Type	1,352	24	1,376	2,413	91	489	2,993
Kerosene	216	79	295	182	99	50	331
Distillate Fuel Oil	18,360	224	18,584	5,551	1,604	2,076	9,231
0.05 percent sulfur and under	3,835	198	4,033	3,664	834	1,334	5,832
Greater then 0.05 percent sulfur	14,525	26	14,551	1,887	770	742	3,399
Residual Fuel Oil	5,986	34	6,020	1,302	266	120	1,688
Less than 0.31 percent sulfur	1,204	31	1,235	0	0	0	0
0.31 to 1.00 percent sulfur	3,456	3	3,459	214	0	1	215
Greater than 1.00 percent sulfur	1,326	0	1,326	1,088	266	119	1,473
Naphtha for Petrochemical Feedstock Use	414	0	414	164	0	1	165
Other Oils for Petrochemical Feedstock Use	0	0	0	69	0	0	69
Special Naphthas	64	15	79	389	0	40	429
Lubricants	511	323	834	504	0	0	504
Waxes	0	61	61	39	0	40	79
Petroleum Coke (Marketable)	361	0	361	782	2,658	316	3,756
Asphalt and Road Oil	1,083	374	1,457	2,700	1,544	931	5,175
Miscellaneous Products	5	35	40	90	19	27	136
Total Stocks, All Oils	**72,973**	**2,268**	**75,241**	**46,549**	**11,251**	**14,930**	**72,730**

See footnotes at end of table.

Table 18. Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining Districts, 1998 (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	**884**	**25,647**	**19,908**	**1,150**	**429**	**48,018**	**1,915**	**22,090**	**99,108**
Petroleum Products	**11,044**	**66,525**	**53,911**	**4,690**	**1,472**	**137,642**	**11,668**	**61,274**	**331,470**
Pentanes Plus	108	86	6	12	10	222	22	0	658
Liquefied Petroleum Gases	2,597	3,238	4,019	28	32	9,914	409	1,049	17,630
Ethane/Ethylene	55	294	0	0	0	349	0	0	351
Propane/Propylene	1,585	1,408	748	4	5	3,750	102	83	6,801
Normal Butane/Butylene	551	875	2,594	9	14	4,043	174	644	7,575
Isobutane/Isobutylene	406	661	677	15	13	1,772	133	322	2,903
Other Hydrocarbons/Hydrogen/Oxygenates	37	1,447	659	17	18	2,178	64	2,271	7,059
Other Hydrocarbons/Hydrogen	0	0	1	0	0	1	0	4	24
Oxygenates	37	1,447	658	W	W	2,177	64	2,267	7,035
Fuel Ethanol	W	W	W	W	W	W	W	W	602
Methanol	W	W	W	W	W	W	W	W	866
MTBE	W	1,048	W	W	W	1,641	W	2,234	5,501
Other Oxygenates [a]	W	W	W	W	W	W	W	W	66
Unfinished Oils	2,435	22,848	18,928	968	399	45,578	2,657	20,130	90,836
Naphthas and Lighter	1,049	7,047	4,530	246	171	13,043	478	3,129	22,009
Kerosene and Light Gas Oils	320	3,662	3,441	221	66	7,710	291	4,656	16,770
Heavy Gas Oils	691	8,454	8,189	468	162	17,964	1,452	9,606	37,478
Residuum	375	3,685	2,768	33	0	6,861	436	2,739	14,579
Motor Gasoline Blending Components	1,244	5,749	4,743	99	350	12,185	2,062	7,055	37,648
Aviation Gasoline Blending Components	6	0	16	0	0	22	0	22	231
Finished Motor Gasoline	1,623	10,695	6,920	369	204	19,811	2,227	10,678	51,161
Reformulated	167	2,902	473	0	0	3,542	0	6,249	15,850
Oxygenated	0	0	0	0	0	0	34	0	302
Other	1,456	7,793	6,447	369	204	16,269	2,193	4,429	35,009
Finished Aviation Gasoline	66	134	102	0	0	302	28	210	682
Jet Fuel	394	3,597	2,690	120	36	6,837	370	4,588	16,164
Naphtha-Type	1	0	0	0	0	1	0	25	26
Kerosene-Type	393	3,597	2,690	120	36	6,836	370	4,563	16,138
Kerosene	23	346	164	26	12	571	95	57	1,349
Distillate Fuel Oil	1,017	7,598	5,326	643	200	14,784	1,519	5,610	49,728
0.05 percent sulfur and under	781	4,836	1,919	303	158	7,997	1,119	4,210	23,191
Greater then 0.05 percent sulfur	236	2,762	3,407	340	42	6,787	400	1,400	26,537
Residual Fuel Oil	244	3,512	2,866	212	7	6,841	467	4,279	19,295
Less than 0.31 percent sulfur	28	6	5	0	0	39	30	799	2,103
0.31 to 1.00 percent sulfur	4	284	237	144	7	676	249	705	5,304
Greater than 1.00 percent sulfur	212	3,222	2,624	68	0	6,126	188	2,775	11,888
Naphtha for Petrochemical Feedstock Use	17	893	384	0	22	1,316	0	198	2,093
Other Oils for Petrochemical Feedstock Use	94	1,063	682	0	0	1,839	0	159	2,067
Special Naphthas	80	1,107	55	158	0	1,400	0	35	1,943
Lubricants	34	2,877	2,294	945	0	6,150	0	903	8,391
Waxes	0	272	251	34	0	557	48	248	993
Petroleum Coke (Marketable)	0	294	2,749	0	0	3,043	228	1,812	9,200
Asphalt and Road Oil	998	515	559	1,059	182	3,313	1,471	1,800	13,216
Miscellaneous Products	27	254	498	0	0	779	1	170	1,126
Total Stocks, All Oils	**11,928**	**92,172**	**73,819**	**5,840**	**1,901**	**185,660**	**13,583**	**83,364**	**430,578**

[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 end of December. • Refer to Appendix A for Refining District descriptions.

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

Table 19. Percent Refinery Yield of Petroleum Products by PAD and Refining Districts,[a] 1998

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	2.9	1.0	2.8	3.9	1.7	2.6	3.4
Finished Motor Gasoline[b]	46.1	39.8	45.8	50.9	50.0	48.5	50.3
Finished Aviation Gasoline[c]	0.2	0.0	0.1	0.1	0.3	0.2	0.1
Naphtha-Type Jet Fuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kerosene-Type Jet Fuel	6.2	1.5	6.0	6.4	7.3	5.3	6.3
Kerosene	0.7	2.3	0.8	0.6	0.3	0.2	0.5
Distillate Fuel Oil	26.5	25.0	26.4	23.5	25.3	33.0	25.5
Residual Fuel Oil	8.5	2.5	8.2	2.2	2.5	0.4	1.9
Naphtha for Petrochemical Feedstock Use	0.7	0.0	0.7	0.9	0.0	0.0	0.6
Other Oils for Petrochemical Feedstock Use	0.1	0.0	0.1	0.9	0.0	0.3	0.7
Special Naphthas	0.1	0.8	0.1	0.9	0.0	0.4	0.7
Lubricants	0.7	8.1	1.1	0.6	0.0	1.3	0.7
Waxes	0.0	0.2	0.0	0.1	0.0	0.2	0.1
Petroleum Coke	3.2	1.0	3.1	3.8	6.2	4.1	4.2
Asphalt and Road Oil	4.7	14.8	5.2	5.4	9.1	3.2	5.5
Still Gas	3.8	2.8	3.8	4.1	3.7	3.9	4.0
Miscellaneous Products	0.1	1.3	0.1	0.3	0.6	0.3	0.3
Processing Gain(-) or Loss(+)[d]	-4.3	-1.0	-4.1	-4.6	-6.9	-4.0	-4.7

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	5.0	7.3	5.0	0.9	2.7	6.1	0.8	2.8	4.4
Finished Motor Gasoline[b]	50.9	44.5	44.3	27.3	54.5	44.6	48.5	44.7	46.2
Finished Aviation Gasoline[c]	0.7	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1
Naphtha-Type Jet Fuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kerosene-Type Jet Fuel	8.7	9.7	12.9	4.6	7.9	10.6	5.1	16.5	9.9
Kerosene	0.0	0.8	0.2	1.0	0.0	0.5	0.6	0.2	0.5
Distillate Fuel Oil	25.3	20.0	20.9	23.5	26.5	20.9	28.6	18.2	22.3
Residual Fuel Oil	1.9	5.1	5.4	3.7	0.7	4.9	2.5	7.8	5.0
Naphtha for Petrochemical Feedstock Use	0.6	4.7	1.2	0.0	0.0	2.9	0.0	0.2	1.6
Other Oils for Petrochemical Feedstock Use	0.8	2.6	3.1	0.0	0.0	2.5	0.1	0.3	1.4
Special Naphthas	0.6	0.6	0.2	2.8	0.0	0.5	0.0	0.1	0.4
Lubricants	0.3	1.6	1.5	11.7	0.0	1.7	0.0	0.8	1.2
Waxes	0.0	0.2	0.1	1.7	0.0	0.2	0.8	0.1	0.1
Petroleum Coke	1.6	5.2	5.1	1.4	1.0	4.7	3.4	6.4	4.6
Asphalt and Road Oil	3.0	1.0	1.3	18.7	4.9	1.8	8.4	2.3	3.3
Still Gas	4.2	4.1	4.0	3.2	2.7	4.0	4.1	5.7	4.3
Miscellaneous Products	0.3	0.5	0.6	0.0	0.0	0.5	0.4	0.2	0.4
Processing Gain(-) or Loss(+)[d]	-3.8	-7.9	-6.0	-0.6	-0.9	-6.6	-3.5	-6.4	-5.8

[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 16 and 17.

Table 20. Imports of Crude Oil and Petroleum Products by PAD District, 1998
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts						Daily Average
	I	II	III	IV	V	U.S. Total	
Crude Oil[a,b]	**557,114**	**606,692**	**1,782,685**	**48,894**	**182,199**	**3,177,584**	**8,706**
Natural Gas Liquids	**7,786**	**30,327**	**39,751**	**4,184**	**33**	**82,081**	**225**
Pentanes Plus	0	445	9,365	1,608	0	11,418	31
Liquefied Petroleum Gases	7,786	29,882	30,386	2,576	33	70,663	194
Ethane	0	0	6,099	0	0	6,099	17
Ethylene	0	131	0	0	0	131	(s)
Propane	7,479	22,274	15,956	1,821	33	47,563	130
Propylene	0	2,583	0	0	0	2,583	7
Normal Butane	307	2,309	5,242	754	0	8,612	24
Butylene	0	0	0	0	0	0	0
Isobutane	0	2,585	3,089	1	0	5,675	16
Isobutylene	0	0	0	0	0	0	0
Other Liquids	**92,781**	**235**	**89,995**	**0**	**28,255**	**211,266**	**579**
Other Hydrocarbons/Hydrogen/Oxygenates	6,402	0	64	0	18,430	24,896	68
Other Hydrocarbons/Hydrogen	31	0	0	0	0	31	(s)
Oxygenates	6,371	0	64	0	18,430	24,865	68
Fuel Ethanol	0	0	0	0	66	66	(s)
MTBE	6,371	0	22	0	18,364	24,757	68
Other Oxygenates[c]	0	0	42	0	0	42	(s)
Unfinished Oils[a]	13,771	202	87,538	0	8,610	110,121	302
Naphthas and Lighter	346	12	17,889	0	280	18,527	51
Kerosene and Light Gas Oils	0	190	0	0	0	190	1
Heavy Gas Oils	10,309	0	46,123	0	112	56,544	155
Residuum	3,116	0	23,526	0	8,218	34,860	96
Motor Gasoline Blending Components	72,608	33	2,393	0	1,215	76,249	209
Aviation Gasoline Blending Components	0	0	0	0	0	0	0
Finished Petroleum Products	**312,819**	**4,373**	**96,225**	**2,244**	**21,854**	**437,515**	**1,199**
Finished Motor Gasoline	104,108	1,057	6,268	200	1,973	113,606	311
Reformulated	57,457	388	6,268	0	1,442	65,555	180
Oxygenated	0	0	0	0	0	0	0
Other	46,651	669	0	200	531	48,051	132
Finished Aviation Gasoline	3	23	0	2	15	43	(s)
Jet Fuel	28,109	0	135	0	16,899	45,143	124
Naphtha-Type	0	0	0	0	0	0	0
Kerosene-Type	28,109	0	135	0	16,899	45,143	124
Bonded Aircraft Fuel	17,553	0	0	0	9,594	27,147	74
Other	10,556	0	135	0	7,305	17,996	49
Kerosene	466	0	0	0	0	466	1
Distillate Fuel Oil	71,980	1,344	199	1,971	1,124	76,618	210
Bonded Ship Bunkers	0	2	0	17	526	545	1
0.05 percent sulfur and under	0	0	0	17	91	108	(s)
Greater than 0.05 percent sulfur	0	2	0	0	435	437	1
Other	71,980	1,342	199	1,954	598	76,073	208
0.05 percent sulfur and under	40,810	996	89	719	499	43,113	118
Greater than 0.05 percent sulfur	31,170	346	110	1,235	99	32,960	90
Residual Fuel Oil	90,969	443	7,780	0	1,345	100,537	275
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	90,969	443	7,780	0	1,345	100,537	275
Less than 0.31 percent sulfur	17,195	237	3,354	0	562	21,348	58
0.31 to 1.00 percent sulfur	26,301	0	1,220	0	0	27,521	75
Greater than 1.00 percent sulfur	47,473	206	3,206	0	783	51,668	142
Naphtha for Petrochemical Feedstock Use	2,817	405	19,067	0	99	22,388	61
Other Oils for Petrochemical Feedstock Use	0	0	61,554	0	0	61,554	169
Special Naphthas	1,492	458	718	0	3	2,671	7
Lubricants	2,917	277	133	0	0	3,327	9
Waxes	335	134	38	0	106	613	2
Petroleum Coke	0	0	0	0	263	263	1
Asphalt and Road Oil	9,572	222	299	71	19	10,183	28
Miscellaneous Products	51	10	34	0	8	103	(s)
Total	**970,500**	**641,627**	**2,008,656**	**55,322**	**232,341**	**3,908,446**	**10,708**

[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 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 21. Imports of Crude Oil and Petroleum Products into the United States by Country of Origin,[a] 1998

(Thousand Barrels)

Country of Origin	Crude Oil[b]	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Compo-nents	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	**749,407**	**19,291**	**22,562**	**1,426**	**8,429**	**622**	**314**	**13,070**	**0**	**0**
Algeria	3,526	18,143	13,187	1,123	0	0	0	11,701	0	0
Iraq	122,518	0	0	0	0	0	0	0	0	0
Kuwait	109,412	0	0	0	0	432	0	0	0	0
Qatar	504	0	0	0	0	0	0	0	0	0
Saudi Arabia	512,452	1,148	9,375	303	8,429	190	314	1,369	0	0
United Arab Emirates	995	0	0	0	0	0	0	0	0	0
Other OPEC	**772,195**	**4,069**	**28,353**	**13,700**	**21,924**	**11,631**	**17,640**	**21,063**	**5**	**0**
Indonesia	18,328	0	1,349	0	0	0	0	4,472	0	0
Nigeria	251,315	0	921	265	64	0	0	1,019	0	0
Venezuela	502,552	4,069	26,083	13,435	21,860	11,631	17,640	15,572	5	0
Non OPEC	**1,655,982**	**47,303**	**59,206**	**61,123**	**83,253**	**32,890**	**58,664**	**66,404**	**461**	**2,671**
Angola	169,580	0	97	0	0	566	0	0	0	260
Argentina	29,187	0	310	5,215	1,612	0	0	286	0	0
Australia	11,349	0	104	0	0	235	0	0	0	0
Bahama Islands	0	0	0	0	637	117	264	366	0	0
Belgium	0	0	6,814	2,837	997	0	0	1,085	0	0
Brazil	0	0	0	3,834	1,988	0	0	2,770	0	41
Brunei	8,576	0	0	0	0	0	0	0	0	0
Cameroon	376	0	65	0	0	0	0	1,030	0	0
Canada	462,228	42,765	3,561	2,082	21,231	771	25,542	9,943	379	1,931
China, People's Republic of	15,376	0	0	0	0	0	0	0	0	0
Colombia	127,487	0	0	218	0	267	217	764	0	0
Congo (Brazzaville)	19,527	0	0	0	0	0	0	0	0	0
Congo (Kinshasa)[d]	6,219	0	0	0	0	0	0	0	0	0
Denmark	0	0	0	0	221	0	0	415	0	0
Ecuador	35,593	0	0	627	0	0	0	373	0	0
Egypt	4,130	0	0	58	0	0	0	0	0	0
France	0	0	2,557	5,516	3,244	0	0	0	0	0
Gabon	75,543	0	0	0	0	0	0	0	0	0
Germany, FR	0	0	2,477	951	473	0	0	2,672	0	0
Greece	0	0	0	24	0	0	0	0	0	0
Guatemala	8,311	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	71	0	0	0	0	0	0
Italy	0	0	140	2,444	1,027	0	208	490	0	0
Ivory Coast	0	0	55	0	0	0	0	0	0	0
Japan	0	0	40	219	233	2,020	130	0	0	0
Korea, Republic of	0	0	280	402	0	9,240	134	147	0	70
Malaysia	9,375	0	3,481	0	0	76	0	0	0	0
Mexico	482,252	0	1,887	1,091	139	532	148	1,045	0	0
Netherlands	0	0	1,079	4,114	1,891	0	0	1,480	0	0
Netherlands Antilles	0	0	13,139	318	0	5,195	0	9,400	0	320
New Zealand	509	0	0	0	0	0	0	0	0	0
Norway	80,820	2,313	1,053	156	1,069	0	0	369	0	0
Oman	0	0	1,013	0	0	0	0	0	0	0
Panama	0	0	0	0	0	0	110	412	0	0
Peru	14,908	0	0	0	0	0	0	1,152	0	0
Portugal	0	0	295	125	4,910	0	0	0	0	0
Puerto Rico	0	0	192	0	0	0	0	0	0	0
Romania	0	0	0	685	0	0	208	0	0	0
Russia	3,147	0	94	2,611	570	107	679	1,268	82	0
Singapore	117	0	3,752	69	188	4,438	0	491	0	0
Spain	0	0	2,493	1,917	744	0	0	902	0	0
Sweden	0	0	311	233	12	0	0	1,558	0	0
Trinidad and Tobago	19,423	0	0	808	699	220	483	2,584	0	0
Tunisia	0	0	191	0	0	0	0	0	0	0
Turkey	0	0	317	0	0	0	0	0	0	0
United Kingdom	58,658	2,225	3,509	18,169	1,955	0	471	5,877	0	0
Virgin Islands	0	0	7,420	3,281	38,944	9,094	30,070	17,166	0	49
Yemen	1,628	0	0	0	0	0	0	668	0	0
Other	11,663	0	2,480	3,048	469	12	0	1,691	0	0
Total	**3,177,584**	**70,663**	**110,121**	**76,249**	**113,606**	**45,143**	**76,618**	**100,537**	**466**	**2,671**
Persian Gulf[e]	**745,881**	**1,148**	**9,901**	**303**	**8,429**	**634**	**314**	**1,369**	**0**	**0**

See footnotes at end of table.

Table 21. Imports of Crude Oil and Petroleum Products into the United States by Country of Origin,[a] 1998 (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	**1,953**	**48,334**	**0**	**0**	**19,410**	**135,411**	**884,818**	**2,053**	**371**	**2,424**
Algeria	1,277	47,407	0	0	9,365	102,203	105,729	10	280	290
Iraq	0	0	0	0	0	0	122,518	336	0	336
Kuwait	0	0	0	0	0	432	109,844	300	1	301
Qatar	0	927	0	0	0	927	1,431	1	3	4
Saudi Arabia	676	0	0	0	10,045	31,849	544,301	1,404	87	1,491
United Arab Emirates	0	0	0	0	0	0	995	3	0	3
Other OPEC	**4,890**	**370**	**0**	**5,968**	**3,808**	**133,421**	**905,616**	**2,116**	**366**	**2,481**
Indonesia	0	0	0	0	4	5,825	24,153	50	16	66
Nigeria	463	0	0	0	0	2,732	254,047	689	7	696
Venezuela	4,427	370	0	5,968	3,804	124,864	627,416	1,377	342	1,719
Non OPEC	**15,545**	**12,850**	**3,327**	**4,215**	**14,118**	**462,030**	**2,118,012**	**4,537**	**1,266**	**5,803**
Angola	97	311	0	0	0	1,331	170,911	465	4	468
Argentina	633	0	0	0	0	8,056	37,243	80	22	102
Australia	547	8,580	0	0	0	9,466	20,815	31	26	57
Bahama Islands	0	0	0	0	0	1,384	1,384	0	4	4
Belgium	18	176	0	0	0	11,927	11,927	0	33	33
Brazil	339	0	0	0	599	9,571	9,571	0	26	26
Brunei	0	155	0	0	0	155	8,731	23	(s)	24
Cameroon	0	0	0	0	0	1,095	1,471	1	3	4
Canada	1,682	0	703	2,468	8,142	121,200	583,428	1,266	332	1,598
China, People's Republic of	0	0	0	0	129	129	15,505	42	(s)	42
Colombia	250	0	0	0	0	1,716	129,203	349	5	354
Congo (Brazzaville)	0	0	0	0	0	0	19,527	53	0	53
Congo (Kinshasa)[d]	0	0	0	0	0	0	6,219	17	0	17
Denmark	0	0	0	0	0	636	636	0	2	2
Ecuador	289	0	0	0	0	1,289	36,882	98	4	101
Egypt	70	0	0	0	0	128	4,258	11	(s)	12
France	850	0	59	0	1,515	13,741	13,741	0	38	38
Gabon	0	0	0	0	0	0	75,543	207	0	207
Germany, FR	231	0	0	0	77	6,881	6,881	0	19	19
Greece	311	0	0	0	0	335	335	0	1	1
Guatemala	0	0	0	0	0	0	8,311	23	0	23
Ireland	0	0	0	0	0	71	71	0	(s)	(s)
Italy	90	0	74	0	0	4,473	4,473	0	12	12
Ivory Coast	0	0	0	0	0	55	55	0	(s)	(s)
Japan	39	0	0	0	73	2,754	2,754	0	8	8
Korea, Republic of	142	0	0	0	1,059	11,474	11,474	0	31	31
Malaysia	0	0	0	0	0	3,557	12,932	26	10	35
Mexico	4,030	632	0	1,372	37	10,913	493,165	1,321	30	1,351
Netherlands	737	492	0	58	1,346	11,197	11,197	0	31	31
Netherlands Antilles	157	1,128	0	179	0	29,836	29,836	0	82	82
New Zealand	0	270	0	0	0	270	779	1	1	2
Norway	0	400	0	0	0	5,360	86,180	221	15	236
Oman	0	0	0	0	0	1,013	1,013	0	3	3
Panama	0	0	0	0	0	522	522	0	1	1
Peru	0	0	0	0	0	1,152	16,060	41	3	44
Portugal	0	0	0	0	0	5,330	5,330	0	15	15
Puerto Rico	2,932	0	2,491	0	0	5,615	5,615	0	15	15
Romania	0	0	0	0	0	893	893	0	2	2
Russia	125	0	0	0	0	5,536	8,683	9	15	24
Singapore	0	0	0	0	208	9,146	9,263	(s)	25	25
Spain	273	244	0	138	0	6,711	6,711	0	18	18
Sweden	0	0	0	0	0	2,114	2,114	0	6	6
Trinidad and Tobago	0	0	0	0	0	4,794	24,217	53	13	66
Tunisia	222	0	0	0	0	413	413	0	1	1
Turkey	288	173	0	0	0	778	778	0	2	2
United Kingdom	0	289	0	0	0	32,495	91,153	161	89	250
Virgin Islands	46	0	0	0	822	106,892	106,892	0	293	293
Yemen	0	0	0	0	0	668	2,296	4	2	6
Other	1,147	0	0	0	111	8,958	20,621	32	25	56
Total	**22,388**	**61,554**	**3,327**	**10,183**	**37,336**	**730,862**	**3,908,446**	**8,706**	**2,002**	**10,708**
Persian Gulf[e]	**676**	**927**	**0**	**0**	**10,045**	**33,746**	**779,627**	**2,044**	**92**	**2,136**

[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] Formerly Zaire.
[e] 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.
Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

Table 22. PAD District I—Imports of Crude Oil and Petroleum Products by Country of Origin,[a] 1998

(Thousand Barrels)

Country of Origin	Crude Oil[b]	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Compo-nents	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	**61,574**	**2,830**	**267**	**1,426**	**8,409**	**622**	**314**	**12,627**	**0**	**0**
Algeria	1,619	2,830	267	1,123	0	0	0	11,701	0	0
Kuwait	0	0	0	0	0	432	0	0	0	0
Saudi Arabia	59,955	0	0	303	8,409	190	314	926	0	0
Other OPEC	**181,377**	**368**	**1,000**	**12,961**	**18,892**	**11,238**	**17,640**	**18,139**	**5**	**0**
Indonesia	626	0	0	0	0	0	0	1,698	0	0
Nigeria	105,780	0	0	71	13	0	0	1,019	0	0
Venezuela	74,971	368	1,000	12,890	18,879	11,238	17,640	15,422	5	0
Non OPEC	**314,163**	**4,588**	**12,504**	**58,221**	**76,807**	**16,249**	**54,026**	**60,203**	**461**	**1,492**
Angola	89,722	0	0	0	0	566	0	0	0	0
Argentina	3,133	0	77	5,215	1,612	0	0	286	0	0
Bahama Islands	0	0	0	0	0	0	0	285	0	0
Belgium	0	0	266	2,811	997	0	0	1,085	0	0
Brazil	0	0	0	3,798	1,988	0	0	2,770	0	41
Brunei	623	0	0	0	0	0	0	0	0	0
Cameroon	376	0	65	0	0	0	0	1,030	0	0
Canada	41,405	2,647	683	2,049	19,632	518	21,571	9,190	379	1,082
China, People's Republic of	3,730	0	0	0	0	0	0	0	0	0
Colombia	26,278	0	0	0	0	267	217	764	0	0
Congo (Brazzaville)	7,247	0	0	0	0	0	0	0	0	0
Congo (Kinshasa)[d]	3,825	0	0	0	0	0	0	0	0	0
Denmark	0	0	0	0	221	0	0	415	0	0
Ecuador	9,732	0	0	0	0	0	0	373	0	0
Egypt	4,130	0	0	0	0	0	0	0	0	0
France	0	0	639	5,510	3,230	0	0	0	0	0
Gabon	38,692	0	0	0	0	0	0	0	0	0
Germany, FR	0	0	1,599	947	473	0	0	1,841	0	0
Ireland	0	0	0	71	0	0	0	0	0	0
Italy	0	0	0	2,025	1,027	0	208	490	0	0
Japan	0	0	0	219	0	0	0	0	0	0
Mexico	9,707	0	0	1,085	0	107	148	0	0	0
Netherlands	0	0	0	3,775	1,852	0	0	1,405	0	0
Netherlands Antilles	0	0	408	318	0	4,906	0	8,797	0	320
Norway	55,549	875	0	156	1,069	0	0	0	0	0
Panama	0	0	0	0	0	0	0	412	0	0
Peru	1,045	0	0	0	0	0	0	1,152	0	0
Portugal	0	0	295	125	1,762	0	0	0	0	0
Puerto Rico	0	0	192	0	0	0	0	0	0	0
Romania	0	0	0	685	0	0	208	0	0	0
Russia	0	0	0	2,611	570	0	650	0	82	0
Singapore	0	0	0	0	0	596	0	442	0	0
Spain	0	0	332	1,917	744	0	0	902	0	0
Sweden	0	0	0	233	12	0	0	1,375	0	0
Trinidad and Tobago	2,998	0	0	808	699	220	483	2,584	0	0
United Kingdom	15,319	1,066	528	18,169	1,955	0	471	5,877	0	0
Virgin Islands	0	0	7,420	3,148	38,660	9,069	30,070	17,166	0	49
Other	652	0	0	2,546	304	0	0	1,562	0	0
Total	**557,114**	**7,786**	**13,771**	**72,608**	**104,108**	**28,109**	**71,980**	**90,969**	**466**	**1,492**
Persian Gulf[e]	**59,955**	**0**	**0**	**303**	**8,409**	**622**	**314**	**926**	**0**	**0**

See footnotes at end of table.

Table 22. PAD District I—Imports of Crude Oil and Petroleum Products by Country of Origin,[a] 1998 (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**	**826**	**27,321**	**88,895**	**169**	**75**	**244**
Algeria	0	0	0	0	0	15,921	17,540	4	44	48
Kuwait	0	0	0	0	0	432	432	0	1	1
Saudi Arabia	0	0	0	0	826	10,968	70,923	164	30	194
Other OPEC	**105**	**0**	**0**	**5,669**	**1,425**	**87,442**	**268,819**	**497**	**240**	**736**
Indonesia	0	0	0	0	0	1,698	2,324	2	5	6
Nigeria	105	0	0	0	0	1,208	106,988	290	3	293
Venezuela	0	0	0	5,669	1,425	84,536	159,507	205	232	437
Non OPEC	**2,712**	**0**	**2,917**	**3,903**	**4,540**	**298,623**	**612,786**	**861**	**818**	**1,679**
Angola	0	0	0	0	0	566	90,288	246	2	247
Argentina	0	0	0	0	0	7,190	10,323	9	20	28
Bahama Islands	0	0	0	0	0	285	285	0	1	1
Belgium	0	0	0	0	0	5,159	5,159	0	14	14
Brazil	0	0	0	0	577	9,174	9,174	0	25	25
Brunei	0	0	0	0	0	0	623	2	0	2
Cameroon	0	0	0	0	0	1,095	1,471	1	3	4
Canada	269	0	426	2,156	108	60,710	102,115	113	166	280
China, People's Republic of	0	0	0	0	51	51	3,781	10	(s)	10
Colombia	0	0	0	0	0	1,248	27,526	72	3	75
Congo (Brazzaville)	0	0	0	0	0	0	7,247	20	0	20
Congo (Kinshasa)[d]	0	0	0	0	0	0	3,825	10	0	10
Denmark	0	0	0	0	0	636	636	0	2	2
Ecuador	0	0	0	0	0	373	10,105	27	1	28
Egypt	0	0	0	0	0	0	4,130	11	0	11
France	0	0	0	0	1,505	10,884	10,884	0	30	30
Gabon	0	0	0	0	0	0	38,692	106	0	106
Germany, FR	0	0	0	0	72	4,932	4,932	0	14	14
Ireland	0	0	0	0	0	71	71	0	(s)	(s)
Italy	0	0	0	0	0	3,750	3,750	0	10	10
Japan	14	0	0	0	42	275	275	0	1	1
Mexico	0	0	0	1,372	0	2,712	12,419	27	7	34
Netherlands	0	0	0	58	1,304	8,394	8,394	0	23	23
Netherlands Antilles	0	0	0	179	0	14,928	14,928	0	41	41
Norway	0	0	0	0	0	2,100	57,649	152	6	158
Panama	0	0	0	0	0	412	412	0	1	1
Peru	0	0	0	0	0	1,152	2,197	3	3	6
Portugal	0	0	0	0	0	2,182	2,182	0	6	6
Puerto Rico	2,169	0	2,491	0	0	4,852	4,852	0	13	13
Romania	0	0	0	0	0	893	893	0	2	2
Russia	0	0	0	0	0	3,913	3,913	0	11	11
Singapore	0	0	0	0	0	1,038	1,038	0	3	3
Spain	0	0	0	138	0	4,033	4,033	0	11	11
Sweden	0	0	0	0	0	1,620	1,620	0	4	4
Trinidad and Tobago	0	0	0	0	0	4,794	7,792	8	13	21
United Kingdom	0	0	0	0	0	28,066	43,385	42	77	119
Virgin Islands	0	0	0	0	822	106,404	106,404	0	292	292
Other	260	0	0	0	59	4,731	5,383	2	13	15
Total	**2,817**	**0**	**2,917**	**9,572**	**6,791**	**413,386**	**970,500**	**1,526**	**1,133**	**2,659**
Persian Gulf[e]	**0**	**0**	**0**	**0**	**826**	**11,400**	**71,355**	**164**	**31**	**195**

[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] Formerly Zaire.
[e] 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.
Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

Table 23. PAD District II—Imports of Crude Oil and Petroleum Products by Country of Origin,[a] 1998

(Thousand Barrels)

Country of Origin	Crude Oil[b]	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Compo-nents	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	**87,646**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Iraq	10,801	0	0	0	0	0	0	0	0	0
Kuwait	10,243	0	0	0	0	0	0	0	0	0
Qatar	504	0	0	0	0	0	0	0	0	0
Saudi Arabia	66,098	0	0	0	0	0	0	0	0	0
Other OPEC	**81,454**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Nigeria	34,141	0	0	0	0	0	0	0	0	0
Venezuela	47,313	0	0	0	0	0	0	0	0	0
Non OPEC	**437,592**	**29,882**	**202**	**33**	**1,057**	**0**	**1,344**	**443**	**0**	**458**
Angola	30,560	0	0	0	0	0	0	0	0	0
Argentina	241	0	0	0	0	0	0	0	0	0
Brunei	1,617	0	0	0	0	0	0	0	0	0
Canada	328,191	29,882	202	33	1,057	0	1,344	443	0	458
Colombia	36,107	0	0	0	0	0	0	0	0	0
Congo (Brazzaville)	401	0	0	0	0	0	0	0	0	0
Congo (Kinshasa)[d]	1,051	0	0	0	0	0	0	0	0	0
Ecuador	714	0	0	0	0	0	0	0	0	0
Gabon	310	0	0	0	0	0	0	0	0	0
Mexico	23,447	0	0	0	0	0	0	0	0	0
Norway	5,617	0	0	0	0	0	0	0	0	0
Peru	303	0	0	0	0	0	0	0	0	0
United Kingdom	9,033	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	**606,692**	**29,882**	**202**	**33**	**1,057**	**0**	**1,344**	**443**	**0**	**458**
Persian Gulf[e]	**87,646**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

See footnotes at end of table.

Table 23. PAD District II—Imports of Crude Oil and Petroleum Products by Country of Origin,[a] 1998 (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**	**87,646**	**240**	**0**	**240**
Iraq	0	0	0	0	0	0	10,801	30	0	30
Kuwait	0	0	0	0	0	0	10,243	28	0	28
Qatar	0	0	0	0	0	0	504	1	0	1
Saudi Arabia	0	0	0	0	0	0	66,098	181	0	181
Other OPEC	**0**	**0**	**0**	**0**	**0**	**0**	**81,454**	**223**	**0**	**223**
Nigeria	0	0	0	0	0	0	34,141	94	0	94
Venezuela	0	0	0	0	0	0	47,313	130	0	130
Non OPEC	**405**	**0**	**277**	**222**	**612**	**34,935**	**472,527**	**1,199**	**96**	**1,295**
Angola	0	0	0	0	0	0	30,560	84	0	84
Argentina	0	0	0	0	0	0	241	1	0	1
Brunei	0	0	0	0	0	0	1,617	4	0	4
Canada	405	0	277	222	609	34,932	363,123	899	96	995
Colombia	0	0	0	0	0	0	36,107	99	0	99
Congo (Brazzaville)	0	0	0	0	0	0	401	1	0	1
Congo (Kinshasa)[d]	0	0	0	0	0	0	1,051	3	0	3
Ecuador	0	0	0	0	0	0	714	2	0	2
Gabon	0	0	0	0	0	0	310	1	0	1
Mexico	0	0	0	0	0	0	23,447	64	0	64
Norway	0	0	0	0	0	0	5,617	15	0	15
Peru	0	0	0	0	0	0	303	1	0	1
United Kingdom	0	0	0	0	0	0	9,033	25	0	25
Other	0	0	0	0	3	3	3	0	(s)	(s)
Total	**405**	**0**	**277**	**222**	**612**	**34,935**	**641,627**	**1,662**	**96**	**1,758**
Persian Gulf[e]	**0**	**0**	**0**	**0**	**0**	**0**	**87,646**	**240**	**0**	**240**

[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] Formerly Zaire.
[e] 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.
Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

Table 24. PAD District III—Imports of Crude Oil and Petroleum Products by Country of Origin,[a] 1998

(Thousand Barrels)

Country of Origin	Crude Oil[b]	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Compo-nents	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
Arab OPEC	**556,678**	**16,461**	**22,295**	**0**	**0**	**0**	**0**	**443**	**0**	**0**
Algeria	1,907	15,313	12,920	0	0	0	0	0	0	0
Iraq	90,560	0	0	0	0	0	0	0	0	0
Kuwait	85,742	0	0	0	0	0	0	0	0	0
Qatar	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	378,073	1,148	9,375	0	0	0	0	443	0	0
United Arab Emirates	396	0	0	0	0	0	0	0	0	0
Other OPEC	**485,897**	**3,701**	**26,583**	**739**	**2,981**	**0**	**0**	**1,775**	**0**	**0**
Indonesia	1,066	0	942	0	0	0	0	1,625	0	0
Nigeria	111,074	0	921	194	0	0	0	0	0	0
Venezuela	373,757	3,701	24,720	545	2,981	0	0	150	0	0
Non OPEC	**740,110**	**10,224**	**38,660**	**1,654**	**3,287**	**135**	**199**	**5,562**	**0**	**718**
Angola	48,988	0	97	0	0	0	0	0	0	260
Argentina	17,311	0	233	0	0	0	0	0	0	0
Australia	457	0	104	0	0	0	0	0	0	0
Bahama Islands	0	0	0	0	0	0	0	81	0	0
Belgium	0	0	6,548	0	0	0	0	0	0	0
Brazil	0	0	0	36	0	0	0	0	0	0
Brunei	6,336	0	0	0	0	0	0	0	0	0
Canada	4,855	7,627	2,292	0	0	0	89	310	0	388
China, People's Republic of	3,510	0	0	0	0	0	0	0	0	0
Colombia	64,800	0	0	218	0	0	0	0	0	0
Congo (Brazzaville)	11,879	0	0	0	0	0	0	0	0	0
Congo (Kinshasa)[d]	1,343	0	0	0	0	0	0	0	0	0
Ecuador	5,426	0	0	447	0	0	0	0	0	0
Egypt	0	0	0	58	0	0	0	0	0	0
France	0	0	1,918	0	0	0	0	0	0	0
Gabon	36,541	0	0	0	0	0	0	0	0	0
Germany, FR	0	0	878	0	0	0	0	831	0	0
Greece	0	0	0	24	0	0	0	0	0	0
Guatemala	8,311	0	0	0	0	0	0	0	0	0
Italy	0	0	140	419	0	0	0	0	0	0
Ivory Coast	0	0	55	0	0	0	0	0	0	0
Japan	0	0	0	0	0	0	0	0	0	0
Korea, Republic of	0	0	0	50	0	126	0	0	0	70
Malaysia	6,269	0	0	0	0	0	0	0	0	0
Mexico	440,263	0	1,887	6	139	9	0	1,045	0	0
Netherlands	0	0	1,079	263	0	0	0	75	0	0
Netherlands Antilles	0	0	12,731	0	0	0	0	603	0	0
New Zealand	0	0	0	0	0	0	0	0	0	0
Norway	19,654	1,438	1,053	0	0	0	0	369	0	0
Oman	0	0	1,013	0	0	0	0	0	0	0
Panama	0	0	0	0	0	0	110	0	0	0
Peru	4,134	0	0	0	0	0	0	0	0	0
Portugal	0	0	0	0	3,148	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0
Russia	3,050	0	94	0	0	0	0	1,268	0	0
Singapore	117	0	408	0	0	0	0	0	0	0
Spain	0	0	2,161	0	0	0	0	0	0	0
Sweden	0	0	0	0	0	0	0	183	0	0
Trinidad and Tobago	16,425	0	0	0	0	0	0	0	0	0
Tunisia	0	0	191	0	0	0	0	0	0	0
Turkey	0	0	317	0	0	0	0	0	0	0
United Kingdom	33,818	1,159	2,981	0	0	0	0	0	0	0
Virgin Islands	0	0	0	133	0	0	0	0	0	0
Yemen	1,628	0	0	0	0	0	0	668	0	0
Other	4,995	0	2,480	0	0	0	0	129	0	0
Total	**1,782,685**	**30,386**	**87,538**	**2,393**	**6,268**	**135**	**199**	**7,780**	**0**	**718**
Persian Gulf[e]	**554,771**	**1,148**	**9,901**	**0**	**0**	**0**	**0**	**443**	**0**	**0**

See footnotes at end of table.

Table 24. PAD District III—Imports of Crude Oil and Petroleum Products by Country of Origin,[a] 1998 (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	**1,953**	**48,334**	**0**	**0**	**9,365**	**98,851**	**655,529**	**1,525**	**271**	**1,796**
Algeria	1,277	47,407	0	0	9,365	86,282	88,189	5	236	242
Iraq	0	0	0	0	0	0	90,560	248	0	248
Kuwait	0	0	0	0	0	0	85,742	235	0	235
Qatar	0	927	0	0	0	927	927	0	3	3
Saudi Arabia	676	0	0	0	0	11,642	389,715	1,036	32	1,068
United Arab Emirates	0	0	0	0	0	0	396	1	0	1
Other OPEC	**4,785**	**370**	**0**	**299**	**4**	**41,237**	**527,134**	**1,331**	**113**	**1,444**
Indonesia	0	0	0	0	4	2,571	3,637	3	7	10
Nigeria	358	0	0	0	0	1,473	112,547	304	4	308
Venezuela	4,427	370	0	299	0	37,193	410,950	1,024	102	1,126
Non OPEC	**12,329**	**12,850**	**133**	**0**	**132**	**85,883**	**825,993**	**2,028**	**235**	**2,263**
Angola	97	311	0	0	0	765	49,753	134	2	136
Argentina	633	0	0	0	0	866	18,177	47	2	50
Australia	547	8,580	0	0	0	9,231	9,688	1	25	27
Bahama Islands	0	0	0	0	0	81	81	0	(s)	(s)
Belgium	18	176	0	0	0	6,742	6,742	0	18	18
Brazil	339	0	0	0	22	397	397	0	1	1
Brunei	0	155	0	0	0	155	6,491	17	(s)	18
Canada	1,008	0	0	0	1	11,715	16,570	13	32	45
China, People's Republic of	0	0	0	0	10	10	3,520	10	(s)	10
Colombia	250	0	0	0	0	468	65,268	178	1	179
Congo (Brazzaville)	0	0	0	0	0	0	11,879	33	0	33
Congo (Kinshasa)[d]	0	0	0	0	0	0	1,343	4	0	4
Ecuador	289	0	0	0	0	736	6,162	15	2	17
Egypt	70	0	0	0	0	128	128	0	(s)	(s)
France	850	0	59	0	10	2,837	2,837	0	8	8
Gabon	0	0	0	0	0	0	36,541	100	0	100
Germany, FR	231	0	0	0	5	1,945	1,945	0	5	5
Greece	311	0	0	0	0	335	335	0	1	1
Guatemala	0	0	0	0	0	0	8,311	23	0	23
Italy	90	0	74	0	0	723	723	0	2	2
Ivory Coast	0	0	0	0	0	55	55	0	(s)	(s)
Japan	25	0	0	0	30	55	55	0	(s)	(s)
Korea, Republic of	43	0	0	0	2	291	291	0	1	1
Malaysia	0	0	0	0	0	0	6,269	17	0	17
Mexico	4,030	632	0	0	0	7,748	448,011	1,206	21	1,227
Netherlands	737	492	0	0	42	2,688	2,688	0	7	7
Netherlands Antilles	157	1,128	0	0	0	14,619	14,619	0	40	40
New Zealand	0	270	0	0	0	270	270	0	1	1
Norway	0	400	0	0	0	3,260	22,914	54	9	63
Oman	0	0	0	0	0	1,013	1,013	0	3	3
Panama	0	0	0	0	0	110	110	0	(s)	(s)
Peru	0	0	0	0	0	0	4,134	11	0	11
Portugal	0	0	0	0	0	3,148	3,148	0	9	9
Puerto Rico	763	0	0	0	0	763	763	0	2	2
Russia	125	0	0	0	0	1,487	4,537	8	4	12
Singapore	0	0	0	0	0	408	525	(s)	1	1
Spain	273	244	0	0	0	2,678	2,678	0	7	7
Sweden	0	0	0	0	0	183	183	0	1	1
Trinidad and Tobago	0	0	0	0	0	0	16,425	45	0	45
Tunisia	222	0	0	0	0	413	413	0	1	1
Turkey	288	173	0	0	0	778	778	0	2	2
United Kingdom	0	289	0	0	0	4,429	38,247	93	12	105
Virgin Islands	46	0	0	0	0	179	179	0	(s)	(s)
Yemen	0	0	0	0	0	668	2,296	4	2	6
Other	887	0	0	0	10	3,506	8,501	14	10	23
Total	**19,067**	**61,554**	**133**	**299**	**9,501**	**225,971**	**2,008,656**	**4,884**	**619**	**5,503**
Persian Gulf[e]	**676**	**927**	**0**	**0**	**0**	**13,095**	**567,866**	**1,520**	**36**	**1,556**

[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] Formerly Zaire.
[e] 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.
Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

Table 25. PAD Districts IV and V—Imports of Crude Oil and Petroleum Products by Country of Origin,[a] 1998

(Thousand Barrels)

Country of Origin	Crude Oil[b]	Liquefied Petroleum Gases	Unfinished Oils	Gasoline Blending Compo-nents	Finished Motor Gasoline	Jet Fuel	Distillate Fuel Oil	Residual Fuel Oil	Kerosene	Special Naphthas
PAD District IV										
Non OPEC	**48,894**	**2,576**	**0**	**0**	**200**	**0**	**1,971**	**0**	**0**	**0**
Canada	48,894	2,576	0	0	200	0	1,971	0	0	0
Total	**48,894**	**2,576**	**0**	**0**	**200**	**0**	**1,971**	**0**	**0**	**0**
PAD District V										
Arab OPEC	**43,509**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**	**0**
Iraq	21,157	0	0	0	0	0	0	0	0	0
Kuwait	13,427	0	0	0	0	0	0	0	0	0
Saudi Arabia	8,326	0	0	0	20	0	0	0	0	0
United Arab Emirates	599	0	0	0	0	0	0	0	0	0
Other OPEC	**23,467**	**0**	**770**	**0**	**51**	**393**	**0**	**1,149**	**0**	**0**
Indonesia	16,636	0	407	0	0	0	0	1,149	0	0
Nigeria	320	0	0	0	51	0	0	0	0	0
Venezuela	6,511	0	363	0	0	393	0	0	0	0
Non OPEC	**115,223**	**33**	**7,840**	**1,215**	**1,902**	**16,506**	**1,124**	**196**	**0**	**3**
Angola	310	0	0	0	0	0	0	0	0	0
Argentina	8,502	0	0	0	0	0	0	0	0	0
Australia	10,892	0	0	0	0	235	0	0	0	0
Bahama Islands	0	0	0	0	637	117	264	0	0	0
Belgium	0	0	0	26	0	0	0	0	0	0
Canada	38,883	33	384	0	342	253	567	0	0	3
China, People's Republic of	8,136	0	0	0	0	0	0	0	0	0
Colombia	302	0	0	0	0	0	0	0	0	0
Ecuador	19,721	0	0	180	0	0	0	0	0	0
France	0	0	0	6	14	0	0	0	0	0
Germany, FR	0	0	0	4	0	0	0	0	0	0
Japan	0	0	40	0	233	2,020	130	0	0	0
Korea, Republic of	0	0	280	352	0	9,114	134	147	0	0
Malaysia	3,106	0	3,481	0	0	76	0	0	0	0
Mexico	8,835	0	0	0	0	416	0	0	0	0
Netherlands	0	0	0	76	39	0	0	0	0	0
Netherlands Antilles	0	0	0	0	0	289	0	0	0	0
New Zealand	509	0	0	0	0	0	0	0	0	0
Peru	9,426	0	0	0	0	0	0	0	0	0
Russia	97	0	0	0	0	107	29	0	0	0
Singapore	0	0	3,344	69	188	3,842	0	49	0	0
Sweden	0	0	311	0	0	0	0	0	0	0
United Kingdom	488	0	0	0	0	0	0	0	0	0
Virgin Islands	0	0	0	0	284	25	0	0	0	0
Other	6,016	0	0	502	165	12	0	0	0	0
Total	**182,199**	**33**	**8,610**	**1,215**	**1,973**	**16,899**	**1,124**	**1,345**	**0**	**3**
Persian Gulf[e]	**43,509**	**0**	**0**	**0**	**20**	**12**	**0**	**0**	**0**	**0**

See footnotes at end of table.

Table 25. PAD Districts IV and V—Imports of Crude Oil and Petroleum Products by Country of Origin,[a] 1998 (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
PAD District IV										
Non OPEC	**0**	**0**	**0**	**71**	**1,610**	**6,428**	**55,322**	**134**	**18**	**152**
Canada	0	0	0	71	1,610	6,428	55,322	134	18	152
Total	**0**	**0**	**0**	**71**	**1,610**	**6,428**	**55,322**	**134**	**18**	**152**
PAD District V										
Arab OPEC	**0**	**0**	**0**	**0**	**9,219**	**9,239**	**52,748**	**119**	**25**	**145**
Iraq	0	0	0	0	0	0	21,157	58	0	58
Kuwait	0	0	0	0	0	0	13,427	37	0	37
Saudi Arabia	0	0	0	0	9,219	9,239	17,565	23	25	48
United Arab Emirates	0	0	0	0	0	0	599	2	0	2
Other OPEC	**0**	**0**	**0**	**0**	**2,379**	**4,742**	**28,209**	**64**	**13**	**77**
Indonesia	0	0	0	0	0	1,556	18,192	46	4	50
Nigeria	0	0	0	0	0	51	371	1	(s)	1
Venezuela	0	0	0	0	2,379	3,135	9,646	18	9	26
Non OPEC	**99**	**0**	**0**	**19**	**7,224**	**36,161**	**151,384**	**316**	**99**	**415**
Angola	0	0	0	0	0	0	310	1	0	1
Argentina	0	0	0	0	0	0	8,502	23	0	23
Australia	0	0	0	0	0	235	11,127	30	1	30
Bahama Islands	0	0	0	0	0	1,018	1,018	0	3	3
Belgium	0	0	0	0	0	26	26	0	(s)	(s)
Canada	0	0	0	19	5,814	7,415	46,298	107	20	127
China, People's Republic of	0	0	0	0	68	68	8,204	22	(s)	22
Colombia	0	0	0	0	0	0	302	1	0	1
Ecuador	0	0	0	0	0	180	19,901	54	(s)	55
France	0	0	0	0	0	20	20	0	(s)	(s)
Germany, FR	0	0	0	0	0	4	4	0	(s)	(s)
Japan	0	0	0	0	1	2,424	2,424	0	7	7
Korea, Republic of	99	0	0	0	1,057	11,183	11,183	0	31	31
Malaysia	0	0	0	0	0	3,557	6,663	9	10	18
Mexico	0	0	0	0	37	453	9,288	24	1	25
Netherlands	0	0	0	0	0	115	115	0	(s)	(s)
Netherlands Antilles	0	0	0	0	0	289	289	0	1	1
New Zealand	0	0	0	0	0	0	509	1	0	1
Peru	0	0	0	0	0	0	9,426	26	0	26
Russia	0	0	0	0	0	136	233	(s)	(s)	1
Singapore	0	0	0	0	208	7,700	7,700	0	21	21
Sweden	0	0	0	0	0	311	311	0	1	1
United Kingdom	0	0	0	0	0	0	488	1	0	1
Virgin Islands	0	0	0	0	0	309	309	0	1	1
Other	0	0	0	0	39	718	6,734	16	2	18
Total	**99**	**0**	**0**	**19**	**18,822**	**50,142**	**232,341**	**499**	**137**	**637**

[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] Formerly Zaire.
[e] 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.
Source: Energy Information Administration (EIA) Form EIA-814, "Monthly Imports Report."

Table 26. Imports of Residual Fuel Oil by Sulfur Content and by PAD District and State of Entry, 1998
(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	**17,195**	**26,301**	**47,473**	**90,969**
Delaware	39	247	2,588	2,874
Florida	1,013	5,500	9,433	15,946
Georgia	160	0	1,518	1,678
Maine	591	0	1,844	2,435
Maryland	0	3,821	2,291	6,112
Massachusetts	110	2,286	2,756	5,152
New Hampshire	0	0	1,009	1,009
New Jersey	6,540	6,344	7,161	20,045
New York	8,346	6,360	4,354	19,060
North Carolina	0	0	4,316	4,316
Pennsylvania	0	769	2,156	2,925
South Carolina	72	282	2,285	2,639
Vermont	0	0	156	156
Virginia	324	692	5,606	6,622
PAD District II	**237**	**0**	**206**	**443**
Illinois	4	0	0	4
Michigan	233	0	206	439
PAD District III	**3,354**	**1,220**	**3,206**	**7,780**
Louisiana	2,523	0	827	3,350
Mississippi	0	0	443	443
Texas	831	1,220	1,936	3,987
PAD District V	**562**	**0**	**783**	**1,345**
Hawaii	562	0	783	1,345
U.S. Total	**21,348**	**27,521**	**51,668**	**100,537**

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

Table 27. Exports of Crude Oil and Petroleum Products by PAD District, 1998

(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts						Daily Average
	I	II	III	IV	V	U.S. Total	
Crude Oil[a]	**567**	**19,770**	**6**	**135**	**19,624**	**40,102**	**110**
Natural Gas Liquids	**663**	**5,851**	**7,670**	**50**	**4,328**	**18,563**	**51**
Pentanes Plus	21	3,010	(s)	43	1	3,075	8
Liquefied Petroleum Gases	643	2,841	7,670	7	4,327	15,488	42
Ethane/Ethylene	0	0	0	0	0	0	0
Propane/Propylene	402	820	5,645	7	2,178	9,051	25
Normal Butane/Butylene	240	2,021	2,025	(s)	2,150	6,436	18
Isobutane/Isobutylene	0	0	0	0	0	0	0
Other Liquids	**638**	**111**	**16,528**	**6**	**1,041**	**18,324**	**50**
Other Hydrocarbons/Oxygenates	503	111	11,403	6	900	12,924	35
Motor Gasoline Blend. Comp.	135	(s)	5,124	0	141	5,400	15
Finished Petroleum Products	**12,846**	**6,812**	**163,595**	**150**	**84,364**	**267,768**	**734**
Finished Motor Gasoline	704	714	36,825	4	7,371	45,618	125
Naphtha-Type Jet Fuel	241	3	253	0	19	516	1
Kerosene-Type Jet Fuel	873	409	4,021	(s)	3,502	8,804	24
Kerosene	33	17	74	0	51	175	(s)
Distillate Fuel Oil	1,839	401	29,030	(s)	14,154	45,424	124
Residual Fuel Oil	3,858	328	31,561	0	14,502	50,248	138
Special Naphthas	583	135	456	4	5,279	6,457	18
Lubricants	1,610	704	5,573	98	1,143	9,128	25
Waxes	333	271	391	32	131	1,157	3
Petroleum Coke	2,584	1,988	55,058	(s)	37,889	97,519	267
Asphalt and Road Oil	143	1,840	348	12	243	2,586	7
Miscellaneous Products	46	5	5	(s)	79	134	(s)
Total	**14,715**	**32,545**	**187,798**	**341**	**109,357**	**344,757**	**945**

[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 28. Exports of Crude Oil and Petroleum Products by Destination, 1998

(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	1	(s)	2	199	0	448	6
Australia	0	1	14	1	(s)	1	9	2
Bahama Islands	0	0	108	269	126	2	828	670
Bahrain	0	0	(s)	0	0	0	0	0
Belgium & Luxembourg	0	0	0	2	(s)	0	12	1
Brazil	0	0	842	0	82	(s)	1,520	49
Cameroon	0	0	0	0	0	0	0	0
Canada	20,775	3,068	3,293	3,839	4,251	29	2,945	4,835
Chile	0	0	1	564	0	0	416	(s)
China, People's Republic of	6,096	0	1	(s)	0	0	1,661	1,685
China, Taiwan	2,595	0	(s)	1,245	0	1	412	268
Colombia	0	0	199	210	0	(s)	5	1
Costa Rica	0	0	26	474	37	0	2,166	443
Denmark	0	0	0	0	0	0	(s)	0
Dominican Republic	0	0	445	36	0	0	387	1,320
Ecuador	0	0	523	2,155	0	2	2,273	0
Egypt	0	0	0	0	0	0	1	0
El Salvador	0	1	1	201	34	0	908	91
Finland	0	0	0	0	111	2	251	0
France	0	(s)	51	35	(s)	20	6	5
French Pacific Islands	0	1	0	0	0	1	202	0
Germany, FR	0	0	67	(s)	(s)	(s)	12	8
Ghana	0	0	0	0	0	0	(s)	0
Greece	0	0	1	0	(s)	0	3	0
Guatemala	0	0	2	1,836	138	(s)	1,832	(s)
Guinea	0	0	0	0	1	0	1	0
Honduras	0	0	13	484	115	0	1,484	637
Hong Kong	0	0	(s)	0	0	1	14	0
India	0	0	0	0	0	0	66	0
Indonesia	0	0	0	0	0	0	1	0
Ireland	0	0	0	0	0	0	(s)	180
Israel	0	0	7	(s)	2,313	2	215	0
Italy	0	(s)	222	3	0	(s)	3	310
Jamaica	0	0	100	2	44	0	9	8,151
Japan	1,885	0	147	7	1	2	545	472
Korea, Republic of	8,740	0	7	0	(s)	(s)	120	365
Malaysia	0	0	(s)	0	0	0	20	0
Mexico	6	(s)	8,553	30,767	781	90	11,524	19,783
Netherlands	0	2	(s)	0	340	0	424	551
Netherlands Antilles	0	0	62	765	0	0	2,073	2,262
New Zealand	0	0	1	(s)	(s)	(s)	3	0
Nigeria	0	0	1	318	0	0	296	240
Norway	0	0	3	0	0	0	1	1
Panama	0	0	153	419	405	(s)	6,043	3,000
Peru	0	0	58	87	0	1	791	37
Philippines	0	0	0	0	0	(s)	2	0
Poland	0	0	0	0	0	0	1	0
Portugal	0	0	35	0	0	0	(s)	0
Puerto Rico	0	(s)	6	1	205	4	796	(s)
Russia	0	0	1	402	97	10	103	13
Saudi Arabia	0	0	1	0	(s)	1	1	1
Singapore	0	0	4	268	0	0	3,049	3,343
South Africa	0	0	(s)	0	0	0	8	0
Spain	0	0	115	0	0	0	301	0
Suriname	0	0	0	0	0	0	1	1
Sweden	0	0	0	1	(s)	0	10	0
Switzerland	0	0	2	0	0	(s)	(s)	0
Thailand	0	(s)	3	0	0	0	408	893
Trinidad and Tobago	0	0	3	890	0	0	78	0
Turkey	0	0	65	2	0	(s)	1	0
United Arab Emirates	0	0	37	(s)	0	2	5	0
United Kingdom	0	(s)	180	1	5	1	30	85
Uruguay	0	0	0	0	1	0	2	0
Venezuela	1	0	2	25	0	(s)	302	(s)
Virgin Islands	0	0	0	0	0	0	(s)	0
Yugoslavia	0	0	0	0	0	0	0	0
Other	4	0	132	305	33	1	396	539
Total	**40,102**	**3,075**	**15,488**	**45,618**	**9,320**	**175**	**45,424**	**50,248**

See footnotes at end of table.

Table 28. Exports of Crude Oil and Petroleum Products by Destination, 1998 (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	16	102	6	132	1	2	914	3
Australia	9	59	6	3,577	4	1	3,684	10
Bahama Islands	0	35	(s)	0	2	1	2,041	6
Bahrain	(s)	1	0	491	(s)	0	492	1
Belgium & Luxembourg	1	218	3	4,479	2	527	5,246	14
Brazil	21	339	4	3,468	1	82	6,408	18
Cameroon	0	(s)	0	123	0	0	123	(s)
Canada	568	1,599	604	5,645	1,996	451	53,898	148
Chile	6	302	2	828	1	(s)	2,122	6
China, People's Republic of	9	47	1	0	(s)	(s)	9,502	26
China, Taiwan	28	275	9	95	3	51	4,983	14
Colombia	8	333	7	127	2	9	903	2
Costa Rica	5	136	2	0	65	1	3,355	9
Denmark	0	2	1	825	7	(s)	836	2
Dominican Republic	5	202	2	434	16	3	2,850	8
Ecuador	220	124	1	0	3	548	5,848	16
Egypt	1	26	0	0	2	0	30	(s)
El Salvador	(s)	53	(s)	86	0	0	1,376	4
Finland	0	63	(s)	0	1	302	728	2
France	2	24	37	2,855	0	(s)	3,036	8
French Pacific Islands	17	2	0	0	0	0	223	1
Germany, FR	2	53	108	744	36	3	1,034	3
Ghana	(s)	2	0	62	0	0	65	(s)
Greece	0	20	(s)	589	0	(s)	613	2
Guatemala	7	179	5	0	0	51	4,052	11
Guinea	0	16	0	0	0	0	17	(s)
Honduras	9	122	2	0	(s)	(s)	2,867	8
Hong Kong	7	73	8	0	(s)	15	119	(s)
India	(s)	312	5	397	20	18	818	2
Indonesia	(s)	7	(s)	165	(s)	129	302	1
Ireland	(s)	1	2	476	0	41	700	2
Israel	(s)	24	(s)	1,636	5	3	4,204	12
Italy	(s)	69	5	10,229	3	132	10,977	30
Jamaica	22	41	1	152	12	183	8,717	24
Japan	4,893	270	36	14,805	11	345	23,417	64
Korea, Republic of	284	43	5	1,945	7	351	11,868	33
Malaysia	1	17	2	13	1	12	64	(s)
Mexico	102	1,760	259	2,894	274	9,047	85,841	235
Netherlands	15	50	3	10,022	38	602	12,047	33
Netherlands Antilles	(s)	560	(s)	0	(s)	330	6,052	17
New Zealand	(s)	14	(s)	540	(s)	0	560	2
Nigeria	0	80	(s)	44	0	161	1,141	3
Norway	0	4	1	317	0	0	327	1
Panama	1	115	1	(s)	0	1	10,137	28
Peru	3	19	2	3	(s)	190	1,192	3
Philippines	1	36	4	147	0	2	192	1
Poland	(s)	1	0	313	0	0	315	1
Portugal	(s)	1	(s)	560	0	0	597	2
Puerto Rico	99	209	3	0	1	3	1,328	4
Russia	(s)	53	(s)	0	1	(s)	680	2
Saudi Arabia	(s)	21	(s)	96	0	1	123	(s)
Singapore	2	162	2	53	3	68	6,954	19
South Africa	(s)	175	(s)	1,116	1	26	1,327	4
Spain	(s)	5	2	10,412	4	3	10,842	30
Suriname	0	13	(s)	0	0	0	15	(s)
Sweden	(s)	13	2	977	0	4	1,008	3
Switzerland	18	2	(s)	0	(s)	42	65	(s)
Thailand	12	66	1	245	5	4	1,636	4
Trinidad and Tobago	4	15	(s)	2	0	77	1,070	3
Turkey	(s)	116	(s)	5,994	1	7	6,186	17
United Arab Emirates	1	16	(s)	883	2	1	945	3
United Kingdom	4	41	8	3,541	29	33	3,960	11
Uruguay	0	11	(s)	0	0	(s)	14	(s)
Venezuela	(s)	158	3	1,661	10	4,571	6,734	18
Virgin Islands	0	2	0	0	(s)	(s)	3	(s)
Yugoslavia	0	2	0	23	0	(s)	25	(s)
Other	54	216	1	3,296	12	23	5,012	14
Total	**6,457**	**9,128**	**1,157**	**97,519**	**2,586**	**18,459**	**344,757**	**945**

[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 29. Net Imports of Crude Oil and Petroleum Products into the United States by Country, 1998

(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	**2,053**	**53**	**23**	**2**	**1**	**36**	**-3**	**(s)**	**257**	**368**	**2,421**
Algeria	10	50	0	0	0	32	0	(s)	198	280	290
Iraq	336	0	0	0	0	0	0	0	0	0	336
Kuwait	300	0	0	1	(s)	0	(s)	(s)	(s)	1	301
Qatar	1	0	0	0	(s)	0	0	(s)	3	3	4
Saudi Arabia	1,404	3	23	1	1	4	(s)	(s)	56	87	1,491
United Arab Emirates	3	(s)	(s)	0	(s)	0	-2	(s)	(s)	-3	(s)
Other OPEC	**2,116**	**11**	**59**	**32**	**47**	**57**	**-5**	**-1**	**143**	**343**	**2,459**
Indonesia	50	0	0	0	(s)	12	(s)	(s)	3	15	65
Nigeria	689	(s)	-1	0	-1	2	(s)	(s)	4	4	693
Venezuela	1,377	11	60	32	48	43	-5	(s)	136	324	1,700
Non OPEC	**4,427**	**87**	**104**	**65**	**38**	**45**	**-259**	**-15**	**392**	**457**	**4,884**
Angola	465	0	0	2	0	0	0	(s)	2	4	468
Argentina	80	(s)	4	-1	-1	1	(s)	(s)	17	20	100
Australia	31	(s)	(s)	1	(s)	(s)	-10	(s)	25	16	47
Bahama Islands	0	(s)	1	(s)	-2	-1	0	(s)	(s)	-2	-2
Belgium & Luxembourg	0	0	3	(s)	(s)	3	-12	-1	26	18	18
Benin	0	0	0	0	0	0	0	(s)	0	(s)	(s)
Brazil	0	-2	5	(s)	-4	7	-10	-1	13	9	9
Brunei	23	0	0	0	0	0	0	(s)	(s)	(s)	24
Cameroon	1	0	0	0	0	3	(s)	(s)	(s)	3	4
Canada	1,209	108	48	-10	62	14	-15	-2	36	241	1,451
China, People's Republic of	25	(s)	(s)	0	-5	-5	0	(s)	(s)	-9	16
China, Taiwan	-7	(s)	-3	0	-1	-1	(s)	-1	(s)	-7	-14
Colombia	349	-1	-1	1	1	2	(s)	-1	1	2	352
Congo (Brazzaville)	53	0	0	0	0	0	0	(s)	0	(s)	53
Congo (Kinshasa)[c]	17	0	0	0	0	0	0	(s)	0	(s)	17
Ecuador	98	-1	-6	0	-6	1	0	(s)	(s)	-12	85
Egypt	11	0	0	0	(s)	0	0	(s)	(s)	(s)	12
France	0	(s)	9	(s)	(s)	(s)	-8	(s)	28	29	29
Gabon	207	0	0	0	0	0	0	(s)	0	(s)	207
Germany, FR	0	(s)	1	(s)	(s)	7	-2	(s)	10	16	16
Greece	0	(s)	0	(s)	(s)	0	-2	(s)	1	-1	-1
Guatemala	23	(s)	-5	(s)	-5	(s)	0	(s)	(s)	-11	12
India	0	0	0	0	(s)	0	-1	-1	(s)	-2	-2
Italy	0	-1	3	0	1	(s)	-28	(s)	7	-18	-18
Jamaica	0	(s)	(s)	(s)	(s)	-22	(s)	(s)	-1	-24	-24
Japan	-5	(s)	1	6	-1	-1	-41	-1	-13	-51	-57
Korea, Republic of	-24	(s)	0	25	(s)	-1	-5	(s)	4	23	-1
Malaysia	26	(s)	0	(s)	(s)	0	(s)	(s)	9	10	35
Mexico	1,321	-23	-84	-1	-31	-51	-8	-5	-2	-205	1,116
Netherlands	0	(s)	5	-1	-1	3	-27	(s)	20	-2	-2
Netherlands Antilles	0	(s)	-2	14	-6	20	0	-2	41	65	65
Norway	221	6	3	0	(s)	1	-1	(s)	4	14	235
Oman	0	0	0	0	0	0	0	(s)	3	3	3
Panama	0	(s)	-1	-1	-16	-7	(s)	(s)	(s)	-26	-26
Peru	41	(s)	(s)	0	-2	3	(s)	(s)	-1	(s)	41
Puerto Rico	0	(s)	(s)	-1	-2	(s)	0	6	8	12	12
Romania	0	0	0	0	1	0	0	(s)	2	2	2
Russia	9	(s)	(s)	(s)	2	3	0	(s)	8	13	22
Syria	0	(s)	0	0	0	0	0	(s)	(s)	(s)	(s)
Spain	0	(s)	2	0	-1	2	-29	(s)	14	-11	-11
Sweden	0	0	(s)	(s)	(s)	4	-3	(s)	1	3	3
Thailand	0	(s)	0	0	-1	-2	-1	(s)	(s)	-4	-4
Trinidad and Tobago	53	(s)	-1	1	1	7	(s)	(s)	2	10	63
Turkey	0	(s)	(s)	0	(s)	0	-16	(s)	2	-15	-15
United Kingdom	161	6	5	(s)	1	16	-10	(s)	60	78	239
Virgin Islands	0	0	107	25	82	47	0	(s)	32	293	293
Yemen	4	0	0	0	0	2	0	0	0	2	6
Other	34	-2	9	5	-26	-11	-30	-4	31	-28	6
Total	**8,596**	**151**	**186**	**98**	**85**	**138**	**-266**	**-16**	**791**	**1,168**	**9,764**
Persian Gulf[d]	**2,044**	**3**	**23**	**2**	**1**	**4**	**-4**	**(s)**	**60**	**88**	**2,132**

[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] Formerly Zaire.

[d] 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," and the U.S. Bureau of the Census.

Table 30. Stocks of Crude Oil and Petroleum Products by PAD District, 1998

(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					U. S. Total
	I	II	III	IV	V	
Crude Oil	**14,460**	**72,393**	**739,483**	**11,141**	**57,471**	**894,948**
Refinery	13,712	13,373	48,018	1,915	22,090	99,108
Tank Farms and Pipelines	728	58,065	106,359	8,421	28,699	202,272
Leases	20	955	13,701	805	863	16,344
Strategic Petroleum Reserve[*a]	0	0	571,405	0	0	571,405
Alaskan In Transit	0	0	0	0	5,819	5,819
Total Stocks, All Oils (excluding Crude Oil)	**200,425**	**171,745**	**269,970**	**17,657**	**92,230**	**752,027**
Refinery	61,529	59,357	137,642	11,668	61,274	331,470
Bulk Terminal	107,960	71,599	78,647	2,728	23,763	284,697
Pipeline	30,883	38,924	50,126	2,971	7,083	129,987
Natural Gas Processing Plant	53	1,865	3,555	290	110	5,873
Pentanes Plus	**34**	**2,462**	**5,911**	**212**	**59**	**8,678**
Refinery	0	414	222	22	0	658
Bulk Terminal	23	1,133	3,583	1	38	4,778
Pipeline	0	428	1,259	67	0	1,754
Natural Gas Processing Plant	11	487	847	122	21	1,488
Liquefied Petroleum Gases	**7,135**	**38,660**	**63,840**	**1,202**	**4,245**	**115,082**
Refinery	1,913	4,345	9,914	409	1,049	17,630
Bulk Terminal	2,706	25,799	38,027	150	3,107	69,789
Pipeline	2,474	7,138	13,191	475	0	23,278
Natural Gas Processing Plant	42	1,378	2,708	168	89	4,385
Ethane/Ethylene	**0**	**4,844**	**15,982**	**210**	**0**	**21,036**
Refinery	0	2	349	0	0	351
Bulk Terminal	0	2,961	12,182	0	0	15,143
Pipeline	0	1,628	2,665	207	0	4,500
Natural Gas Processing Plant	0	253	786	3	0	1,042
Propane/Propylene	**5,069**	**26,995**	**29,972**	**488**	**2,109**	**64,633**
Refinery	474	2,392	3,750	102	83	6,801
Bulk Terminal	2,222	20,049	17,654	149	1,963	42,037
Pipeline	2,353	3,684	7,849	155	0	14,041
Natural Gas Processing Plant	20	870	719	82	63	1,754
Normal Butane/Butylene	**1,871**	**5,085**	**13,109**	**315**	**1,765**	**22,145**
Refinery	1,247	1,467	4,043	174	644	7,575
Bulk Terminal	484	2,119	6,435	1	1,105	10,144
Pipeline	121	1,355	1,875	73	0	3,424
Natural Gas Processing Plant	19	144	756	67	16	1,002
Isobutane/Isobutylene	**195**	**1,736**	**4,777**	**189**	**371**	**7,268**
Refinery	192	484	1,772	133	322	2,903
Bulk Terminal	0	670	1,756	0	39	2,465
Pipeline	0	471	802	40	0	1,313
Natural Gas Processing Plant	3	111	447	16	10	587
Other Hydrocarbons/Hydrogen/Oxygenates	**2,234**	**2,120**	**5,470**	**263**	**4,085**	**14,172**
Refinery	1,883	663	2,178	64	2,271	7,059
Bulk Terminal	351	1,276	3,174	191	557	5,549
Pipeline	0	181	118	8	1,257	1,564
Other Hydrocarbons/Hydrogen	**0**	**19**	**1**	**0**	**4**	**24**
Refinery	0	19	1	0	4	24
Fuel Ethanol	**262**	**1,893**	**625**	**96**	**530**	**3,406**
Refinery	W	436	W	W	W	602
Bulk Terminal[*b]	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[*b]	W	W	W	W	W	W
Pipeline	W	W	W	W	W	W
Methanol	**W**	**W**	**W**	**W**	**W**	**866**
Refinery	W	W	W	W	W	866

See footnotes at end of table.

Table 30. Stocks of Crude Oil and Petroleum Products by PAD District, 1998 (Continued)

(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					U. S. Total
	I	II	III	IV	V	
MTBE	**1,574**	**W**	**4,196**	**W**	**3,543**	**9,653**
Refinery	1,437	W	1,641	W	2,234	5,501
Bulk Terminal [*b]	W	W	2,437	W	66	2,791
Pipeline	W	W	118	W	1,243	1,361
Other Oxygenates [*c]	**W**	**W**	**W**	**W**	**W**	**W**
Refinery	W	W	W	W	W	W
Bulk Terminal [*b]	W	W	W	W	W	W
Pipeline	W	W	W	W	W	W
Unfinished Oils	**10,546**	**11,925**	**45,578**	**2,657**	**20,130**	**90,836**
Refinery						
Naphthas and Lighter	1,930	3,429	13,043	478	3,129	22,009
Kerosene and Light Gas Oils	2,521	1,592	7,710	291	4,656	16,770
Heavy Gas Oils	4,587	3,869	17,964	1,452	9,606	37,478
Residuum	1,508	3,035	6,861	436	2,739	14,579
Motor Gasoline Blending Components	**9,667**	**11,094**	**13,622**	**2,062**	**7,398**	**43,843**
Refinery	7,816	8,530	12,185	2,062	7,055	37,648
Bulk Terminal	1,785	1,100	890	0	161	3,936
Pipeline	66	1,464	547	0	182	2,259
Aviation Gasoline Blending Components	**173**	**14**	**22**	**0**	**22**	**231**
Refinery	173	14	22	0	22	231
Finished Motor Gasoline	**52,060**	**42,363**	**50,751**	**4,682**	**21,940**	**171,796**
Refinery	9,654	8,791	19,811	2,227	10,678	51,161
Bulk Terminal	29,069	18,675	11,972	1,079	8,991	69,786
Pipeline	13,337	14,897	18,968	1,376	2,271	50,849
Reformulated	**22,282**	**909**	**9,277**	**0**	**11,796**	**44,264**
Refinery	5,637	422	3,542	0	6,249	15,850
Bulk Terminal	11,434	404	2,384	0	4,290	18,512
Pipeline	5,211	83	3,351	0	1,257	9,902
Oxygenated	**325**	**419**	**1**	**153**	**4**	**902**
Refinery	17	251	0	34	0	302
Bulk Terminal	308	168	1	119	4	600
Pipeline	0	0	0	0	0	0
Other	**29,453**	**41,035**	**41,473**	**4,529**	**10,140**	**126,630**
Refinery	4,000	8,118	16,269	2,193	4,429	35,009
Bulk Terminal	17,327	18,103	9,587	960	4,697	50,674
Pipeline	8,126	14,814	15,617	1,376	1,014	40,947
Finished Aviation Gasoline	**260**	**510**	**350**	**35**	**671**	**1,826**
Refinery	23	119	302	28	210	682
Bulk Terminal	237	288	48	7	461	1,041
Pipeline	0	103	0	0	0	103
Naphtha-Type Jet Fuel	**0**	**0**	**1**	**0**	**33**	**34**
Refinery	0	0	1	0	25	26
Bulk Terminal	0	0	0	0	8	8
Pipeline	0	0	0	0	0	0
Kerosene-Type Jet Fuel	**10,921**	**9,602**	**14,087**	**795**	**9,255**	**44,660**
Refinery	1,376	2,993	6,836	370	4,563	16,138
Bulk Terminal	4,038	2,395	1,630	252	3,054	11,369
Pipeline	5,507	4,214	5,621	173	1,638	17,153

See footnotes at end of table.

Table 30. Stocks of Crude Oil and Petroleum Products by PAD District, 1998 (Continued)

(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					U. S. Total
	I	II	III	IV	V	
Kerosene	**3,903**	**1,211**	**1,573**	**130**	**126**	**6,943**
Refinery	295	331	571	95	57	1,349
Bulk Terminal	3,269	804	670	0	59	4,802
Pipeline	339	76	332	35	10	792
Distillate Fuel Oil	**76,367**	**33,440**	**31,164**	**3,053**	**12,051**	**156,075**
Refinery	18,584	9,231	14,784	1,519	5,610	49,728
Bulk Terminal	48,623	13,789	6,306	702	4,989	74,409
Pipeline	9,160	10,420	10,074	832	1,452	31,938
0.05 Percent Sulfur and Under	**23,168**	**23,720**	**18,614**	**2,538**	**8,737**	**76,777**
Refinery	4,033	5,832	7,997	1,119	4,210	23,191
Bulk Terminal	14,792	9,794	4,544	630	3,249	33,009
Pipeline	4,343	8,094	6,073	789	1,278	20,577
Greater than 0.05 Percent Sulfur	**53,199**	**9,720**	**12,550**	**515**	**3,314**	**79,298**
Refinery	14,551	3,399	6,787	400	1,400	26,537
Bulk Terminal	33,831	3,995	1,762	72	1,740	41,400
Pipeline	4,817	2,326	4,001	43	174	11,361
Residual Fuel Oil[*d]	**20,062**	**2,335**	**16,085**	**467**	**5,960**	**44,909**
Refinery	6,020	1,688	6,841	467	4,279	19,295
Bulk Terminal	14,042	647	9,244	0	1,408	25,341
Pipeline	0	0	0	0	273	273
Less than 0.31% Sulfur	**4,979**	**134**	**258**	**30**	**806**	**6,207**
Refinery	1,235	0	39	30	799	2,103
Bulk Terminal	3,744	134	219	0	7	4,104
0.31 to 1.00% Sulfur	**8,497**	**404**	**3,433**	**249**	**770**	**13,353**
Refinery	3,459	215	676	249	705	5,304
Bulk Terminal	5,038	189	2,757	0	65	8,049
Greater than 1.00% Sulfur	**6,586**	**1,797**	**12,394**	**188**	**4,111**	**25,076**
Refinery	1,326	1,473	6,126	188	2,775	11,888
Bulk Terminal	5,260	324	6,268	0	1,336	13,188
Naphtha for Petrochemical Feedstock Use	**414**	**165**	**1,316**	**0**	**198**	**2,093**
Refinery	414	165	1,316	0	198	2,093
Other Oils for Petrochemical Feedstock Use	**0**	**69**	**1,839**	**0**	**159**	**2,067**
Refinery	0	69	1,839	0	159	2,067
Special Naphthas	**99**	**441**	**1,622**	**0**	**45**	**2,207**
Refinery	79	429	1,400	0	35	1,943
Bulk Terminal	20	12	222	0	10	264
Lubricants	**2,490**	**1,585**	**7,686**	**0**	**1,417**	**13,178**
Refinery	834	504	6,150	0	903	8,391
Bulk Terminal	1,656	1,081	1,536	0	514	4,787
Waxes	**61**	**79**	**557**	**48**	**248**	**993**
Refinery	61	79	557	48	248	993
Petroleum Coke	**361**	**3,756**	**3,043**	**228**	**1,812**	**9,200**
Refinery	361	3,756	3,043	228	1,812	9,200
Asphalt and Road Oil	**3,572**	**9,639**	**4,148**	**1,803**	**2,189**	**21,351**
Refinery	1,457	5,175	3,313	1,471	1,800	13,216
Bulk Terminal	2,115	4,464	835	332	389	8,135
Miscellaneous Products	**66**	**275**	**1,305**	**20**	**187**	**1,853**
Refinery	40	136	779	1	170	1,126
Bulk Terminal	26	136	510	14	17	703
Pipeline	0	3	16	5	0	24
Total Stocks, All Oils	**214,885**	**244,138**	**1,009,453**	**28,798**	**149,701**	**1,646,975**

[a] Crude oil stocks in the Strategic Petroleum Reserve include non-U.S. stocks held under foreign or commercial storage agreements.

[b] Includes stocks held by producers.

[c] 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).

[d] 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 end of December.

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 31. Refinery, Bulk Terminal, and Natural Gas Plant Stocks of Selected Petroleum Products by PAD District and State, 1998

(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	**38,723**	**17,071**	**325**	**21,327**	**3,564**	**67,207**	**18,825**	**48,382**	**20,062**	**2,716**
Connecticut	1,537	1,537	0	0	120	6,603	765	5,838	80	W
Delaware, D.C., Maryland	2,144	1,614	0	530	127	5,704	1,010	4,694	4,289	W
Florida	4,961	0	0	4,961	47	1,910	1,149	761	807	77
Georgia	2,131	0	0	2,131	58	2,226	1,534	692	233	W
Maine, New Hampshire, Vermont	1,339	830	0	509	375	2,422	674	1,748	770	W
Massachusetts	1,257	1,257	0	0	280	5,195	579	4,616	912	W
New Jersey	9,048	6,840	124	2,084	822	18,715	4,770	13,945	5,992	W
New York	3,385	1,346	184	1,855	489	9,224	1,941	7,283	3,823	W
North Carolina	2,448	0	0	2,448	257	2,095	1,288	807	273	W
Pennsylvania	5,617	1,670	0	3,947	707	7,484	2,580	4,904	1,320	W
Rhode Island	458	458	0	0	W	1,335	189	1,146	W	W
South Carolina	1,497	0	0	1,497	122	984	652	332	W	W
Virginia	2,648	1,519	0	1,129	116	3,172	1,575	1,597	736	W
West Virginia	253	0	17	236	W	138	119	19	W	W
PAD District II	**27,466**	**826**	**419**	**26,221**	**1,135**	**23,020**	**15,626**	**7,394**	**2,335**	**23,311**
Illinois	3,155	125	0	3,030	148	3,628	2,566	1,062	895	856
Indiana	4,402	194	8	4,200	326	3,363	2,008	1,355	108	W
Iowa	996	0	0	996	W	1,226	990	236	W	W
Kansas, Nebraska	2,582	0	0	2,582	5	2,286	1,719	567	42	15,919
Kentucky	1,276	389	0	887	22	925	411	514	W	W
Michigan	2,861	0	0	2,861	121	1,532	1,215	317	103	3,986
Minnesota	1,357	0	251	1,106	W	1,580	1,177	403	178	W
Missouri	1,236	0	0	1,236	W	771	663	108	W	W
North Dakota, South Dakota	520	0	2	518	W	647	453	194	W	W
Ohio	3,788	9	0	3,779	311	2,587	1,417	1,170	195	W
Oklahoma	1,759	0	3	1,756	W	1,143	844	299	210	491
Tennessee	2,236	0	155	2,081	45	1,659	1,201	458	278	W
Wisconsin	1,298	109	0	1,189	W	1,673	962	711	79	W
PAD District III	**31,783**	**5,926**	**1**	**25,856**	**1,241**	**21,090**	**12,541**	**8,549**	**16,085**	**22,123**
Alabama	1,454	0	0	1,454	48	1,055	729	326	300	93
Arkansas	786	0	0	786	W	724	402	322	W	W
Louisiana	6,808	473	0	6,335	348	5,268	2,189	3,079	6,358	1,949
Mississippi	2,635	0	0	2,635	364	1,532	624	908	W	6,027
New Mexico	433	0	1	432	W	272	223	49	7	W
Texas	19,667	5,453	0	14,214	469	12,239	8,374	3,865	9,062	13,945
PAD District IV	**3,306**	**0**	**153**	**3,153**	**95**	**2,221**	**1,749**	**472**	**467**	**333**
Colorado	835	0	153	682	W	464	413	51	W	W
Idaho	257	0	0	257	W	219	151	68	W	W
Montana	1,049	0	0	1,049	W	556	556	0	85	18
Utah	585	0	0	585	W	593	298	295	78	239
Wyoming	580	0	0	580	W	389	331	58	W	44
PAD District V	**19,669**	**10,539**	**4**	**9,126**	**116**	**10,599**	**7,459**	**3,140**	**5,687**	**2,109**
Alaska	581	0	0	581	W	730	66	664	W	W
Arizona	1,125	111	1	1,013	W	483	417	66	W	W
California	11,717	10,428	0	1,289	108	6,110	5,195	915	3,367	466
Hawaii	902	0	0	902	W	522	115	407	W	W
Nevada	190	0	3	187	W	150	131	19	W	W
Oregon	1,402	0	0	1,402	W	666	551	115	72	W
Washington	3,752	0	0	3,752	W	1,938	984	954	966	72
U.S. Total	**120,947**	**34,362**	**902**	**85,683**	**6,151**	**124,137**	**56,200**	**67,937**	**44,636**	**50,592**

W = Withheld to avoid disclosure of individual company data.

Notes: • Stocks are reported as of the end of December. • 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 32. Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, 1998

(Thousand Barrels)

Commodity	From I to			From II to				From III to	
	II	III	V	I	III	IV	V	I	II
Crude Oil	**0**	**4,890**	**0**	**3,115**	**11,453**	**7,141**	**0**	**532**	**735,689**
Petroleum Products	**106,718**	**712**	**0**	**32,244**	**79,701**	**36,735**	**0**	**1,162,811**	**341,557**
Pentanes Plus	0	0	0	0	1,744	6	0	0	9,135
Liquefied Petroleum Gases	0	0	0	9,088	53,579	1,171	0	27,959	39,438
Unfinished Oils	383	0	0	351	1,391	0	0	73	1,407
Motor Gasoline Blending Components	215	78	0	74	69	0	0	6,348	24,851
Finished Motor Gasoline	70,714	0	0	10,861	11,826	14,871	0	664,287	134,329
Reformulated	19	0	0	0	6,512	0	0	123,938	12,606
Oxygenated	0	0	0	488	0	141	0	0	0
Other	70,695	0	0	10,373	5,314	14,730	0	540,349	121,723
Finished Aviation Gasoline	0	0	0	0	0	141	0	926	1,087
Jet Fuel	3,488	20	0	1,325	9	11,784	0	159,509	54,088
Naphtha-Type	0	0	0	0	0	0	0	0	0
Kerosene-Type	3,488	20	0	1,325	9	11,784	0	159,509	54,088
Kerosene	252	0	0	457	0	0	0	1,508	201
Distillate Fuel Oil	31,005	0	0	7,531	5,305	8,762	0	270,417	64,546
0.05 percent sulfur and under	24,596	0	0	3,338	4,515	8,762	0	173,214	52,045
Greater than 0.05 percent sulfur	6,409	0	0	4,193	790	0	0	97,203	12,501
Residual Fuel Oil	0	373	0	284	5,144	0	0	16,213	434
Petrochemical Feedstocks[a]	654	0	0	0	0	0	0	1,957	745
Special Naphthas	0	20	0	10	72	0	0	1,565	2,079
Lubricants	0	221	0	649	362	0	0	8,524	3,440
Waxes	0	0	0	0	0	0	0	9	0
Asphalt and Road Oil	7	0	0	1,614	200	0	0	3,516	5,777
Miscellaneous Products	0	0	0	0	0	0	0	0	0
Total	**106,718**	**5,602**	**0**	**35,359**	**91,154**	**43,876**	**0**	**1,163,343**	**1,077,246**

Commodity	From III to		From IV to			From V to			
	IV	V	II	III	V	I	II	III	IV
Crude Oil	**0**	**0**	**36,894**	**10,715**	**0**	**0**	**0**	**22,288**	**0**
Petroleum Products	**4,458**	**33,242**	**28,050**	**27,282**	**11,971**	**501**	**0**	**2,324**	**0**
Pentanes Plus	0	0	1,916	3,242	0	0	0	0	0
Liquefied Petroleum Gases	0	0	16,769	24,040	0	0	0	0	0
Unfinished Oils	0	0	0	0	0	0	0	706	0
Motor Gasoline Blending Components	0	2,421	0	0	0	0	0	0	0
Finished Motor Gasoline	3,241	20,474	5,359	0	9,121	501	0	496	0
Reformulated	0	1,567	0	0	0	0	0	119	0
Oxygenated	0	1,967	0	0	0	0	0	0	0
Other	3,241	16,940	5,359	0	9,121	501	0	377	0
Finished Aviation Gasoline	0	212	0	0	0	0	0	0	0
Jet Fuel	630	5,098	349	0	1,167	0	0	0	0
Naphtha-Type	0	0	0	0	0	0	0	0	0
Kerosene-Type	630	5,098	349	0	1,167	0	0	0	0
Kerosene	0	0	95	0	0	0	0	0	0
Distillate Fuel Oil	587	4,740	3,562	0	1,683	0	0	324	0
0.05 percent sulfur and under	587	3,006	3,562	0	1,663	0	0	147	0
Greater than 0.05 percent sulfur	0	1,734	0	0	20	0	0	177	0
Residual Fuel Oil	0	0	0	0	0	0	0	0	0
Petrochemical Feedstocks[a]	0	0	0	0	0	0	0	102	0
Special Naphthas	0	0	0	0	0	0	0	0	0
Lubricants	0	297	0	0	0	0	0	586	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	110	0
Total	**4,458**	**33,242**	**64,944**	**37,997**	**11,971**	**501**	**0**	**24,612**	**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 33. Movements of Crude Oil and Petroleum Products by Pipeline Between PAD Districts, 1998

(Thousand Barrels)

Commodity	From I to		From II to			From III to	
	II	III	I	III	IV	I	II
Crude Oil	**0**	**4,667**	**1,803**	**11,453**	**7,141**	**0**	**735,687**
Petroleum Products	**105,340**	**0**	**11,716**	**68,472**	**36,735**	**867,464**	**289,953**
Pentanes Plus	0	0	0	1,744	6	0	9,135
Liquefied Petroleum Gases	0	0	9,088	53,579	1,171	24,908	39,438
Motor Gasoline Blending Components	0	0	30	0	0	142	24,092
Finished Motor Gasoline	70,654	0	1,499	10,617	14,871	499,786	113,052
Reformulated	19	0	0	6,512	0	121,607	6,512
Oxygenated	0	0	0	0	141	0	0
Other	70,635	0	1,499	4,105	14,730	378,179	106,540
Finished Aviation Gasoline	0	0	0	0	141	0	864
Jet Fuel	3,488	0	288	2	11,784	122,013	52,815
Naphtha-Type	0	0	0	0	0	0	0
Kerosene-Type	3,488	0	288	2	11,784	122,013	52,815
Kerosene	252	0	0	0	0	1,267	129
Distillate Fuel Oil	30,946	0	811	2,530	8,762	219,348	50,428
0.05 percent sulfur and under	24,596	0	288	1,920	8,762	136,610	46,943
Greater than 0.05 percent sulfur	6,350	0	523	610	0	82,738	3,485
Residual Fuel Oil	0	0	0	0	0	0	0
Miscellaneous Products	0	0	0	0	0	0	0
Total	**105,340**	**4,667**	**13,519**	**79,925**	**43,876**	**867,464**	**1,025,640**

Commodity	From III to		From IV to			From V to	
	IV	V	II	III	V	III	IV
Crude Oil	**0**	**0**	**36,894**	**10,715**	**0**	**22,288**	**0**
Petroleum Products	**4,458**	**30,270**	**28,050**	**27,282**	**11,971**	**0**	**0**
Pentanes Plus	0	0	1,916	3,242	0	0	0
Liquefied Petroleum Gases	0	0	16,769	24,040	0	0	0
Motor Gasoline Blending Components	0	1,804	0	0	0	0	0
Finished Motor Gasoline	3,241	19,301	5,359	0	9,121	0	0
Reformulated	0	1,477	0	0	0	0	0
Oxygenated	0	1,967	0	0	0	0	0
Other	3,241	15,857	5,359	0	9,121	0	0
Finished Aviation Gasoline	0	0	0	0	0	0	0
Jet Fuel	630	4,845	349	0	1,167	0	0
Naphtha-Type	0	0	0	0	0	0	0
Kerosene-Type	630	4,845	349	0	1,167	0	0
Kerosene	0	0	95	0	0	0	0
Distillate Fuel Oil	587	4,320	3,562	0	1,683	0	0
0.05 percent sulfur and under	587	2,586	3,562	0	1,663	0	0
Greater than 0.05 percent sulfur	0	1,734	0	0	20	0	0
Residual Fuel Oil	0	0	0	0	0	0	0
Miscellaneous Products	0	0	0	0	0	0	0
Total	**4,458**	**30,270**	**64,944**	**37,997**	**11,971**	**22,288**	**0**

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

Table 34. Movements of Crude Oil and Petroleum Products by Tanker and Barge Between PAD Districts, 1998

(Thousand Barrels)

Commodity	From I to			From II to			From III to	
	II	III	V	I	III	V	I	New England
Crude Oil	**0**	**223**	**0**	**1,312**	**0**	**0**	**532**	**0**
Petroleum Products	**1,378**	**712**	**0**	**20,528**	**11,229**	**0**	**295,347**	**1,642**
Liquefied Petroleum Gases	0	0	0	0	0	0	3,051	0
Unfinished Oils	383	0	0	351	1,391	0	73	0
Motor Gasoline Blending Components	215	78	0	44	69	0	6,206	52
Finished Motor Gasoline	60	0	0	9,362	1,209	0	164,501	733
Reformulated	0	0	0	0	0	0	2,331	733
Oxygenated	0	0	0	488	0	0	0	0
Other	60	0	0	8,874	1,209	0	162,170	0
Finished Aviation Gasoline	0	0	0	0	0	0	926	30
Jet Fuel	0	20	0	1,037	7	0	37,496	0
Naphtha-Type	0	0	0	0	0	0	0	0
Kerosene-Type	0	20	0	1,037	7	0	37,496	0
Kerosene	0	0	0	457	0	0	241	0
Distillate Fuel Oil	59	0	0	6,720	2,775	0	51,069	573
0.05 percent sulfur and under	0	0	0	3,050	2,595	0	36,604	180
Greater then 0.05 percent sulfur	59	0	0	3,670	180	0	14,465	393
Residual Fuel Oil	0	373	0	284	5,144	0	16,213	254
Less than 0.31 percent sulfur	0	0	0	0	0	0	0	0
0.31 to 1.00 percent sulfur	0	0	0	0	0	0	123	0
Greater than 1.00 percent sulfur	0	373	0	284	5,144	0	16,090	254
Petrochemical Feedstocks[a]	654	0	0	0	0	0	1,957	0
Special Naphthas	0	20	0	10	72	0	1,565	0
Lubricants	0	221	0	649	362	0	8,524	0
Waxes	0	0	0	0	0	0	9	0
Asphalt and Road Oil	7	0	0	1,614	200	0	3,516	0
Miscellaneous Products	0	0	0	0	0	0	0	0
Total	**1,378**	**935**	**0**	**21,840**	**11,229**	**0**	**295,879**	**1,642**

Commodity	From III to				From V to		
	Central Atlantic	Lower Atlantic	II	V	I	II	III
Crude Oil	**0**	**532**	**2**	**0**	**0**	**0**	**0**
Petroleum Products	**19,971**	**273,734**	**51,604**	**2,972**	**501**	**0**	**2,324**
Liquefied Petroleum Gases	0	3,051	0	0	0	0	0
Unfinished Oils	0	73	1,407	0	0	0	706
Motor Gasoline Blending Components	5,886	268	759	617	0	0	0
Finished Motor Gasoline	4,543	159,225	21,277	1,173	501	0	496
Reformulated	1,495	103	6,094	90	0	0	119
Oxygenated	0	0	0	0	0	0	0
Other	3,048	159,122	15,183	1,083	501	0	377
Finished Aviation Gasoline	253	643	223	212	0	0	0
Jet Fuel	756	36,740	1,273	253	0	0	0
Naphtha-Type	0	0	0	0	0	0	0
Kerosene-Type	756	36,740	1,273	253	0	0	0
Kerosene	0	241	72	0	0	0	0
Distillate Fuel Oil	2,182	48,314	14,118	420	0	0	324
0.05 percent sulfur and under	1,312	35,112	5,102	420	0	0	147
Greater then 0.05 percent sulfur	870	13,202	9,016	0	0	0	177
Residual Fuel Oil	552	15,407	434	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	123	0	0	0	0	0
Greater than 1.00 percent sulfur	552	15,284	434	0	0	0	0
Petrochemical Feedstocks[a]	0	1,957	745	0	0	0	102
Special Naphthas	523	1,042	2,079	0	0	0	0
Lubricants	4,581	3,943	3,440	297	0	0	586
Waxes	9	0	0	0	0	0	0
Asphalt and Road Oil	686	2,830	5,777	0	0	0	0
Miscellaneous Products	0	0	0	0	0	0	110
Total	**19,971**	**274,266**	**51,606**	**2,972**	**501**	**0**	**2,324**

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

Source: Energy Information Administration (EIA) Form EIA-817, "Monthly Tanker and Barge Movement Report."

Table 35. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, 1998

(Thousand Barrels)

Commodity	PAD District I			PAD District II		
	Receipts	Shipments	Net Receipts	Receipts	Shipments	Net Receipts
Crude Oil	**3,647**	**4,890**	**-1,243**	**772,583**	**21,709**	**750,874**
Petroleum Products	**1,195,556**	**107,430**	**1,088,126**	**476,325**	**148,680**	**327,645**
Pentanes Plus	0	0	0	11,051	1,750	9,301
Liquefied Petroleum Gases	37,047	0	37,047	56,207	63,838	-7,631
Ethane/Ethylene	0	0	0	8,303	30,425	-22,122
Propane/Propylene	35,736	0	35,736	34,269	23,412	10,857
Normal Butane/Butylene	1,025	0	1,025	7,622	8,716	-1,094
Isobutane/Isobutylene	286	0	286	6,013	1,285	4,728
Unfinished Oils	424	383	41	1,790	1,742	48
Motor Gasoline Blending Components	6,422	293	6,129	25,066	143	24,923
Finished Motor Gasoline	675,649	70,714	604,935	210,402	37,558	172,844
Reformulated	123,938	19	123,919	12,625	6,512	6,113
Oxygenated	488	0	488	0	629	-629
Other	551,223	70,695	480,528	197,777	30,417	167,360
Finished Aviation Gasoline	926	0	926	1,087	141	946
Jet Fuel	160,834	3,508	157,326	57,925	13,118	44,807
Naphtha-Type	0	0	0	0	0	0
Kerosene-Type	160,834	3,508	157,326	57,925	13,118	44,807
Kerosene	1,965	252	1,713	548	457	91
Distillate Fuel Oil	277,948	31,005	246,943	99,113	21,598	77,515
0.05 percent sulfur and under	176,552	24,596	151,956	80,203	16,615	63,588
Greater than 0.05 percent sulfur	101,396	6,409	94,987	18,910	4,983	13,927
Residual Fuel Oil	16,497	373	16,124	434	5,428	-4,994
Petrochemical Feedstocks[a]	1,957	654	1,303	1,399	0	1,399
Special Naphthas	1,575	20	1,555	2,079	82	1,997
Lubricants	9,173	221	8,952	3,440	1,011	2,429
Waxes	9	0	9	0	0	0
Asphalt and Road Oil	5,130	7	5,123	5,784	1,814	3,970
Miscellaneous Products	0	0	0	0	0	0
Total	**1,199,203**	**112,320**	**1,086,883**	**1,248,908**	**170,389**	**1,078,519**

Commodity	PAD District III			PAD District IV			PAD District V		
	Receipts	Shipments	Net Receipts	Receipts	Shipments	Net Receipts	Receipts	Shipments	Net Receipts
Crude Oil	**49,346**	**736,221**	**-686,875**	**7,141**	**47,609**	**-40,468**	**0**	**22,288**	**-22,288**
Petroleum Products	**110,019**	**1,542,068**	**-1,432,049**	**41,193**	**67,303**	**-26,110**	**45,213**	**2,825**	**42,388**
Pentanes Plus	4,986	9,135	-4,149	6	5,158	-5,152	0	0	0
Liquefied Petroleum Gases	77,619	67,397	10,222	1,171	40,809	-39,638	0	0	0
Ethane/Ethylene	41,383	2,584	38,799	0	16,677	-16,677	0	0	0
Propane/Propylene	21,981	54,225	-32,244	984	15,333	-14,349	0	0	0
Normal Butane/Butylene	10,895	5,692	5,203	185	5,319	-5,134	0	0	0
Isobutane/Isobutylene	3,360	4,896	-1,536	2	3,480	-3,478	0	0	0
Unfinished Oils	2,097	1,480	617	0	0	0	0	706	-706
Motor Gasoline Blending Components	147	33,620	-33,473	0	0	0	2,421	0	2,421
Finished Motor Gasoline	12,322	822,331	-810,009	18,112	14,480	3,632	29,595	997	28,598
Reformulated	6,631	138,111	-131,480	0	0	0	1,567	119	1,448
Oxygenated	0	1,967	-1,967	141	0	141	1,967	0	1,967
Other	5,691	682,253	-676,562	17,971	14,480	3,491	26,061	878	25,183
Finished Aviation Gasoline	0	2,225	-2,225	141	0	141	212	0	212
Jet Fuel	29	219,325	-219,296	12,414	1,516	10,898	6,265	0	6,265
Naphtha-Type	0	0	0	0	0	0	0	0	0
Kerosene-Type	29	219,325	-219,296	12,414	1,516	10,898	6,265	0	6,265
Kerosene	0	1,709	-1,709	0	95	-95	0	0	0
Distillate Fuel Oil	5,629	340,290	-334,661	9,349	5,245	4,104	6,423	324	6,099
0.05 percent sulfur and under	4,662	228,852	-224,190	9,349	5,225	4,124	4,669	147	4,522
Greater than 0.05 percent sulfur	967	111,438	-110,471	0	20	-20	1,754	177	1,577
Residual Fuel Oil	5,517	16,647	-11,130	0	0	0	0	0	0
Petrochemical Feedstocks[a]	102	2,702	-2,600	0	0	0	0	102	-102
Special Naphthas	92	3,644	-3,552	0	0	0	0	0	0
Lubricants	1,169	12,261	-11,092	0	0	0	297	586	-289
Waxes	0	9	-9	0	0	0	0	0	0
Asphalt and Road Oil	200	9,293	-9,093	0	0	0	0	0	0
Miscellaneous Products	110	0	110	0	0	0	0	110	-110
Total	**159,365**	**2,278,289**	**-2,118,924**	**48,334**	**114,912**	**-66,578**	**45,213**	**25,113**	**20,100**

[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 36. Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 1999

PAD District and State	Number of Operable Refineries			Atmospheric Crude Oil Distillation Capacity					
				Barrels per Calendar Day			Barrels per Stream Day		
	Total	Operating	Idle[a]	Total	Operating	Idle	Total	Operating	Idle
PAD District I	**17**	**14**	**3**	**1,690,600**	**1,542,600**	**148,000**	**1,780,269**	**1,621,269**	**159,000**
Delaware	1	1	0	157,000	157,000	0	160,000	160,000	0
Georgia	2	1	1	33,400	5,400	28,000	40,000	8,000	32,000
New Jersey	6	4	2	662,000	542,000	120,000	687,158	560,158	127,000
Pennsylvania	6	6	0	767,800	767,800	0	819,211	819,211	0
Virginia	1	1	0	58,600	58,600	0	61,900	61,900	0
West Virginia	1	1	0	11,800	11,800	0	12,000	12,000	0
PAD District II	**29**	**29**	**0**	**3,619,065**	**3,619,065**	**0**	**3,795,500**	**3,795,500**	**0**
Illinois	6	6	0	1,026,815	1,026,815	0	1,071,000	1,071,000	0
Indiana	2	2	0	433,000	433,000	0	456,000	456,000	0
Kansas	3	3	0	286,250	286,250	0	303,000	303,000	0
Kentucky	2	2	0	227,500	227,500	0	236,300	236,300	0
Michigan	2	2	0	126,000	126,000	0	130,000	130,000	0
Minnesota	2	2	0	330,000	330,000	0	354,000	354,000	0
North Dakota	1	1	0	58,000	58,000	0	60,000	60,000	0
Ohio	4	4	0	520,500	520,500	0	534,000	534,000	0
Oklahoma	5	5	0	438,000	438,000	0	468,700	468,700	0
Tennessee	1	1	0	140,000	140,000	0	147,500	147,500	0
Wisconsin	1	1	0	33,000	33,000	0	35,000	35,000	0
PAD District III	**57**	**56**	**1**	**7,410,950**	**7,381,950**	**29,000**	**7,819,562**	**7,786,562**	**33,000**
Alabama	3	3	0	130,000	130,000	0	138,000	138,000	0
Arkansas	3	3	0	64,900	64,900	0	67,000	67,000	0
Louisiana	17	17	0	2,600,300	2,600,300	0	2,744,755	2,744,755	0
Mississippi	4	4	0	335,800	335,800	0	384,000	384,000	0
New Mexico	3	3	0	94,600	94,600	0	99,107	99,107	0
Texas	27	26	1	4,185,350	4,156,350	29,000	4,386,700	4,353,700	33,000
PAD District IV	**16**	**16**	**0**	**528,120**	**528,120**	**0**	**555,289**	**555,289**	**0**
Colorado	2	2	0	85,500	85,500	0	92,000	92,000	0
Montana	4	4	0	151,950	151,950	0	156,700	156,700	0
Utah	5	5	0	158,000	158,000	0	168,500	168,500	0
Wyoming	5	5	0	132,670	132,670	0	138,089	138,089	0
PAD District V	**40**	**40**	**0**	**3,012,555**	**2,989,755**	**22,800**	**3,204,601**	**3,177,601**	**27,000**
Alaska	6	6	0	349,450	349,450	0	382,000	382,000	0
California	23	23	0	1,928,605	1,905,805	22,800	2,054,343	2,027,343	27,000
Hawaii	2	2	0	147,500	147,500	0	152,000	152,000	0
Nevada	2	2	0	7,000	7,000	0	7,100	7,100	0
Oregon	1	1	0	0	0	0	0	0	0
Washington	6	6	0	580,000	580,000	0	609,158	609,158	0
U.S. Total	**159**	**155**	**4**	**16,261,290**	**16,061,490**	**199,800**	**17,155,221**	**16,936,221**	**219,000**
Puerto Rico	2	2	0	35,000	35,000	0	36,000	36,000	0
Virgin Islands	1	1	0	495,000	470,000	25,000	525,000	495,000	30,000

See footnotes at end of table.

Table 36. Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 1999 (Continued)

PAD District and State	Downstream Charge Capacity (Barrels per Stream Day)							
	Vacuum Distillation	Thermal Cracking	Catalytic Cracking		Catalytic Hydro-cracking	Catalytic Reforming	Catalytic Hydro-treating	Fuels Solvent Deasphalting
			Fresh	Recycled				
PAD District I	**734,647**	**92,500**	**734,989**	**12,200**	**42,222**	**323,309**	**994,788**	**22,222**
Delaware	102,000	46,500	77,000	5,000	20,000	41,000	171,000	0
Georgia	0	0	0	0	0	0	0	0
New Jersey	284,763	25,500	325,833	5,000	0	87,111	326,500	22,222
Pennsylvania	307,184	0	304,056	200	22,222	180,398	457,688	0
Virginia	34,700	20,500	28,100	2,000	0	11,400	30,800	0
West Virginia	6,000	0	0	0	0	3,400	8,800	0
PAD District II	**1,491,400**	**333,000**	**1,293,100**	**30,050**	**153,200**	**909,750**	**2,550,500**	**31,200**
Illinois	421,600	104,500	361,000	3,000	70,000	284,700	665,900	0
Indiana	247,800	32,000	173,200	4,200	0	96,500	322,300	0
Kansas	123,000	57,500	87,000	500	0	66,500	261,500	0
Kentucky	95,000	0	100,000	0	0	48,000	196,300	14,000
Michigan	41,000	0	50,100	0	0	36,500	108,300	0
Minnesota	204,000	67,000	109,000	0	0	69,000	357,000	0
North Dakota	0	0	26,000	3,600	0	12,100	17,600	0
Ohio	181,000	39,500	181,000	16,500	78,200	163,000	251,000	12,800
Oklahoma	157,500	32,500	127,800	2,250	5,000	109,250	289,100	4,400
Tennessee	0	0	67,000	0	0	16,200	64,700	0
Wisconsin	20,500	0	11,000	0	0	8,000	16,800	0
PAD District III	**3,549,632**	**986,800**	**2,835,450**	**87,900**	**772,500**	**1,830,300**	**5,522,350**	**188,000**
Alabama	59,000	12,000	0	0	0	27,200	76,600	0
Arkansas	26,700	0	19,100	0	0	12,900	53,500	5,500
Louisiana	1,165,057	411,300	987,200	11,000	199,800	521,100	1,611,800	36,000
Mississippi	311,875	75,000	68,000	0	167,000	96,000	164,400	0
New Mexico	19,000	0	34,500	4,500	0	30,800	67,300	0
Texas	1,968,000	488,500	1,726,650	72,400	405,700	1,142,300	3,548,750	146,500
PAD District IV	**208,450**	**41,500**	**180,900**	**20,190**	**5,000**	**120,995**	**350,950**	**9,040**
Colorado	32,500	0	28,500	1,100	0	20,700	48,200	0
Montana	64,450	23,000	55,900	5,990	5,000	35,030	142,600	4,000
Utah	44,000	8,500	47,000	7,100	0	34,380	73,700	5,040
Wyoming	67,500	10,000	49,500	6,000	0	30,885	86,450	0
PAD District V	**1,553,805**	**592,488**	**875,367**	**3,000**	**579,112**	**595,078**	**2,042,511**	**68,000**
Alaska	26,000	0	0	0	12,500	12,000	12,000	0
California	1,147,973	496,488	676,889	0	497,612	427,656	1,660,478	50,000
Hawaii	74,300	13,000	22,000	0	18,000	13,000	15,500	0
Nevada	11,000	0	0	0	0	0	0	0
Oregon	15,000	0	0	0	0	0	0	0
Washington	279,532	83,000	176,478	3,000	51,000	142,422	354,533	18,000
U.S. Total	**7,537,934**	**2,046,288**	**5,919,806**	**153,340**	**1,552,034**	**3,779,432**	**11,461,099**	**318,462**
Puerto Rico	45,000	0	0	0	15,600	63,200	80,000	0
Virgin Islands	230,000	85,000	135,000	0	0	115,000	428,000	0

[a] Refineries where distillation units were completely idle but not permanently shutdown on January 1, 1999.
Source: Energy Information Administration (EIA), Form EIA-820, "Biennial Refinery Report."

Table 37. Production Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 1999
(Barrels per Stream Day, Except Where Noted)

PAD District and State	Production Capacity							
	Alkylates	Aromatics	Asphalt and Road Oil	Isomers	Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons/day)
PAD District I	**103,955**	**20,900**	**167,650**	**25,283**	**22,450**	**22,310**	**72**	**1,341**
Delaware	9,100	1,400	0	0	0	8,710	40	596
Georgia	0	0	27,000	0	0	0	0	0
New Jersey	35,333	7,500	120,400	12,333	12,000	7,500	20	298
Pennsylvania	55,322	12,000	20,000	12,950	6,850	0	11	373
Virginia	4,200	0	0	0	0	6,100	0	73
West Virginia	0	0	250	0	3,600	0	1	1
PAD District II	**267,950**	**51,200**	**277,766**	**203,400**	**25,100**	**89,025**	**377**	**4,756**
Illinois	97,500	8,000	70,250	17,750	7,600	32,200	99	1,726
Indiana	35,700	17,000	72,300	27,200	0	9,000	35	550
Kansas	25,700	3,000	0	37,000	0	13,925	6	306
Kentucky	12,000	12,000	23,000	13,250	8,500	0	0	491
Michigan	9,400	0	22,000	9,000	0	0	0	209
Minnesota	19,000	0	30,000	24,000	0	18,000	90	905
North Dakota	5,600	0	0	5,000	0	0	0	17
Ohio	25,300	11,200	26,500	27,000	200	8,200	101	325
Oklahoma	30,150	0	26,216	36,600	8,800	7,700	46	172
Tennessee	6,100	0	0	4,600	0	0	0	43
Wisconsin	1,500	0	7,500	2,000	0	0	0	12
PAD District III	**565,200**	**225,600**	**229,350**	**305,000**	**153,250**	**229,254**	**1,311**	**15,349**
Alabama	0	0	22,500	3,100	0	2,500	6	95
Arkansas	4,900	0	10,950	6,500	4,700	0	3	157
Louisiana	204,400	25,300	62,300	99,200	58,650	99,234	213	4,270
Mississippi	16,200	21,000	42,700	0	8,100	4,800	238	1,300
New Mexico	11,200	0	6,400	11,000	0	0	0	26
Texas	328,500	179,300	84,500	185,200	81,800	122,720	851	9,501
PAD District IV	**37,507**	**0**	**51,700**	**14,796**	**0**	**8,655**	**73**	**646**
Colorado	0	0	9,000	1,046	0	0	0	98
Montana	14,680	0	21,700	5,750	0	5,775	60	372
Utah	14,050	0	1,700	7,000	0	380	0	54
Wyoming	8,777	0	19,300	1,000	0	2,500	13	122
PAD District V	**197,134**	**4,300**	**119,318**	**118,322**	**32,400**	**91,847**	**1,271**	**4,331**
Alaska	0	2,800	6,000	4,000	0	0	13	15
California	162,667	1,500	68,868	95,889	32,400	90,343	1,143	4,106
Hawaii	5,000	0	16,000	3,200	0	0	21	34
Nevada	0	0	2,000	0	0	0	0	0
Oregon	0	0	11,250	0	0	0	0	0
Washington	29,467	0	15,200	15,233	0	1,504	94	176
U.S. Total	**1,171,746**	**302,000**	**845,784**	**666,801**	**233,200**	**441,091**	**3,104**	**26,423**
Puerto Rico	0	19,200	0	0	9,200	0	19	50
Virgin Islands	20,000	20,000	0	18,000	0	0	0	600

MMcfd = Million cubic feet per day.
Source: Energy Information Administration (EIA), Form EIA-820, "Biennial Refinery Report."

Directory of Operable Petroleum Refineries on Table 38

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999

(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Alabama	**130,000**	**0**	**138,000**	**0**	**59,000**	**12,000**	**0**	**0**	**0**
Coastal Mobile Refining Co.									
Chickasaw	16,500	0	18,000	0	14,000	0	0	0	0
Hunt Refining Co.									
Tuscaloosa	33,500	0	35,000	0	15,000	12,000	0	0	0
Shell Chemical									
Saraland (Mobile)	80,000	0	85,000	0	30,000	0	0	0	0
Alaska	**349,450**	**0**	**382,000**	**0**	**26,000**	**0**	**0**	**0**	**0**
Arco Alaska Inc.									
Kuparuk (Anchorage)	14,000	0	16,000	0	0	0	0	0	0
Prudhoe Bay	15,000	0	16,000	0	0	0	0	0	0
Petro Star Inc									
North Pole	13,750	0	14,000	0	0	0	0	0	0
Valdez	38,000	0	41,000	0	0	0	0	0	0
Tesoro Petroleum Corp.									
Kenai	72,000	0	80,000	0	20,000	0	0	0	0
Williams Alaska Petro Inc. (Formerly Mapco Petroleum Inc.)									
North Pole	196,700	0	215,000	0	6,000	0	0	0	0
Arkansas	**64,900**	**0**	**67,000**	**0**	**26,700**	**0**	**0**	**0**	**0**
Berry Petroleum Co.									
Stephens	6,700	0	7,000	0	3,700	0	0	0	0
Cross Oil & Refining Co Inc									
Smackover	6,200	0	7,000	0	3,500	0	0	0	0
Lion Oil Co									
El Dorado	52,000	0	53,000	0	19,500	0	0	0	0
California	**1,905,805**	**22,800**	**2,027,343**	**27,000**	**1,147,973**	**394,821**	**96,667**	**5,000**	**0**
Arco Products Co.									
Los Angeles	255,000	0	255,500	0	125,000	60,000	0	0	0
Chevron U.S.A. Inc.									
El Segundo	260,000	0	273,000	0	137,000	66,000	0	0	0
Richmond	225,000	0	240,000	0	115,000	0	0	0	0
Equilon Enterprises LLC (Formerly Texaco Refining & Marketing Inc.)									
Bakersfield	63,000	0	65,000	0	36,100	21,600	0	0	0
Wilmington	90,600	0	98,000	0	61,000	43,000	0	0	0
(Formerly Shell Oil Co.)									
Martinez	154,800	0	162,500	0	111,500	26,000	22,500	0	0
Exxon Co. U.S.A.									
Benicia	129,500	0	135,000	0	71,500	0	27,500	0	0
Golden Bear Oil Specialties (Formerly Witco Corp.)									
Bakersfield	0	0	0	0	10,000	0	0	0	0
Huntway Refining Co									
Benicia	8,505	0	9,000	0	8,400	0	0	0	0
Wilmington	5,500	0	6,000	0	5,700	0	0	0	0
Kern Oil & Refining Co									
Bakersfield	24,700	0	25,000	0	0	0	0	0	0
Lunday Thagard									
South Gate	8,100	0	8,500	0	7,000	0	0	0	0
Mobil Oil Corp									
Torrance	130,000	0	155,000	0	103,000	52,000	0	0	0
Paramount Petroleum Corp.									
Paramount	42,500	0	45,000	0	28,000	0	0	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
Alabama	**0**	**0**	**0**	**7,200**	**20,000**	**12,000**	**31,600**	**33,000**	**0**	**0**
Chickasaw	0	0	0	0	0	0	0	0	0	0
Tuscaloosa	0	0	0	7,200	0	12,000	13,100	12,000	0	0
Saraland (Mobile)	0	0	0	0	20,000	0	18,500	21,000	0	0
Alaska	**0**	**0**	**12,500**	**12,000**	**0**	**0**	**12,000**	**0**	**0**	**0**
Kuparuk (Anchorage)	0	0	0	0	0	0	0	0	0	0
Prudhoe Bay	0	0	0	0	0	0	0	0	0	0
North Pole	0	0	0	0	0	0	0	0	0	0
Valdez	0	0	0	0	0	0	0	0	0	0
Kenai	0	0	12,500	12,000	0	0	12,000	0	0	0
North Pole	0	0	0	0	0	0	0	0	0	0
Arkansas	**19,100**	**0**	**0**	**12,900**	**0**	**25,000**	**20,000**	**8,500**	**0**	**5,500**
Stephens	0	0	0	0	0	0	0	0	0	0
Smackover	0	0	0	0	0	4,000	0	0	0	0
El Dorado	19,100	0	0	12,900	0	21,000	20,000	8,500	0	5,500
California	**676,889**	**0**	**497,612**	**184,689**	**242,967**	**626,778**	**484,833**	**442,967**	**105,900**	**50,000**
Los Angeles	93,000	0	44,000	0	50,000	85,000	40,000	17,000	15,700	0
El Segundo	65,000	0	49,000	40,000	0	72,000	73,500	78,000	0	0
Richmond	70,000	0	154,000	62,000	0	0	55,000	95,000	26,000	50,000
Bakersfield	0	0	22,000	11,800	0	20,000	12,500	0	4,700	0
Wilmington	34,000	0	30,000	0	30,000	30,000	22,000	15,000	0	0
Martinez	73,000	0	37,000	31,000	0	75,000	28,000	28,000	40,100	0
Benicia	73,000	0	35,000	0	35,000	39,000	74,000	26,000	18,000	0
Bakersfield	0	0	0	0	0	0	0	2,000	1,400	0
Benicia	0	0	0	0	0	0	0	0	0	0
Wilmington	0	0	0	0	0	0	0	0	0	0
Bakersfield	0	0	0	0	3,300	0	5,000	7,300	0	0
South Gate	0	0	0	0	0	0	0	0	0	0
Torrance	95,000	0	28,000	0	22,000	106,000	22,000	15,000	0	0
Paramount	0	0	0	0	9,000	12,000	10,000	8,000	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Petroleum Fuel & Terminal									
Long Beach	12,800	12,800	25,000	15,000	0	0	0	0	0
San Joaquin Refining Co Inc									
Bakersfield	14,300	10,000	15,000	12,000	14,300	0	0	5,000	0
Santa Maria Refining Co.									
Santa Maria	9,500	0	10,000	0	10,000	0	0	0	0
Tenby Inc.									
Oxnard	4,000	0	5,000	0	0	0	0	0	0
Tosco Refining Co.									
Martinez (Avon)	156,000	0	164,211	0	107,368	0	46,667	0	0
(Formerly Unocal Corp.)									
Arroyo Grande	41,800	0	44,000	0	33,684	23,444	0	0	0
Rodeo	73,200	0	77,053	0	40,421	23,444	0	0	0
Wilmington	125,000	0	131,579	0	78,000	53,333	0	0	0
Ultramar Refining									
(Formerly Ultramar Corp.)									
Wilmington	72,000	0	78,000	0	45,000	26,000	0	0	0
Colorado	**85,500**	**0**	**92,000**	**0**	**32,500**	**0**	**0**	**0**	**0**
Colorado Refining Co.									
Commerce City	28,000	0	32,000	0	7,500	0	0	0	0
Conoco Inc.									
Commerce City	57,500	0	60,000	0	25,000	0	0	0	0
Delaware	**157,000**	**0**	**160,000**	**0**	**102,000**	**0**	**46,500**	**0**	**0**
Motiva Enterprises LLC									
(Formerly Star Enterprise)									
Delaware City	157,000	0	160,000	0	102,000	0	46,500	0	0
Georgia	**5,400**	**28,000**	**8,000**	**32,000**	**0**	**0**	**0**	**0**	**0**
Citgo Asphalt Refining Co.									
Savannah	0	28,000	0	32,000	0	0	0	0	0
Young Refining Corp									
Douglasville	5,400	0	8,000	0	0	0	0	0	0
Hawaii	**147,500**	**0**	**152,000**	**0**	**74,300**	**0**	**0**	**13,000**	**0**
Chevron U.S.A. Inc.									
Honolulu	54,000	0	57,000	0	31,300	0	0	0	0
Tesoro Hawaii Corp.									
(Formerly BHP Petroleum Americas Refining Inc.)									
Ewa Beach	93,500	0	95,000	0	43,000	0	0	13,000	0
Illinois	**1,026,815**	**0**	**1,071,000**	**0**	**421,600**	**104,500**	**0**	**0**	**0**
Clark Refining & Marketing									
Blue Island	80,515	0	81,000	0	35,000	0	0	0	0
Hartford	64,000	0	67,000	0	30,000	17,500	0	0	0
Equilon Enterprises LLC									
(Formerly Shell Oil Co.)									
Wood River	288,300	0	310,000	0	119,000	0	0	0	0
Marathon Ashland Petro LLC									
(Formerly Marathon Oil Co.)									
Robinson	192,000	0	196,000	0	57,000	0	0	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
Long Beach	0	0	0	0	0	0	0	0	0	0
Bakersfield	0	0	0	0	0	0	0	0	0	0
Santa Maria	0	0	0	0	0	0	0	0	0	0
Oxnard	0	0	0	0	0	0	0	0	0	0
Martinez (Avon)	73,889	0	35,556	23,889	20,556	72,222	33,333	52,222	0	0
Arroyo Grande	0	0	0	0	0	0	0	0	0	0
Rodeo	0	0	35,556	0	34,000	0	23,000	24,556	0	0
Wilmington	50,000	0	27,500	0	39,111	55,556	56,500	38,889	0	0
Wilmington	50,000	0	0	16,000	0	60,000	30,000	36,000	0	0
Colorado	**28,500**	**1,100**	**0**	**20,700**	**0**	**14,500**	**20,700**	**13,000**	**0**	**0**
Commerce City	9,500	1,100	0	10,500	0	0	10,500	0	0	0
Commerce City	19,000	0	0	10,200	0	14,500	10,200	13,000	0	0
Delaware	**77,000**	**5,000**	**20,000**	**41,000**	**0**	**0**	**79,000**	**59,000**	**33,000**	**0**
Delaware City	77,000	5,000	20,000	41,000	0	0	79,000	59,000	33,000	0
Georgia	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Savannah	0	0	0	0	0	0	0	0	0	0
Douglasville	0	0	0	0	0	0	0	0	0	0
Hawaii	**22,000**	**0**	**18,000**	**13,000**	**0**	**0**	**12,000**	**0**	**3,500**	**0**
Honolulu	22,000	0	0	0	0	0	0	0	3,500	0
Ewa Beach	0	0	18,000	13,000	0	0	12,000	0	0	0
Illinois	**361,000**	**3,000**	**70,000**	**211,000**	**73,700**	**29,000**	**307,200**	**299,200**	**30,500**	**0**
Blue Island	30,000	0	10,000	16,000	12,500	0	21,000	0	0	0
Hartford	27,000	0	0	0	14,000	0	13,500	14,700	0	0
Wood River	94,000	0	33,500	75,000	16,000	29,000	64,000	80,000	30,500	0
Robinson	48,000	0	26,500	76,000	0	0	59,000	68,000	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)

(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Mobil Oil Corp									
Joliet	240,000	0	250,000	0	105,600	50,000	0	0	0
PDV Midwest Refining LLC (Formerly Uno-Ven Co.)									
Lemont (Chicago)	162,000	0	167,000	0	75,000	37,000	0	0	0
Indiana	**433,000**	**0**	**456,000**	**0**	**247,800**	**32,000**	**0**	**0**	**0**
BP Amoco PLC (Formerly Amoco Oil Co.)									
Whiting	410,000	0	432,000	0	240,000	32,000	0	0	0
Countrymark Cooperative Inc									
Mount Vernon	23,000	0	24,000	0	7,800	0	0	0	0
Kansas	**286,250**	**0**	**303,000**	**0**	**123,000**	**57,500**	**0**	**0**	**0**
Equilon Enterprises LLC (Formerly Texaco Refining & Marketing Inc.)									
El Dorado	98,750	0	108,000	0	39,000	18,000	0	0	0
Farmland Industries Inc.									
Coffeyville	112,000	0	115,000	0	50,000	17,500	0	0	0
National Cooperative Refinery Assoc.									
McPherson	75,500	0	80,000	0	34,000	22,000	0	0	0
Kentucky	**227,500**	**0**	**236,300**	**0**	**95,000**	**0**	**0**	**0**	**0**
Marathon Ashland Petro LLC (Formerly Ashland Oil Inc.)									
Catlettsburg	222,000	0	230,000	0	95,000	0	0	0	0
Somerset Refinery Inc									
Somerset	5,500	0	6,300	0	0	0	0	0	0
Louisiana	**2,600,300**	**0**	**2,744,755**	**0**	**1,165,057**	**385,800**	**0**	**13,500**	**12,000**
BP Amoco PLC (Formerly BP Oil Corp.)									
Belle Chasse (Alliance)	255,000	0	255,000	0	93,000	25,800	0	0	0
Calcasieu Refining Co.									
Lake Charles	15,300	0	15,600	0	0	0	0	0	0
Calumet Lubricants Co LP									
Cotton Valley	7,800	0	8,500	0	0	0	0	0	0
Princeton	8,300	0	8,655	0	6,257	0	0	0	0
Chalmette Refining LLC (Formerly Mobil Oil Corp.)									
Chalmette	181,600	0	192,000	0	145,000	35,000	0	0	0
Citgo Petroleum Corp.									
Lake Charles	312,700	0	327,500	0	84,000	100,000	0	0	0
Conoco Inc.									
Westlake	229,900	0	242,000	0	115,500	66,000	0	0	12,000
Exxon Co. U.S.A.									
Baton Rouge	473,000	0	493,000	0	226,000	107,000	0	0	0
Marathon Ashland Petro LLC (Formerly Marathon Oil Co.)									
Garyville	232,000	0	243,000	0	125,000	0	0	0	0
Motiva Enterprises LLC (Formerly Star Enterprise)									
Convent	225,000	0	240,000	0	113,000	0	0	13,500	0
(Formerly Shell Oil Co.)									
Norco	232,000	0	235,000	0	80,000	27,000	0	0	0
Murphy Oil U.S.A. Inc.									
Meraux	95,000	0	100,000	0	50,000	0	0	0	0
Orion Refining Corp (Formerly Transamerican Refining Co.)									
Good Hope	110,000	0	150,000	0	55,000	25,000	0	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
Joliet	98,000	0	0	44,000	0	0	88,000	86,000	0	0
Lemont (Chicago)	64,000	3,000	0	0	31,200	0	61,700	50,500	0	0
Indiana	**173,200**	**4,200**	**0**	**6,500**	**90,000**	**98,300**	**125,000**	**99,000**	**0**	**0**
Whiting	165,000	4,000	0	0	90,000	98,300	115,000	99,000	0	0
Mount Vernon	8,200	200	0	6,500	0	0	10,000	0	0	0
Kansas	**87,000**	**500**	**0**	**29,000**	**37,500**	**48,000**	**103,500**	**99,000**	**11,000**	**0**
El Dorado	37,500	0	0	7,500	20,000	48,000	40,000	34,000	0	0
Coffeyville	28,000	0	0	0	17,500	0	30,000	30,000	0	0
McPherson	21,500	500	0	21,500	0	0	33,500	35,000	11,000	0
Kentucky	**100,000**	**0**	**0**	**47,000**	**1,000**	**43,000**	**65,300**	**77,000**	**11,000**	**14,000**
Catlettsburg	100,000	0	0	47,000	0	43,000	64,000	77,000	11,000	14,000
Somerset	0	0	0	0	1,000	0	1,300	0	0	0
Louisiana	**987,200**	**11,000**	**199,800**	**346,000**	**175,100**	**306,400**	**627,300**	**582,200**	**95,900**	**36,000**
Belle Chasse (Alliance)	105,000	2,000	0	0	44,100	0	48,000	58,400	0	0
Lake Charles	0	0	0	0	0	0	0	0	0	0
Cotton Valley	0	0	0	0	0	0	3,600	0	0	0
Princeton	0	0	0	0	0	0	0	0	8,500	0
Chalmette	78,000	0	22,000	18,000	28,000	46,000	38,000	30,000	0	0
Lake Charles	130,000	0	38,000	86,000	18,000	68,000	116,000	33,000	25,500	0
Westlake	51,000	0	28,000	48,000	0	0	52,700	128,500	13,000	0
Baton Rouge	219,000	0	25,000	71,000	0	0	154,000	90,000	47,700	0
Garyville	110,000	0	0	45,000	0	93,000	46,000	52,000	0	36,000
Convent	92,000	0	52,000	0	40,000	33,000	44,000	91,000	0	0
Norco	110,000	0	34,800	40,000	20,500	0	38,000	44,300	0	0
Meraux	38,000	0	0	18,000	0	27,500	22,000	15,000	0	0
Good Hope	0	0	0	0	12,000	30,000	30,000	30,000	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)

(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Pennzoil - Quaker State Corp (Formerly Pennzoil Producing Co.)									
Shreveport	46,200	0	50,000	0	24,300	0	0	0	0
Placid Refining Co									
Port Allen	48,500	0	49,500	0	20,000	0	0	0	0
Shell Chemical									
Saint Rose	50,000	0	55,000	0	28,000	0	0	0	0
Valero Refining Co. (Formerly Basis Petroleum Inc.)									
Krotz Springs	78,000	0	80,000	0	0	0	0	0	0
Michigan	**126,000**	**0**	**130,000**	**0**	**41,000**	**0**	**0**	**0**	**0**
Marathon Ashland Petro LLC (Formerly Marathon Oil Co.)									
Detroit	74,000	0	75,000	0	41,000	0	0	0	0
TPI Petroleum Inc. (Formerly Total Petroleum Inc.)									
Alma	52,000	0	55,000	0	0	0	0	0	0
Minnesota	**330,000**	**0**	**354,000**	**0**	**204,000**	**67,000**	**0**	**0**	**0**
Koch Refining Co.									
St. Paul (Pine Bend)	260,000	0	280,000	0	170,000	67,000	0	0	0
Marathon Ashland Petro LLC (Formerly Ashland Oil Inc.)									
Saint Paul Park	70,000	0	74,000	0	34,000	0	0	0	0
Mississippi	**335,800**	**0**	**384,000**	**0**	**311,875**	**75,000**	**0**	**0**	**0**
Chevron U.S.A. Inc.									
Pascagoula	295,000	0	340,000	0	286,000	75,000	0	0	0
Ergon Refining Inc.									
Vicksburg	24,000	0	25,000	0	19,000	0	0	0	0
Southland Oil Co									
Lumberton	5,800	0	6,500	0	0	0	0	0	0
Sandersville	11,000	0	12,500	0	6,875	0	0	0	0
Montana	**151,950**	**0**	**156,700**	**0**	**64,450**	**15,000**	**8,000**	**0**	**0**
Cenex Harvest States Coop (Formerly Cenex)									
Laurel	41,450	0	42,500	0	12,000	0	0	0	0
Conoco Inc.									
Billings	51,500	0	53,000	0	26,500	15,000	0	0	0
Exxon Co. U.S.A.									
Billings	52,000	0	54,000	0	22,500	0	8,000	0	0
Montana Refining Co.									
Great Falls	[E]7,000	0	7,200	0	3,450	0	0	0	0
Nevada	**7,000**	**0**	**7,100**	**0**	**11,000**	**0**	**0**	**0**	**0**
Foreland Refining Corp									
Eagle Springs	7,000	0	7,100	0	6,000	0	0	0	0
Tonapah	0	0	0	0	5,000	0	0	0	0
New Jersey	**542,000**	**120,000**	**560,158**	**127,000**	**284,763**	**25,500**	**0**	**0**	**0**
Amerada Hess Corp.									
Port Reading (Sewaren)	0	0	0	0	0	0	0	0	0
Chevron U.S.A. Inc.									
Perth Amboy	0	80,000	0	83,000	47,000	0	0	0	0
Citgo Asphalt Refining Co.									
Paulsboro	0	40,000	0	44,000	40,000	0	0	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
Shreveport	3,500	7,000	0	10,000	0	8,900	10,000	10,000	1,200	0
Port Allen	19,000	2,000	0	10,000	0	0	12,000	0	0	0
Saint Rose	0	0	0	0	0	0	0	0	0	0
Krotz Springs	31,700	0	0	0	12,500	0	13,000	0	0	0
Michigan	**50,100**	**0**	**0**	**36,500**	**0**	**17,800**	**41,500**	**45,200**	**3,800**	**0**
Detroit	30,000	0	0	20,000	0	17,800	16,500	19,400	0	0
Alma	20,100	0	0	16,500	0	0	25,000	25,800	3,800	0
Minnesota	**109,000**	**0**	**0**	**57,000**	**12,000**	**125,000**	**102,000**	**130,000**	**0**	**0**
St. Paul (Pine Bend)	84,000	0	0	37,000	12,000	100,000	80,000	105,000	0	0
Saint Paul Park	25,000	0	0	20,000	0	25,000	22,000	25,000	0	0
Mississippi	**68,000**	**0**	**167,000**	**62,000**	**34,000**	**36,000**	**54,800**	**65,500**	**8,100**	**0**
Pascagoula	68,000	0	167,000	62,000	34,000	36,000	54,800	65,500	0	0
Vicksburg	0	0	0	0	0	0	0	0	8,100	0
Lumberton	0	0	0	0	0	0	0	0	0	0
Sandersville	0	0	0	0	0	0	0	0	0	0
Montana	**55,900**	**5,990**	**5,000**	**12,000**	**23,030**	**39,000**	**44,600**	**53,000**	**6,000**	**4,000**
Laurel	13,500	1,500	0	12,000	0	16,000	18,000	15,000	0	4,000
Billings	19,000	990	0	0	12,000	20,000	10,000	15,000	0	0
Billings	21,000	3,500	5,000	0	10,000	0	15,500	20,000	6,000	0
Great Falls	2,400	0	0	0	1,030	3,000	1,100	3,000	0	0
Nevada	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Eagle Springs	0	0	0	0	0	0	0	0	0	0
Tonapah	0	0	0	0	0	0	0	0	0	0
New Jersey	**325,833**	**5,000**	**0**	**61,111**	**26,000**	**50,000**	**90,222**	**151,778**	**34,500**	**22,222**
Port Reading (Sewaren)	62,500	5,000	0	0	0	0	0	0	0	0
Perth Amboy	0	0	0	0	0	0	0	0	0	0
Paulsboro	0	0	0	0	0	0	0	0	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Coastal Eagle Point Oil Co.									
Westville	140,000	0	140,000	0	47,500	0	0	0	0
Tosco Refining Co.									
Linden (Bayway)	250,000	0	263,158	0	65,263	0	0	0	0
Valero Refining Co. (Formerly Mobil Oil Corp.)									
Paulsboro	152,000	0	157,000	0	85,000	25,500	0	0	0
New Mexico	**94,600**	**0**	**99,107**	**0**	**19,000**	**0**	**0**	**0**	**0**
Giant Industries Inc.									
Bloomfield	16,800	0	18,107	0	0	0	0	0	0
Giant Refining Co.									
Gallup	20,800	0	21,000	0	0	0	0	0	0
Navajo Refining Co.									
Artesia	57,000	0	60,000	0	19,000	0	0	0	0
North Dakota	**58,000**	**0**	**60,000**	**0**	**0**	**0**	**0**	**0**	**0**
BP Amoco PLC (Formerly Amoco Oil Co.)									
Mandan	58,000	0	60,000	0	0	0	0	0	0
Ohio	**520,500**	**0**	**534,000**	**0**	**181,000**	**39,500**	**0**	**0**	**0**
BP Amoco PLC (Formerly BP Oil Corp.)									
Toledo	152,000	0	155,000	0	65,000	18,000	0	0	0
Clark Refining & Marketing (Formerly BP Oil Corp.)									
Lima	161,500	0	165,000	0	52,000	21,500	0	0	0
Marathon Ashland Petro LLC (Formerly Ashland Oil Inc.)									
Canton	73,000	0	74,000	0	34,000	0	0	0	0
Sun Co Inc.									
Toledo	134,000	0	140,000	0	30,000	0	0	0	0
Oklahoma	**438,000**	**0**	**468,700**	**0**	**157,500**	**32,500**	**0**	**0**	**0**
Conoco Inc.									
Ponca City	168,000	0	183,700	0	55,000	23,700	0	0	0
Sinclair Oil Corp.									
Tulsa	64,000	0	68,000	0	27,000	0	0	0	0
Sun Co Inc.									
Tulsa	85,000	0	90,000	0	29,000	8,800	0	0	0
TPI Petroleum Inc. (Formerly Total Petroleum Inc.)									
Ardmore	75,000	0	79,000	0	32,000	0	0	0	0
Wynnewood Refining Co.									
Wynnewood	46,000	0	48,000	0	14,500	0	0	0	0
Oregon	**0**	**0**	**0**	**0**	**15,000**	**0**	**0**	**0**	**0**
Chevron U.S.A. Inc.									
Portland (Willbridge)	0	0	0	0	15,000	0	0	0	0
Pennsylvania	**767,800**	**0**	**819,211**	**0**	**307,184**	**0**	**0**	**0**	**0**
American Refining Group Inc (Formerly Witco Corp.)									
Bradford	10,000	0	10,500	0	0	0	0	0	0
Pennzoil - Quaker State Corp (Formerly Pennziol Producing Co.)									
Rouseville	12,800	0	16,500	0	6,500	0	0	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
Westville	55,000	0	0	30,000	0	0	32,000	18,000	11,000	0
Linden (Bayway)	153,333	0	0	31,111	0	50,000	32,222	87,778	0	22,222
Paulsboro	55,000	0	0	0	26,000	0	26,000	46,000	23,500	0
New Mexico	**34,500**	**4,500**	**0**	**15,000**	**15,800**	**0**	**34,800**	**32,500**	**0**	**0**
Bloomfield	6,000	500	0	0	4,000	0	4,000	3,000	0	0
Gallup	8,500	3,000	0	0	6,800	0	6,800	3,000	0	0
Artesia	20,000	1,000	0	15,000	5,000	0	24,000	26,500	0	0
North Dakota	**26,000**	**3,600**	**0**	**0**	**12,100**	**0**	**17,600**	**0**	**0**	**0**
Mandan	26,000	3,600	0	0	12,100	0	17,600	0	0	0
Ohio	**181,000**	**16,500**	**78,200**	**19,000**	**144,000**	**25,000**	**176,000**	**50,000**	**0**	**12,800**
Toledo	60,000	16,500	27,000	0	42,000	0	40,000	40,000	0	0
Lima	37,000	0	23,000	0	54,000	0	60,000	0	0	0
Canton	24,000	0	0	19,000	0	25,000	26,000	10,000	0	0
Toledo	60,000	0	28,200	0	48,000	0	50,000	0	0	12,800
Oklahoma	**127,800**	**2,250**	**5,000**	**31,000**	**78,250**	**53,800**	**126,000**	**98,800**	**10,500**	**4,400**
Ponca City	60,800	0	0	0	46,000	22,800	46,000	49,800	0	0
Tulsa	22,500	2,250	0	0	14,250	0	20,000	17,500	0	0
Tulsa	0	0	0	0	18,000	0	25,000	0	10,500	0
Ardmore	26,500	0	0	18,500	0	31,000	24,000	31,500	0	0
Wynnewood	18,000	0	5,000	12,500	0	0	11,000	0	0	4,400
Oregon	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Portland (Willbridge)	0	0	0	0	0	0	0	0	0	0
Pennsylvania	**304,056**	**200**	**22,222**	**58,598**	**121,800**	**66,222**	**197,022**	**186,444**	**8,000**	**0**
Bradford	0	0	0	0	1,800	0	3,300	0	0	0
Rouseville	0	0	0	5,820	0	0	6,500	0	8,000	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)

(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Sun Co Inc.									
Marcus Hook	175,000	0	185,000	0	36,000	0	0	0	0
Sun Refining & Marketing									
Philadelphia	330,000	0	355,000	0	160,000	0	0	0	0
Tosco Refining Co. (Formerly BP Oil Co.)									
Trainer	175,000	0	184,211	0	73,684	0	0	0	0
United Refining Co.									
Warren	65,000	0	68,000	0	31,000	0	0	0	0
Tennessee	**140,000**	**0**	**147,500**	**0**	**0**	**0**	**0**	**0**	**0**
Williams Refining LLC (Formerly Mapco Petroleum Inc.)									
Memphis	140,000	0	147,500	0	0	0	0	0	0
Texas	**4,156,350**	**29,000**	**4,353,700**	**33,000**	**1,968,000**	**436,500**	**42,000**	**10,000**	**0**
Age Refining & Marketing									
San Antonio	9,000	0	10,000	0	0	0	0	0	0
BP Amoco PLC (Formerly Amoco Oil Co.)									
Texas City	433,000	0	460,000	0	240,000	42,500	0	0	0
Chevron U.S.A. Inc.									
El Paso	90,000	0	102,000	0	43,000	0	0	0	0
Citgo Refining & Chemical Inc.									
Corpus Christi	157,000	0	165,000	0	82,000	44,000	0	0	0
Clark Refining & Marketing									
Port Arthur	203,500	0	212,000	0	100,000	37,500	0	0	0
Coastal Refining & Marketing Inc.									
Corpus Christi	95,000	0	102,500	0	57,000	18,000	0	10,000	0
Crown Central Petroleum Corp.									
Pasadena	100,000	0	103,000	0	38,000	12,500	0	0	0
Deer Park Refg Ltd Ptnrshp									
Deer Park	274,200	0	280,000	0	149,500	65,000	0	0	0
Diamond Shamrock Refining & Marketing Co.									
Sunray (McKee)	145,900	0	152,000	0	50,000	0	0	0	0
Three Rivers	90,000	2,000	92,000	4,000	32,000	0	0	0	0
Exxon Co. U.S.A.									
Baytown	465,000	0	485,000	0	240,000	0	42,000	0	0
Fina Oil & Chemical Co									
Big Spring	58,500	0	61,000	0	24,000	0	0	0	0
Port Arthur	178,500	0	183,500	0	52,000	0	0	0	0
Koch Refining Co.									
Corpus Christi	297,000	0	305,000	0	110,000	15,200	0	0	0
La Gloria Oil & Gas Co.									
Tyler	55,000	0	60,000	0	15,000	6,000	0	0	0
Lyondell Citgo Refining Co. Ltd.									
Houston	268,850	0	283,000	0	190,000	98,000	0	0	0
Marathon Ashland Petro LLC (Formerly Marathon Oil Co.)									
Texas City	72,000	0	75,000	0	0	0	0	0	0
Mobil Oil Corp									
Beaumont	335,000	0	345,000	0	145,000	41,800	0	0	0
Motiva Enterprises LLC (Formerly Star Enterprise)									
Port Arthur	235,000	0	250,000	0	120,500	56,000	0	0	0
Neste Trifinery Petro Serve									
Corpus Christi	0	27,000	0	29,000	25,000	0	0	0	0
Phillips 66 Co.									
Borger	125,000	0	130,000	0	0	0	0	0	0
Sweeny	205,000	0	213,000	0	74,000	0	0	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
Marcus Hook	105,000	0	0	0	20,000	0	45,000	40,000	0	0
Philadelphia	118,500	0	0	0	86,000	24,000	88,000	79,000	0	0
Trainer	55,556	0	22,222	52,778	0	42,222	32,222	44,444	0	0
Warren	25,000	200	0	0	14,000	0	22,000	23,000	0	0
Tennessee	**67,000**	**0**	**0**	**16,200**	**0**	**0**	**20,700**	**44,000**	**0**	**0**
Memphis	67,000	0	0	16,200	0	0	20,700	44,000	0	0
Texas	**1,726,650**	**72,400**	**405,700**	**817,800**	**324,500**	**641,500**	**1,221,300**	**1,275,250**	**410,700**	**146,500**
San Antonio	0	0	0	0	0	0	0	0	0	0
Texas City	220,000	40,000	120,000	70,000	75,000	100,000	143,000	140,000	0	0
El Paso	30,000	0	0	22,700	0	0	23,100	21,500	0	0
Corpus Christi	82,000	0	0	51,500	0	65,000	58,500	50,000	0	0
Port Arthur	65,000	0	0	50,000	0	65,000	50,000	90,000	23,000	0
Corpus Christi	20,000	0	10,500	0	29,000	25,000	33,000	24,000	0	0
Pasadena	56,000	0	0	23,000	0	0	28,000	7,000	16,000	0
Deer Park	70,000	5,000	68,500	47,300	27,000	93,500	65,000	72,000	12,000	0
Sunray (McKee)	48,500	0	29,000	25,000	18,000	0	34,500	34,000	0	16,500
Three Rivers	23,500	0	26,000	20,000	10,000	0	20,000	0	10,000	9,500
Baytown	203,000	5,000	28,000	123,000	0	110,000	148,000	198,000	66,500	38,000
Big Spring	25,000	0	0	21,000	0	6,000	25,500	22,750	2,500	10,000
Port Arthur	64,000	0	0	35,000	0	27,000	44,200	55,000	0	19,500
Corpus Christi	110,000	0	11,700	52,000	23,500	18,000	113,000	63,000	0	0
Tyler	20,250	0	0	4,500	13,000	0	20,000	12,000	0	0
Houston	102,000	0	0	25,000	45,000	101,000	81,000	128,000	3,700	0
Texas City	42,000	0	0	0	11,000	0	0	0	0	0
Beaumont	110,000	0	55,000	150,000	0	0	143,000	93,000	0	0
Port Arthur	90,000	0	21,000	48,000	0	31,000	59,500	71,000	0	0
Corpus Christi	0	0	0	0	0	0	0	0	0	0
Borger	60,000	10,400	0	0	26,000	0	26,500	40,000	50,000	0
Sweeny	99,400	12,000	0	0	37,500	0	55,700	51,000	82,500	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
South Hampton Refining Co.									
Silsbee	0	0	0	0	0	0	0	0	0
Specified Fuels & Chemls LLC									
(Formerly Howell Hydrocarbons & Chemical Inc.)									
Channelview	1,400	0	1,700	0	0	0	0	0	0
Valero Refining Co.									
(Formerly Basis Petroleum Co.)									
Corpus Christi	38,000	0	38,000	0	32,000	0	0	0	0
Houston	72,500	0	85,000	0	39,000	0	0	0	0
Texas City	152,000	0	160,000	0	110,000	0	0	0	0
Utah	**158,000**	**0**	**168,500**	**0**	**44,000**	**8,500**	**0**	**0**	**0**
BP Amoco PLC									
(Formerly Amoco Oil Co.)									
Salt Lake City	53,000	0	56,000	0	0	0	0	0	0
Big West Oil Co.									
North Salt Lake	24,000	0	25,000	0	5,000	0	0	0	0
Chevron U.S.A. Inc.									
Salt Lake City	45,000	0	49,000	0	27,500	8,500	0	0	0
Inland Refining Inc.									
(Formerly Crysen Refining Co.)									
Woods Cross	11,000	0	12,500	0	6,000	0	0	0	0
Phillips 66 Co.									
Woods Cross	25,000	0	26,000	0	5,500	0	0	0	0
Virginia	**58,600**	**0**	**61,900**	**0**	**34,700**	**20,500**	**0**	**0**	**0**
BP Amoco PLC									
(Formerly Amoco Oil Co.)									
Yorktown	58,600	0	61,900	0	34,700	20,500	0	0	0
Washington	**580,000**	**0**	**609,158**	**0**	**279,532**	**83,000**	**0**	**0**	**0**
Arco Products Co.									
Ferndale (Cherry Point)	202,000	0	213,000	0	108,000	58,000	0	0	0
Chevron U.S.A. Inc.									
Richmond Beach	0	0	0	0	6,200	0	0	0	0
Equilon Enterprises LLC									
(Formerly Texaco Refining & Marketing Inc.)									
Anacortes	142,000	0	147,500	0	60,000	25,000	0	0	0
Tesoro Northwest Co.									
(Formerly Shell Oil Co.)									
Anacortes	107,500	0	112,000	0	47,000	0	0	0	0
Tosco Refining Co.									
Ferndale	88,500	0	93,158	0	32,632	0	0	0	0
U.S. Oil & Refining Co.									
Tacoma	40,000	0	43,500	0	25,700	0	0	0	0
West Virginia	**11,800**	**0**	**12,000**	**0**	**6,000**	**0**	**0**	**0**	**0**
Ergon West Virginia Inc.									
(Formerly Quaker State Corp.)									
Newell (Congo)	11,800	0	12,000	0	6,000	0	0	0	0
Wisconsin	**33,000**	**0**	**35,000**	**0**	**20,500**	**0**	**0**	**0**	**0**
Murphy Oil U.S.A. Inc.									
Superior	33,000	0	35,000	0	20,500	0	0	0	0
Wyoming	**132,670**	**0**	**138,089**	**0**	**67,500**	**10,000**	**0**	**0**	**0**
Frontier Refining									
Cheyenne	38,670	0	41,000	0	23,500	10,000	0	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
Silsbee	0	0	0	800	0	0	3,800	0	500	0
Channelview	0	0	0	0	0	0	0	0	0	0
Corpus Christi	78,000	0	36,000	36,000	0	0	26,000	0	74,000	0
Houston	60,000	0	0	0	0	0	0	45,000	0	18,000
Texas City	48,000	0	0	13,000	9,500	0	20,000	58,000	70,000	35,000
Utah	**47,000**	**7,100**	**0**	**0**	**34,380**	**0**	**41,300**	**25,200**	**7,200**	**5,040**
Salt Lake City	20,000	4,000	0	0	11,000	0	11,000	0	0	0
North Salt Lake	5,000	500	0	0	5,500	0	7,000	7,000	0	0
Salt Lake City	14,000	0	0	0	8,000	0	8,300	13,300	7,200	0
Woods Cross	0	0	0	0	2,200	0	3,000	3,200	0	0
Woods Cross	8,000	2,600	0	0	7,680	0	12,000	1,700	0	5,040
Virginia	**28,100**	**2,000**	**0**	**11,400**	**0**	**0**	**11,900**	**18,900**	**0**	**0**
Yorktown	28,100	2,000	0	11,400	0	0	11,900	18,900	0	0
Washington	**176,478**	**3,000**	**51,000**	**105,222**	**37,200**	**58,600**	**138,722**	**118,211**	**39,000**	**18,000**
Ferndale (Cherry Point)	51,000	0	51,000	62,000	0	51,000	51,000	26,000	0	0
Richmond Beach	0	0	0	0	0	0	0	0	0	0
Anacortes	54,000	0	0	0	31,000	0	29,000	16,000	39,000	0
Anacortes	43,700	3,000	0	26,000	0	7,600	34,000	29,300	0	18,000
Ferndale	27,778	0	0	17,222	0	0	17,222	41,111	0	0
Tacoma	0	0	0	0	6,200	0	7,500	5,800	0	0
West Virginia	**0**	**0**	**0**	**3,400**	**0**	**4,800**	**4,000**	**0**	**0**	**0**
Newell (Congo)	0	0	0	3,400	0	4,800	4,000	0	0	0
Wisconsin	**11,000**	**0**	**0**	**8,000**	**0**	**0**	**9,000**	**7,800**	**0**	**0**
Superior	11,000	0	0	8,000	0	0	9,000	7,800	0	0
Wyoming	**49,500**	**6,000**	**0**	**7,800**	**23,085**	**0**	**30,950**	**44,500**	**11,000**	**0**
Cheyenne	12,000	0	0	7,800	0	0	8,000	16,500	0	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Atmospheric Crude Oil Distillation Capacity				Downstream Charge Capacity				
	Barrels per Calendar Day		Barrels per Stream Day		Vacuum Distillation	Thermal Cracking			
	Operating	Idle	Operating	Idle		Delayed Coking	Fluid Coking	Visbreaking	Other/ Gas Oil
Little America Refining Co.									
Evansville (Casper)	24,500	0	25,500	0	12,000	0	0	0	0
Silver Eagle Refining									
Evanston	3,000	0	3,089	0	0	0	0	0	0
Sinclair Oil Corp.									
Sinclair	54,000	0	56,000	0	30,500	0	0	0	0
Wyoming Refining Co									
Newcastle	12,500	0	12,500	0	1,500	0	0	0	0
U.S. Total	**16,061,490**	**199,800**	**16,936,221**	**219,000**	**7,537,934**	**1,799,621**	**193,167**	**41,500**	**12,000**
Puerto Rico	**35,000**	**0**	**36,000**	**0**	**45,000**	**0**	**0**	**0**	**0**
Phillips Puerto Rico Core Inc.									
Guayama	0	0	0	0	0	0	0	0	0
Sun Co Inc.									
Yabucoa	35,000	0	36,000	0	45,000	0	0	0	0
Virgin Islands	**470,000**	**25,000**	**495,000**	**30,000**	**230,000**	**0**	**0**	**85,000**	**0**
Hovensa LLC									
(Formerly Amerada Hess Corp.)									
Kingshill (St Croix)	470,000	25,000	495,000	30,000	230,000	0	0	85,000	0

See footnotes at end of table.

Table 38. Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

Location	Downstream Charge Capacity (Continued)									
	Catalytic Cracking		Catalytic Hydrocracking	Catalytic Reforming		Catalytic Hydrotreating				Fuel Solvents Deasphalting
	Fresh	Recycled		Low Pressure	High Pressure	Heavy Gas Oil	Naphtha Reformer Feed	Distillate	Other/ Residual	
Evansville (Casper)	10,500	500	0	0	6,000	0	7,200	8,000	0	0
Evanston	0	0	0	0	1,835	0	3,250	0	0	0
Sinclair	21,500	1,000	0	0	12,500	0	12,500	16,000	11,000	0
Newcastle	5,500	4,500	0	0	2,750	0	0	4,000	0	0
U.S. Total	**5,919,806**	**153,340**	**1,552,034**	**2,253,020**	**1,526,412**	**2,320,700**	**4,250,849**	**4,059,950**	**829,600**	**318,462**
Puerto Rico	**0**	**0**	**15,600**	**63,200**	**0**	**10,000**	**70,000**	**0**	**0**	**0**
Guayama	0	0	0	43,200	0	0	50,000	0	0	0
Yabucoa	0	0	15,600	20,000	0	10,000	20,000	0	0	0
Virgin Islands	**135,000**	**0**	**0**	**90,000**	**25,000**	**138,000**	**130,000**	**160,000**	**0**	**0**
Kingshill (St Croix)	135,000	0	0	90,000	25,000	138,000	130,000	160,000	0	0

* Includes capacity of Kerr-McGee's Southwestern Refining Company, which was purchased by Koch in 1995.
E=Estimated. Company was a nonrespondent.
Source: Energy Information Administration (EIA), Form EIA-820, "Biennial Refinery Report."

Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 1999
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Alabama	**0**	**0**	**22,500**	**1,100**	**2,000**	**0**	**2,500**	**6**	**95**
Coastal Mobile Refining Co.									
Chickasaw	0	0	10,500	0	0	0	0	0	0
Hunt Refining Co.									
Tuscaloosa	0	0	12,000	0	0	0	2,500	6	80
Shell Chemical									
Saraland (Mobile)	0	0	0	1,100	2,000	0	0	0	15
Alaska	**0**	**2,800**	**6,000**	**0**	**4,000**	**0**	**0**	**13**	**15**
Tesoro Petroleum Corp.									
Kenai	0	0	0	0	4,000	0	0	13	15
Williams Alaska Petro Inc.									
(Formerly Mapco Petroleum Inc.)									
North Pole	0	2,800	6,000	0	0	0	0	0	0
Arkansas	**4,900**	**0**	**10,950**	**0**	**6,500**	**4,700**	**0**	**3**	**157**
Berry Petroleum Co.									
Stephens	0	0	1,200	0	0	0	0	0	0
Cross Oil & Refining Co Inc									
Smackover	0	0	2,050	0	0	4,700	0	3	0
Lion Oil Co									
El Dorado	4,900	0	7,700	0	6,500	0	0	0	157
California	**162,667**	**1,500**	**68,868**	**24,333**	**71,556**	**32,400**	**90,343**	**1,143**	**4,106**
Arco Products Co.									
Los Angeles	12,000	0	0	0	0	0	11,500	75	300
Chevron U.S.A. Inc.									
El Segundo	24,500	0	0	7,300	20,000	0	4,000	130	600
Richmond	24,000	0	0	0	28,000	18,500	0	185	448
Equilon Enterprises LLC									
(Formerly Texaco Refining & Marketing Inc.)									
Bakersfield	0	0	0	700	0	0	6,000	24	105
Wilmington	9,500	0	0	0	0	0	10,000	69	300
(Formerly Shell Oil Co.)									
Martinez	11,000	0	15,000	0	0	3,900	6,509	107	437
Exxon Co. U.S.A.									
Benicia	14,500	0	0	0	0	0	5,500	119	303
Golden Bear Oil Specialties									
(Formerly Witco Corp.)									
Bakersfield	0	0	4,000	0	0	6,000	0	0	0
Huntway Refining Co									
Benicia	0	0	3,250	0	0	0	0	0	0
Wilmington	0	0	3,500	0	0	0	0	0	0
Kern Oil & Refining Co									
Bakersfield	0	0	0	0	0	0	0	0	4
Lunday Thagard									
South Gate	0	0	5,833	0	0	0	0	0	0
Mobil Oil Corp									
Torrance	26,000	0	0	6,000	0	0	7,111	147	280
Paramount Petroleum Corp.									
Paramount	0	0	15,000	0	0	0	0	0	40
Petroleum Fuel & Terminal									
Long Beach	0	0	8,200	0	0	0	0	0	0
San Joaquin Refining Co Inc									
Bakersfield	0	1,500	6,500	0	0	4,000	0	4	3

See footnotes at end of table.

Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Santa Maria Refining Co.									
Santa Maria	0	0	6,385	0	0	0	0	0	0
Tenby Inc.									
Oxnard	0	0	1,200	0	0	0	0	0	0
Tosco Refining Co.									
Martinez (Avon)	16,667	0	0	0	0	0	8,000	82	171
(Formerly Unocal Corp.)									
Arroyo Grande	0	0	0	0	0	0	5,556	0	107
Rodeo	0	0	0	0	10,000	0	5,556	89	342
Wilmington	10,500	0	0	3,333	13,556	0	11,111	112	416
Ultramar Refining									
(Formerly Ultramar Corp.)									
Wilmington	14,000	0	0	7,000	0	0	9,500	0	250
Colorado	**0**	**0**	**9,000**	**1,046**	**0**	**0**	**0**	**0**	**98**
Colorado Refining Co.									
Commerce City	0	0	0	1,046	0	0	0	0	4
Conoco Inc.									
Commerce City	0	0	9,000	0	0	0	0	0	94
Delaware	**9,100**	**1,400**	**0**	**0**	**0**	**0**	**8,710**	**40**	**596**
Motiva Enterprises LLC									
(Formerly Star Enterprise)									
Delaware City	9,100	1,400	0	0	0	0	8,710	40	596
Georgia	**0**	**0**	**27,000**	**0**	**0**	**0**	**0**	**0**	**0**
Citgo Asphalt Refining Co.									
Savannah	0	0	24,000	0	0	0	0	0	0
Young Refining Corp									
Douglasville	0	0	3,000	0	0	0	0	0	0
Hawaii	**5,000**	**0**	**16,000**	**3,200**	**0**	**0**	**0**	**21**	**34**
Chevron U.S.A. Inc.									
Honolulu	5,000	0	15,000	3,200	0	0	0	3	0
Tesoro Hawaii Corp.									
(Formerly BHP Petroleum Americas Refining Inc.)									
Ewa Beach	0	0	1,000	0	0	0	0	18	34
Illinois	**97,500**	**8,000**	**70,250**	**0**	**17,750**	**7,600**	**32,200**	**99**	**1,726**
Clark Refining & Marketing									
Blue Island	6,000	0	5,000	0	0	0	0	14	20
Hartford	8,500	0	250	0	3,750	0	4,800	3	11
Equilon Enterprises LLC									
(Formerly Shell Oil Co.)									
Wood River	22,000	4,500	55,000	0	0	7,600	0	57	504
Marathon Ashland Petro LLC									
(Formerly Marathon Oil Co.)									
Robinson	12,000	0	0	0	14,000	0	8,300	25	215
Mobil Oil Corp									
Joliet	28,000	0	10,000	0	0	0	17,000	0	600
PDV Midwest Refining LLC									
(Formerly Uno-Ven Co.)									
Lemont (Chicago)	21,000	3,500	0	0	0	0	2,100	0	376

See footnotes at end of table.

Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Indiana	**35,700**	**17,000**	**72,300**	**0**	**27,200**	**0**	**9,000**	**35**	**550**
BP Amoco PLC									
(Formerly Amoco Oil Co.)									
Whiting	34,000	17,000	70,000	0	25,000	0	9,000	35	550
Countrymark Cooperative Inc									
Mount Vernon	1,700	0	2,300	0	2,200	0	0	0	0
Kansas	**25,700**	**3,000**	**0**	**3,500**	**33,500**	**0**	**13,925**	**6**	**306**
Equilon Enterprises LLC									
(Formerly Texaco Refining & Marketing Inc.)									
El Dorado	11,500	3,000	0	0	15,000	0	5,000	6	190
Farmland Industries Inc.									
Coffeyville	7,200	0	0	0	8,500	0	5,600	0	35
National Cooperative Refinery Assoc.									
McPherson	7,000	0	0	3,500	10,000	0	3,325	0	81
Kentucky	**12,000**	**12,000**	**23,000**	**0**	**13,250**	**8,500**	**0**	**0**	**491**
Marathon Ashland Petro LLC									
(Formerly Ashland Oil Inc.)									
Catlettsburg	12,000	12,000	23,000	0	13,000	8,500	0	0	491
Somerset Refinery Inc									
Somerset	0	0	0	0	250	0	0	0	0
Louisiana	**204,400**	**25,300**	**62,300**	**39,900**	**59,300**	**58,650**	**99,234**	**213**	**4,270**
BP Amoco PLC									
(Formerly BP Oil Corp.)									
Belle Chasse (Alliance)	38,000	12,300	0	0	0	0	5,289	40	125
Calumet Lubricants Co LP									
Princeton	0	0	1,700	0	0	5,950	0	5	3
Chalmette Refining LLC									
(Formerly Mobil Oil Corp.)									
Chalmette	20,000	9,000	0	10,000	0	0	10,000	0	200
Citgo Petroleum Corp.									
Lake Charles	23,000	4,000	0	0	28,000	9,600	21,000	0	691
Conoco Inc.									
Westlake	8,000	0	0	0	0	18,000	18,250	0	750
Exxon Co. U.S.A.									
Baton Rouge	35,900	0	0	0	0	16,000	30,195	19	672
Marathon Ashland Petro LLC									
(Formerly Marathon Oil Co.)									
Garyville	30,000	0	42,000	23,000	18,000	0	0	0	549
Motiva Enterprises LLC									
(Formerly Star Enterprise)									
Convent	16,500	0	0	0	12,500	0	0	63	788
(Formerly Shell Oil Co.)									
Norco	16,000	0	0	0	0	0	7,000	60	155
Murphy Oil U.S.A. Inc.									
Meraux	8,500	0	18,000	0	0	0	0	0	146
Orion Refining Corp									
(Formerly Transamerican Refining Co.)									
Good Hope	0	0	0	0	0	0	7,500	20	140
Pennzoil - Quaker State Corp									
(Formerly Pennzoil Producing Co.)									
Shreveport	4,500	0	600	4,200	0	9,100	0	6	33
Placid Refining Co									
Port Allen	4,000	0	0	0	0	0	0	0	8

See footnotes at end of table.

Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Valero Refining Co.									
(Formerly Basis Petroleum Inc.)									
Krotz Springs	0	0	0	2,700	800	0	0	0	10
Michigan	**9,400**	**0**	**22,000**	**0**	**9,000**	**0**	**0**	**0**	**209**
Marathon Ashland Petro LLC									
(Formerly Marathon Oil Co.)									
Detroit	4,100	0	22,000	0	0	0	0	0	156
TPI Petroleum Inc.									
(Formerly Total Petroleum Inc.)									
Alma	5,300	0	0	0	9,000	0	0	0	53
Minnesota	**19,000**	**0**	**30,000**	**2,000**	**22,000**	**0**	**18,000**	**90**	**905**
Koch Refining Co.									
St. Paul (Pine Bend)	13,000	0	20,000	0	15,000	0	18,000	80	800
Marathon Ashland Petro LLC									
(Formerly Ashland Oil Inc.)									
Saint Paul Park	6,000	0	10,000	2,000	7,000	0	0	10	105
Mississippi	**16,200**	**21,000**	**42,700**	**0**	**0**	**8,100**	**4,800**	**238**	**1,300**
Chevron U.S.A. Inc.									
Pascagoula	16,200	21,000	20,000	0	0	0	4,800	230	1,300
Ergon Refining Inc.									
Vicksburg	0	0	13,000	0	0	8,100	0	8	0
Southland Oil Co									
Lumberton	0	0	3,575	0	0	0	0	0	0
Sandersville	0	0	6,125	0	0	0	0	0	0
Montana	**14,680**	**0**	**21,700**	**5,050**	**700**	**0**	**5,775**	**60**	**372**
Cenex Harvest States Coop									
(Formerly Cenex)									
Laurel	3,780	0	10,000	1,250	0	0	0	12	130
Conoco Inc.									
Billings	6,500	0	0	3,800	0	0	3,600	20	242
Exxon Co. U.S.A.									
Billings	3,700	0	10,000	0	0	0	2,175	26	0
Montana Refining Co.									
Great Falls	700	0	1,700	0	700	0	0	2	0
Nevada	**0**	**0**	**2,000**	**0**	**0**	**0**	**0**	**0**	**0**
Foreland Refining Corp									
(Formerly Petro Source Refining Partners)									
Eagle Springs	0	0	2,000	0	0	0	0	0	0
New Jersey	**35,333**	**7,500**	**120,400**	**3,333**	**9,000**	**12,000**	**7,500**	**20**	**298**
Amerada Hess Corp.									
Port Reading (Sewaren)	7,000	0	0	0	0	0	0	0	10
Chevron U.S.A. Inc.									
Perth Amboy	0	0	35,000	0	0	0	0	0	0
Citgo Asphalt Refining Co.									
Paulsboro	0	0	32,400	0	0	0	0	0	0
Coastal Eagle Point Oil Co.									
Westville	4,000	7,500	0	0	9,000	0	0	0	20

See footnotes at end of table.

Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Tosco Refining Co.									
Linden (Bayway)	13,333	0	40,000	3,333	0	0	0	12	110
Valero Refining Co. (Formerly Mobil Oil Corp.)									
Paulsboro	11,000	0	13,000	0	0	12,000	7,500	8	158
New Mexico	**11,200**	**0**	**6,400**	**0**	**11,000**	**0**	**0**	**0**	**26**
Giant Industries Inc.									
Bloomfield	0	0	0	0	0	0	0	0	2
Giant Refining Co.									
Gallup	1,800	0	0	0	4,000	0	0	0	2
Navajo Refining Co.									
Artesia	9,400	0	6,400	0	7,000	0	0	0	22
North Dakota	**5,600**	**0**	**0**	**0**	**5,000**	**0**	**0**	**0**	**17**
BP Amoco PLC (Formerly Amoco Oil Co.)									
Mandan	5,600	0	0	0	5,000	0	0	0	17
Ohio	**25,300**	**11,200**	**26,500**	**4,500**	**22,500**	**200**	**8,200**	**101**	**325**
BP Amoco PLC (Formerly BP Oil Corp.)									
Toledo	11,500	0	12,000	0	0	0	4,200	24	100
Clark Refining & Marketing (Formerly BP Oil Corp.)									
Lima	0	2,200	2,000	4,500	17,500	0	4,000	29	42
Marathon Ashland Petro LLC (Formerly Ashland Oil Inc.)									
Canton	6,000	0	8,000	0	5,000	0	0	0	121
Sun Co Inc.									
Toledo	7,800	9,000	4,500	0	0	200	0	48	62
Oklahoma	**30,150**	**0**	**26,216**	**8,900**	**27,700**	**8,800**	**7,700**	**46**	**172**
Conoco Inc.									
Ponca City	14,600	0	0	8,000	8,700	0	5,750	11	34
Sinclair Oil Corp.									
Tulsa	4,250	0	15,216	0	8,000	0	0	0	28
Sun Co Inc.									
Tulsa	0	0	0	900	0	8,800	1,950	0	0
TPI Petroleum Inc. (Formerly Total Petroleum Inc.)									
Ardmore	6,300	0	6,000	0	7,000	0	0	26	110
Wynnewood Refining Co.									
Wynnewood	5,000	0	5,000	0	4,000	0	0	9	0
Oregon	**0**	**0**	**11,250**	**0**	**0**	**0**	**0**	**0**	**0**
Chevron U.S.A. Inc.									
Portland (Willbridge)	0	0	11,250	0	0	0	0	0	0
Pennsylvania	**55,322**	**12,000**	**20,000**	**5,000**	**7,950**	**6,850**	**0**	**11**	**373**
American Refining Group Inc (Formerly Witco Corp.)									
Bradford	0	0	0	0	0	2,100	0	0	0

See footnotes at end of table.

Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Pennzoil - Quaker State Corp (Formerly Pennziol Producing Co.)									
Rouseville	0	0	0	0	1,150	4,750	0	4	0
Sun Co Inc.									
Marcus Hook	12,000	8,000	0	0	0	0	0	7	0
Sun Refining & Marketing									
Philadelphia	26,000	4,000	0	5,000	0	0	0	0	260
Tosco Refining Co. (Formerly BP Oil Co.)									
Trainer	13,222	0	0	0	0	0	0	0	43
United Refining Co.									
Warren	4,100	0	20,000	0	6,800	0	0	0	70
Tennessee	**6,100**	**0**	**0**	**0**	**4,600**	**0**	**0**	**0**	**43**
Williams Refining LLC (Formerly Mapco Petroleum Inc.)									
Memphis	6,100	0	0	0	4,600	0	0	0	43
Texas	**328,500**	**179,300**	**84,500**	**49,200**	**136,000**	**81,800**	**122,720**	**851**	**9,501**
Age Refining & Marketing									
San Antonio	0	1,200	0	100	0	0	0	0	0
BP Amoco PLC (Formerly Amoco Oil Co.)									
Texas City	62,000	46,000	0	0	33,000	0	15,000	213	1,219
Chevron U.S.A. Inc.									
El Paso	9,000	0	5,600	3,200	0	0	0	0	33
Citgo Refining & Chemical Inc.									
Corpus Christi	21,000	14,600	0	0	0	0	12,300	0	300
Clark Refining & Marketing									
Port Arthur	12,000	0	0	2,000	0	0	9,000	0	900
Coastal Refining & Marketing Inc.									
Corpus Christi	3,000	19,100	15,000	0	5,200	0	4,750	24	185
Crown Central Petroleum Corp.									
Pasadena	10,000	0	0	0	5,000	0	1,500	0	22
Deer Park Refg Ltd Ptnrshp									
Deer Park	17,200	0	4,700	0	0	11,000	20,610	108	1,105
Diamond Shamrock Refining & Marketing Co.									
Sunray (McKee)	10,000	0	9,600	1,200	0	0	0	0	30
Three Rivers	6,500	10,000	0	0	0	1,800	0	0	55
Exxon Co. U.S.A.									
Baytown	29,000	0	7,000	0	0	31,300	2,750	147	1,064
Fina Oil & Chemical Co									
Big Spring	5,000	1,000	7,600	0	0	0	0	0	138
Port Arthur	5,900	13,600	4,000	0	9,800	0	0	0	300
Koch Refining Co.									
Corpus Christi	13,000	26,000	0	0	10,000	0	2,800	0	235
La Gloria Oil & Gas Co.									
Tyler	4,700	0	0	500	0	0	1,500	0	15
Lyondell Citgo Refining Co. Ltd.									
Houston	11,500	10,700	0	0	0	3,700	23,500	0	720
Marathon Ashland Petro LLC (Formerly Marathon Oil Co.)									
Texas City	9,000	2,500	0	0	0	0	0	0	0
Mobil Oil Corp									
Beaumont	14,200	11,700	0	11,200	23,000	14,500	13,010	54	560

See footnotes at end of table.

Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Motiva Enterprises LLC									
(Formerly Star Enterprise)									
Port Arthur	20,000	0	0	0	0	19,500	16,000	0	781
Neste Trifinery Petro Serve									
Corpus Christi	0	0	16,000	0	0	0	0	0	0
Phillips 66 Co.									
Borger	14,000	0	0	11,000	24,600	0	0	50	340
Sweeny	20,000	5,300	0	0	9,000	0	0	120	385
South Hampton Refining Co.									
Silsbee	0	600	0	0	900	0	0	1	0
Valero Refining Co.									
(Formerly Basis Petroleum Co.)									
Corpus Christi	13,000	17,000	15,000	20,000	10,000	0	0	134	504
Houston	11,000	0	0	0	0	0	0	0	110
Texas City	7,500	0	0	0	5,500	0	0	0	500
Utah	**14,050**	**0**	**1,700**	**2,700**	**4,300**	**0**	**380**	**0**	**54**
BP Amoco PLC									
(Formerly Amoco Oil Co.)									
Salt Lake City	4,800	0	0	0	0	0	0	0	19
Big West Oil Co.									
North Salt Lake	1,400	0	0	1,400	1,700	0	0	0	4
Chevron U.S.A. Inc.									
Salt Lake City	5,600	0	0	1,300	0	0	380	0	21
Phillips 66 Co.									
Woods Cross	2,250	0	1,700	0	2,600	0	0	0	10
Virginia	**4,200**	**0**	**0**	**0**	**0**	**0**	**6,100**	**0**	**73**
BP Amoco PLC									
(Formerly Amoco Oil Co.)									
Yorktown	4,200	0	0	0	0	0	6,100	0	73
Washington	**29,467**	**0**	**15,200**	**12,933**	**2,300**	**0**	**1,504**	**94**	**176**
Arco Products Co.									
Ferndale (Cherry Point)	0	0	0	5,000	0	0	7	94	0
Chevron U.S.A. Inc.									
Richmond Beach	0	0	4,200	0	0	0	0	0	0
Equilon Enterprises LLC									
(Formerly Texaco Refining & Marketing Inc.)									
Anacortes	10,400	0	0	0	0	0	1,497	0	117
Tesoro Northwest Co.									
(Formerly Shell Oil Co.)									
Anacortes	12,400	0	3,000	3,600	0	0	0	0	0
Tosco Refining Co.									
Ferndale	6,667	0	0	4,333	0	0	0	0	49
U.S. Oil & Refining Co.									
Tacoma	0	0	8,000	0	2,300	0	0	0	10
West Virginia	**0**	**0**	**250**	**0**	**0**	**3,600**	**0**	**1**	**1**
Ergon West Virginia Inc.									
(Formerly Quaker State Corp.)									
Newell (Congo)	0	0	250	0	0	3,600	0	1	1
Wisconsin	**1,500**	**0**	**7,500**	**0**	**2,000**	**0**	**0**	**0**	**12**
Murphy Oil U.S.A. Inc.									
Superior	1,500	0	7,500	0	2,000	0	0	0	12

See footnotes at end of table.

Table 39. Production Capacity of Operable Petroleum Refineries by State as of January 1, 1999 (Continued)
(Barrels per Stream Day, Except Where Noted)

State/Refiner/Location	Alkylates	Aromatics	Asphalt and Road Oil	Isomers		Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons per day)
				Isobutane	Isopentane and Isohexane				
Wyoming	**8,777**	**0**	**19,300**	**0**	**1,000**	**0**	**2,500**	**13**	**122**
Frontier Refining									
Cheyenne	4,200	0	10,000	0	0	0	2,500	13	80
Little America Refining Co.									
Evansville (Casper)	0	0	4,400	0	0	0	0	0	0
Silver Eagle Refining									
Evanston	0	0	0	0	1,000	0	0	0	0
Sinclair Oil Corp.									
Sinclair	4,000	0	4,900	0	0	0	0	0	40
Wyoming Refining Co									
Newcastle	577	0	0	0	0	0	0	0	2
U.S. Total	**1,171,746**	**302,000**	**845,784**	**166,695**	**500,106**	**233,200**	**441,091**	**3,104**	**26,423**
Puerto Rico	**0**	**19,200**	**0**	**0**	**0**	**9,200**	**0**	**19**	**50**
Phillips Puerto Rico Core Inc.									
Guayama	0	19,200	0	0	0	0	0	0	0
Sun Co Inc.									
Yabucoa	0	0	0	0	0	9,200	0	19	50
Virgin Islands	**20,000**	**20,000**	**0**	**0**	**18,000**	**0**	**0**	**0**	**600**
Hovensa LLC (Formerly Amerada Hess Corp.)									
Kingshill (St Croix)	20,000	20,000	0	0	18,000	0	0	0	600

MMcfd = Million cubic feet per day.
* Includes capacity of Kerr-McGee's Southwestern Refining Company, which was purchased by Koch in 1995.
E=Estimated. Company was a nonrespondent.
Source: Energy Information Administration (EIA), Form EIA-820, "Biennial Refinery Report."

Table 40. Refiners' Operable Atmospheric Crude Oil Distillation Capacity as of January 1, 1999

Refiner	Barrels per Calendar Day
Companies with Capacity Over 100,000 bbl/cd	
BP AMOCO PLC	1,419,600
Texas City, Texas[a]	433,000
Whiting, Indiana[a]	410,000
Belle Chasse (Alliance), Louisiana[b]	255,000
Toledo, Ohio[b]	152,000
Yorktown, Virginia[a]	58,600
Mandan, North Dakota[a]	58,000
Salt Lake City, Utah[a]	53,000
EXXON CORP	1,119,500
Exxon Co. U.S.A.	
Baton Rouge, Louisiana	473,000
Baytown, Texas	465,000
Benicia, California	129,500
Billings, Montana	52,000
CHEVRON CORP	1,049,000
Chevron U.S.A. Inc.	
Pascagoula, Mississippi	295,000
El Segundo, California	260,000
Richmond, California	225,000
El Paso, Texas	90,000
Perth Amboy, New Jersey	80,000
Honolulu, Hawaii	54,000
Salt Lake City, Utah	45,000
USX CORP	935,000
Marathon Ashland Petro LLC	
Garyville, Louisiana[c]	232,000
Catlettsburg, Kentucky[d]	222,000
Robinson, Illinois[c]	192,000
Detroit, Michigan[c]	74,000
Canton, Ohio[d]	73,000
Texas City, Texas[c]	72,000
Saint Paul Park, Minnesota[d]	70,000
TOSCO CORP	909,500
Tosco Refining Co.	
Linden (Bayway), New Jersey	250,000
Trainer, Pennsylvania	175,000
Martinez (Avon), California	156,000
Wilmington, California[e]	125,000
Ferndale, Washington	88,500
Rodeo, California[e]	73,200
Arroyo Grande, California[e]	41,800
MOTIVA ENTERPRISES LLC	849,000
Port Arthur, Texas[f]	235,000
Norco, Louisiana[g]	232,000
Convent, Louisiana[f]	225,000
Delaware City, Delaware[f]	157,000
EQUILON ENTERPRISES LLC	837,450
Wood River, Illinois[g]	288,300
Martinez, California[g]	154,800
Anacortes, Washington[h]	142,000
El Dorado, Kansas[h]	98,750
Wilmington, California[h]	90,600
Bakersfield, California[h]	63,000
SUN CO INC	724,000
Sun Co Inc.	
Marcus Hook, Pennsylvania	175,000
Toledo, Ohio	134,000
Tulsa, Oklahoma	85,000
Sun Refining & Marketing	
Philadelphia, Pennsylvania	330,000
MOBIL OIL CORP	705,000
Beaumont, Texas	335,000
Joliet, Illinois	240,000
Torrance, California	130,000
PDV AMERICA INC	699,700
Citgo Petroleum Corp.	
Lake Charles, Louisiana	312,700
PDV Midwest Refining LLC	
Lemont (Chicago), Illinois[i]	162,000
Citgo Refining & Chemical Inc.	
Corpus Christi, Texas	157,000
Citgo Asphalt Refining Co.	
Paulsboro, New Jersey	40,000
Savannah, Georgia	28,000
KOCH INDUS INC	557,000
Koch Refining Co.	
Corpus Christi, Texas	297,000
St. Paul (Pine Bend), Minnesota	260,000
BLACKSTONE GROUP LP[j]	509,515
Clark Refining & Marketing	
Port Arthur, Texas[b]	203,500
Lima, Ohio	161,500
Blue Island, Illinois	80,515
Hartford, Illinois	64,000
E I DUPONT DE NEMOURS	506,900
Conoco Inc.	
Westlake, Louisiana	229,900
Ponca City, Oklahoma	168,000
Commerce City, Colorado	57,500
Billings, Montana	51,500

See footnotes at end of table.

Table 40. Refiners' Operable Atmospheric Crude Oil Distillation Capacity as of January 1, 1999 (Continued)

Refiner	Barrels per Calendar Day
VALERO ENERGY CORP	492,500
Valero Refining Co.	
Texas City, Texas[k]	152,000
Paulsboro, New Jersey[l]	152,000
Krotz Springs, Louisiana[k]	78,000
Houston, Texas[k]	72,500
Corpus Christi, Texas	38,000
ATLANTIC RICHFIELD CO	486,000
Arco Products Co.	
Los Angeles, California	255,000
Ferndale (Cherry Point), Washington	202,000
Arco Alaska Inc.	
Prudhoe Bay, Alaska	15,000
Kuparuk (Anchorage), Alaska	14,000
ULTRAMAR DIAMOND SHAMROCK CORP	464,900
Diamond Shamrock Refining & Marketing Co.	
Sunray (McKee), Texas	145,900
Three Rivers, Texas	92,000
TPI Petroleum Inc.	
Ardmore, Oklahoma[m]	75,000
Alma, Michigan[m]	52,000
Ultramar Refining	
Wilmington, California[n]	72,000
Colorado Refining Co.	
Commerce City, Colorado[m]	28,000
PHILLIPS PETRO CO	355,000
Phillips 66 Co.	
Sweeny, Texas	205,000
Borger, Texas	125,000
Woods Cross, Utah	25,000
WILLIAMS CO, THE	336,700
Williams Alaska Petro Inc.	
North Pole, Alaska[o]	196,700
Williams Refining LLC	
Memphis, Tennessee[o]	140,000
DEER PARK REFG LTD PTNRSHP	
Deer Park, Texas	274,200
TESORO PETRO CORP	273,000
Tesoro Northwest Co.	
Anacortes, Washington[g]	107,500
Tesoro Hawaii Corp.	
Ewa Beach, Hawaii[p]	93,500
Tesoro Petroleum Corp.	
Kenai, Alaska	72,000
LYONDELL PETROCHEM CO	
Lyondell Citgo Refining Co. Ltd.	
Houston, Texas	268,850
COASTAL CORP, THE	251,500
Coastal Eagle Point Oil Co.	
Westville, New Jersey	140,000
Coastal Refining & Marketing Inc.	
Corpus Christi, Texas	95,000
Coastal Mobile Refining Co.	
Chickasaw, Alabama	16,500
FINA OIL & CHEMICAL CO	237,000
Port Arthur, Texas	178,500
Big Spring, Texas	58,500
CHALMETTE REFINING LLC	
Chalmette, Louisiana[l]	181,600
CROWN CENTRAL PETRO CORP	155,000
Crown Central Petroleum Corp.	
Pasadena, Texas	100,000
La Gloria Oil & Gas Co.	
Tyler, Texas	55,000
SINCLAIR OIL CORP	142,500
Sinclair Oil Corp.	
Tulsa, Oklahoma	64,000
Sinclair, Wyoming	54,000
Little America Refining Co.	
Evansville (Casper), Wyoming	24,500
SHELL OIL CO	130,000
Shell Chemical	
Saraland (Mobile), Alabama	80,000
Saint Rose, Louisiana	50,000
MURPHY OIL CORP	128,000
Murphy Oil U.S.A. Inc.	
Meraux, Louisiana	95,000
Superior, Wisconsin	33,000
CENEX HARVEST STATES COOPERATIVE[q]	116,950
National Cooperative Refinery Assoc.	
McPherson, Kansas	75,500
Cenex Harvest States Coop	
Laurel, Montana	41,450

See footnotes at end of table.

Table 40. Refiners' Operable Atmospheric Crude Oil Distillation Capacity as of January 1, 1999 (Continued)

Refiner	Barrels per Calendar Day
FARMLAND INDUS INC CRA	
Farmland Industries Inc.	
Coffeyville, Kansas	112,000
ORION REFINING CORP	
Good Hope, Louisiana[r]	110,000
Total	**15,336,865**
Companies with Capacity 30,001 to 100,000 bbl/cd	
UNITED REFINING INC	
United Refining Co.	
Warren, Pennsylvania	65,000
HOLLY CORP	64,000
Navajo Refining Co.	
Artesia, New Mexico	57,000
Montana Refining Co.	
Great Falls, Montana	7,000
PENNZOIL - QUAKER STATE CORP	59,000
Shreveport, Louisiana[s]	46,200
Rouseville, Pennsylvania[s]	12,800
LION OIL CO	
El Dorado, Arkansas	52,000
PETRO STAR INC	51,750
Valdez, Alaska	38,000
North Pole, Alaska	13,750
PLACID REFINING CO	
Port Allen, Louisiana	48,500
GARY WILLIAMS CO	
Wynnewood Refining Co.	
Wynnewood, Oklahoma	46,000
PARAMOUNT ACQUISITION CORP	
Paramount Petroleum Corp.	
Paramount, California	42,500
TIME OIL CO	
U.S. Oil & Refining Co.	
Tacoma, Washington	40,000
WAINOCO OIL CORP	
Frontier Refining	
Cheyenne, Wyoming	38,670
GIANT INDUS INC	37,600
Giant Refining Co.	
Gallup, New Mexico	20,800
Giant Industries Inc.	
Bloomfield, New Mexico	16,800
ERGON INC	35,800
Ergon Refining Inc.	
Vicksburg, Mississippi	24,000
Ergon West Virginia Inc.	
Newell (Congo), West Virginia[t]	11,800
HUNT CONSLD INC	
Hunt Refining Co.	
Tuscaloosa, Alabama	33,500
Total	**614,320**
Companies with Capacity 10,001 to 30,000 bbl/cd	
NESTE TRIFINERY PETRO SERVE	
Corpus Christi, Texas	27,000
APEX OIL CO INC	
Petroleum Fuel & Terminal	
Long Beach, California	25,600
KERN OIL & REFINING CO	
Bakersfield, California	24,700
SAN JOAQUIN REFINING CO INC	
Bakersfield, California	24,300
FLYING J INC	
Big West Oil Co.	
North Salt Lake, Utah	24,000
COUNTRYMARK COOPERATIVE INC	
Mount Vernon, Indiana	23,000
SOUTHLAND OIL CO	16,800
Sandersville, Mississippi	11,000
Lumberton, Mississippi	5,800

See footnotes at end of table.

Table 40. Refiners' Operable Atmospheric Crude Oil Distillation Capacity as of January 1, 1999 (Continued)

Refiner	Barrels per Calendar Day
CALUMET LUBRICANTS CO LP	16,100
Princeton, Louisiana	8,300
Cotton Valley, Louisiana	7,800
TRANSWORLD OIL USA INC	
Calcasieu Refining Co.	
Lake Charles, Louisiana	15,300
HUNTWAY REFINING CO	14,005
Benicia, California	8,505
Wilmington, California	5,500
WYOMING REFINING CO	
Newcastle, Wyoming	12,500
INLAND RESOURCES INC	
Inland Refining Inc.	
Woods Cross, Utah[u]	11,000
Total	**234,305**
Companies with Capacity 10,000 bbl/cd or Less	
AMERICAN REFINING GROUP INC	
Bradford, Pennsylvania[v]	10,000
SABA PETRO INC	
Santa Maria Refining Co.	
Santa Maria, California	9,500
AGE REFINING & MARKETING	
San Antonio, Texas	9,000
WORLD OIL CO	
Lunday Thagard	
South Gate, California	8,100
FORELAND REFINING CORP	
Eagle Springs, Nevada[w]	7,000
MARTIN GAS SALES INC	
Berry Petroleum Co.	
Stephens, Arkansas	6,700
CROSS OIL & REFINING CO INC	
Smackover, Arkansas	6,200
SOMERSET REFINERY INC	
Somerset, Kentucky	5,500
YOUNG REFINING CORP	
Douglasville, Georgia	5,400
OIL HOLDING INC	
Tenby Inc.	
Oxnard, California	4,000
SILVER EAGLE REFINING	
Evanston, Wyoming	3,000
SPECIFIED FUELS & CHEMLS LLC	
Channelview, Texas[x]	1,400
Total	**75,800**
U.S. Total	**16,261,290**

[a] Formerly Amoco Oil Company
[b] Formerly BP Oil Corporation
[c] Formerly Marathon Oil Company
[d] Formerly Ashland Oil Company
[e] Formerly Unocal Corporation
[f] Formerly Star Enterprise
[g] Formerly Shell Oil Company
[h] Formerly Texaco Refining & Marketing Incorporated
[i] Formerly Uno-Ven Company
[j] Formerly Trizachhahm Corporation
[k] Formerly Basis Petroleum Incorporated
[l] Formerly Mobil Oil Corporation
[m] Formerly Total Petroleum North America LTD
[n] Formerly Ultramar Corporation
[o] Formerly Mapco Petroleum Incorporated
[p] Formerly BHP Petroleum Americas Refining Incorporated
[q] Formerly Cenex
[r] Formerly Transamerican Refining Company
[s] Formerly Pennzoil Producing Company
[t] Formerly Quaker State Corporation
[u] Formerly Crysen Corporation
[v] Formerly Witco Corporation
[w] Formerly Petro Source Refining Partners
[x] Formerly Howell Hydrocarbons & Chemical Incorporated

Source:Energy Information Administration (EIA), Form EIA-820, "Biennial Refinery Report."

Table 41. Operable Crude Oil and Downstream Charge Capacity of Petroleum Refineries, January 1, 1981 to January 1, 1999

(Thousand Barrels per Stream Day, Except Where Noted)

Year/PAD District	Atmospheric Crude Oil Distillation	Downstream Charge Capacity							
		Vacuum Distillation	Thermal Cracking	Catalytic Cracking		Catalytic Hydro-cracking	Catalytic Reforming	Catalytic Hydro-treating	Fuels Solvent Deasphalting
				Fresh	Recycled				
JAN 1, 1981	19,763	7,033	1,587	5,543	594	909	4,098	8,487	NA
JAN 1, 1982	19,018	7,197	1,782	5,474	562	892	3,966	8,539	NA
JAN 1, 1983	17,871	7,180	1,715	5,402	488	883	3,918	8,354	NA
JAN 1, 1984	17,059	7,165	1,852	5,310	492	952	3,907	9,009	NA
JAN 1, 1985	16,504	6,998	1,858	5,232	507	1,053	3,750	8,897	NA
JAN 1, 1986	16,346	6,892	1,880	5,214	463	1,125	3,744	8,791	NA
JAN 1, 1987	16,460	6,935	1,928	5,251	466	1,189	3,805	9,083	230
JAN 1, 1988	16,825	7,198	2,080	5,424	381	1,202	3,891	9,170	240
JAN 1, 1989	16,568	7,225	2,073	5,324	326	1,238	3,911	9,440	245
JAN 1, 1990	16,507	7,245	2,108	5,441	314	1,282	3,896	9,537	279
JAN 1, 1991	16,557	7,276	2,158	5,559	304	1,308	3,926	9,676	271
JAN 1, 1992	16,633	7,172	2,100	5,608	280	1,363	3,907	9,644	276
JAN 1, 1993	15,935	6,892	2,082	5,540	244	1,397	3,728	9,677	269
JAN 1, 1994	15,904	6,892	2,107	5,586	191	1,376	3,875	10,616	261
JAN 1, 1995	16,326	7,248	2,123	5,583	169	1,386	3,867	10,916	251
JAN 1, 1997	16,287	7,349	2,050	5,595	155	1,388	3,727	11,041	275
JAN 1, 1999	17,155	7,538	2,046	5,920	153	1,552	3,779	11,461	318
PADD I	1,780	735	93	735	12	42	323	995	22
PADD II	3,796	1,491	333	1,293	30	153	910	2,551	31
PADD III	7,820	3,550	987	2,835	88	773	1,830	5,522	188
PADD IV	555	208	42	181	20	5	121	351	9
PADD V	3,205	1,554	592	875	3	579	595	2,043	68
JAN 1, 2000	17,039	7,569	2,092	6,028	163	1,556	3,785	11,504	319
PADD I	1,788	735	93	735	12	42	323	1,021	22
PADD II	3,814	1,491	351	1,297	30	156	912	2,558	31
PADD III	7,666	3,576	1,015	2,940	98	774	1,833	5,531	189
PADD IV	556	208	42	181	20	5	121	352	9
PADD V	3,215	1,558	592	875	3	579	595	2,043	68
1999-2000 (Net Change)	-116	31	46	109	10	4	6	43	1
PADD I	8	0	0	0	0	0	0	26	0
PADD II	19	0	18	4	0	3	3	7	0
PADD III	-154	27	28	105	10	1	3	9	1
PADD IV	(s)	0	0	0	0	0	0	1	0
PADD V	11	4	0	0	0	0	0	0	0

NA = Not available.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration (EIA), Form EIA-820, “Annual and Biennial Refinery Report.”

Table 42. Operable Production Capacity of Petroleum Refineries, January 1, 1981 to January 1, 1999
(Thousand Barrels per Stream Day, Except Where Noted)

Year/PAD District	Production Capacity							
	Alkylates	Aromatics	Asphalt and Road Oil	Isomers	Lubricants	Marketable Petroleum Coke	Hydrogen (MMcfd)	Sulfur (short tons/day)
JAN 1, 1981	974	299	765	131	234	276	2,054	NA
JAN 1, 1982	984	290	740	162	242	267	1,944	NA
JAN 1, 1983	960	237	722	212	241	296	2,298	NA
JAN 1, 1984	945	218	800	208	241	407	2,444	NA
JAN 1, 1985	917	215	767	219	243	424	2,572	NA
JAN 1, 1986	941	276	804	258	246	356	2,357	NA
JAN 1, 1987	974	287	788	326	250	364	2,569	23,806
JAN 1, 1988	993	289	788	465	232	368	2,418	27,639
JAN 1, 1989	1,015	290	823	469	230	333	2,501	28,369
JAN 1, 1990	1,030	290	844	456	232	341	2,607	24,202
JAN 1, 1991	1,077	292	866	490	229	367	2,527	23,875
JAN 1, 1992	1,095	290	812	494	217	356	2,644	23,811
JAN 1, 1993	1,083	286	814	499	217	393	2,674	25,940
JAN 1, 1994	1,086	278	793	499	213	410	2,940	24,554
JAN 1, 1995	1,105	285	846	502	217	427	3,139	24,885
JAN 1, 1997	1,120	288	872	577	244	458	3,052	26,466
JAN 1, 1999	1,172	302	846	667	233	441	3,104	26,423
PADD I	104	21	168	25	22	22	72	1,341
PADD II	268	51	278	203	25	89	377	4,756
PADD III	565	226	229	305	153	229	1,311	15,349
PADD IV	38	0	52	15	0	9	73	646
PADD V	197	4	119	118	32	92	1,271	4,331
JAN 1, 2000	1,203	312	849	667	234	458	3,069	27,092
PADD I	104	21	168	25	22	22	72	1,341
PADD II	274	51	278	203	25	94	379	5,112
PADD III	590	236	232	305	154	242	1,327	15,624
PADD IV	38	0	52	15	0	9	73	646
PADD V	197	4	119	118	32	92	1,218	4,369
1999-2000 (Net Change)	32	10	3	(s)	1	17	-35	669
PADD I	0	0	(s)	0	0	0	0	0
PADD II	6	0	0	0	0	5	2	356
PADD III	25	10	3	(s)	1	13	16	275
PADD IV	(s)	0	0	0	0	0	0	0
PADD V	0	0	0	0	0	(s)	-53	38

NA = Not available. MMcfd = Million cubic feet per day.
(s) = Less than 500 barrels per stream day.
Note: Totals may not equal sum of components due to independent rounding.
Source: Energy Information Administration (EIA), Form EIA-820, "Annual and Biennial Refinery Report."

Table 43. Working Storage Capacity[a] at Operable Refineries by PAD District as of January 1, 1999

(Thousand Barrels)

Commodity	PAD Districts					United States
	I	II	III	IV	V	
Crude Oil	**24,691**	**21,923**	**73,502**	**5,528**	**34,980**	**160,624**
Liquefied Petroleum Products	**3,381**	**8,186**	**19,204**	**529**	**1,794**	**33,094**
Propane/Propylene	898	4,291	9,724	168	199	15,280
Normal Butane/Butylene	2,483	3,895	9,480	361	1,595	17,814
Other Liquids	**10,723**	**15,744**	**31,566**	**3,429**	**18,348**	**79,810**
Oxygenates	2,523	765	3,631	126	3,305	10,350
Fuel Ethanol	0	81	46	113	1	241
Methanol	557	32	587	0	142	1,318
MTBE	1,866	652	2,843	12	3,097	8,470
Other Oxygenates	100	0	155	1	65	321
Gasoline Blending Components	8,200	14,979	27,935	3,303	15,043	69,460
Petroleum Products	**53,941**	**88,341**	**213,195**	**20,872**	**81,715**	**458,064**
Finished Motor Gasoline	10,305	18,472	28,031	4,811	14,221	75,840
Reformulated	5,538	1,412	5,071	0	7,494	19,515
Oxygenated	156	535	176	265	252	1,384
Other Finished	4,611	16,525	22,784	4,546	6,475	54,941
Jet Fuel	2,519	3,933	11,968	879	6,627	25,926
Naphtha-Type	0	114	86	218	70	488
Kerosene-Type	2,519	3,819	11,882	661	6,557	25,438
Kerosene	388	883	2,051	266	297	3,885
Distillate Fuel Oil	11,414	17,729	26,035	4,898	10,015	70,091
0.05 percent sulfur and under	4,253	11,083	13,019	3,135	7,238	38,728
Greater than 0.05 percent sulfur	7,161	6,646	13,016	1,763	2,777	31,363
Residual Fuel Oil	3,098	4,030	11,460	1,696	7,444	27,728
Lubricants	2,623	2,158	13,261	0	2,103	20,145
Asphalt and Road Oil	3,804	10,184	6,609	3,873	3,829	28,299
Other Products	19,790	30,952	113,780	4,449	37,179	206,150
Total	**92,736**	**134,194**	**337,467**	**30,358**	**136,837**	**731,592**

[a] The difference in volume between the maximum safe fill capacity and tank bottoms.
[b] 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).
[c] Includes ethane/ethylene, isobutane/isobutylene, pentanes plus, other hydrocarbons/hydrogen, unfinished oils, finished aviation gasoline, special naphthas, wax, petroleum coke, still gas, petrochemical feedstocks and miscellaneous products.
Source: Energy Information Administration (EIA), Form EIA-820, "Biennial Refinery Report."

Table 44. Shell Storage Capacity[a] at Operable Refineries by PAD District as of January 1, 1999

(Thousand Barrels)

Commodity	PAD Districts					United States
	I	II	III	IV	V	
Crude Oil	**28,377**	**26,101**	**86,748**	**6,179**	**38,436**	**185,841**
Liquefied Petroleum Products	**3,773**	**8,838**	**22,430**	**565**	**1,980**	**37,586**
Propane/Propylene	997	4,602	11,548	180	218	17,545
Normal Butane/Butylene	2,776	4,236	10,882	385	1,762	20,041
Other Liquids	**12,251**	**18,112**	**36,242**	**3,801**	**20,528**	**90,934**
Oxygenates	2,788	860	4,200	146	3,742	11,736
Fuel Ethanol	0	99	50	131	1	281
Methanol	594	34	672	0	166	1,466
MTBE	2,084	727	3,299	13	3,501	9,624
Other Oxygenates	110	0	179	2	74	365
Gasoline Blending Components	9,463	17,252	32,042	3,655	16,786	79,198
Petroleum Products	**59,595**	**98,374**	**241,589**	**22,789**	**90,185**	**512,532**
Finished Motor Gasoline	11,649	20,713	32,343	5,415	16,141	86,261
Reformulated	6,289	1,556	5,771	0	8,636	22,252
Oxygenated	171	610	206	311	280	1,578
Other Finished	5,189	18,547	26,366	5,104	7,225	62,431
Jet Fuel	2,770	4,381	13,397	963	7,349	28,860
Naphtha-Type	0	116	91	251	80	538
Kerosene-Type	2,770	4,265	13,306	712	7,269	28,322
Kerosene	415	987	2,257	292	349	4,300
Distillate Fuel Oil	12,376	19,374	28,907	5,351	11,081	77,089
0.05 percent sulfur and under	4,525	12,172	14,453	3,403	7,961	42,514
Greater than 0.05 percent sulfur	7,851	7,202	14,454	1,948	3,120	34,575
Residual Fuel Oil	3,412	4,449	13,030	1,835	8,089	30,815
Lubricants	2,754	2,407	14,423	0	2,185	21,769
Asphalt and Road Oil	4,175	11,246	7,428	4,091	4,032	30,972
Other Products	22,044	34,817	129,804	4,842	40,959	232,466
Total	**103,996**	**151,425**	**387,009**	**33,334**	**151,129**	**826,893**

[a] The design capacity of the tank.
[b] 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).
[c] Includes ethane/ethylene, isobutane/isobutylene, pentanes plus, other hydrocarbons/hydrogen, unfinished oils, finished aviation gasoline, special naphthas, wax, petroleum coke, still gas, petrochemical feedstocks and miscellaneous products.
Source: Energy Information Administration (EIA), Form EIA-820, "Biennial Refinery Report."

Table 45. Capacity and Fresh Feed Input to Selected Downstream Units at U.S. Refineries, 1997-1999
(Barrels per Calendar Day, Expect Where Noted)

PAD District/Item	1997	1998	1999	1997	1998	1999
	PAD DISTRICT I			PAD DISTRICT II		
Cokers						
Capacity	82,850	NA	83,400	339,700	NA	321,300
Inputs	80,145	77,805	—	319,792	319,748	—
Catalytic Crackers						
Capacity	574,600	NA	675,400	1,194,060	NA	1,225,590
Inputs	608,192	641,403	—	1,136,852	1,107,874	—
Hydrocrackers						
Capacity	31,300	NA	38,000	134,400	NA	138,600
Inputs	42,748	53,088	—	138,296	138,879	—
	PAD DISTRICT III			PAD DISTRICT IV		
Cokers						
Capacity	796,718	NA	883,688	36,200	NA	36,400
Inputs	773,049	817,233	—	40,000	40,553	—
Catalytic Crackers						
Capacity	2,611,931	NA	2,653,814	168,955	NA	169,395
Inputs	2,511,581	2,507,071	—	154,737	147,414	—
Hydrocrackers						
Capacity	619,900	NA	710,600	8,000	NA	4,500
Inputs	465,195	512,389	—	3,411	3,756	—
	PAD DISTRICT V			U.S. TOTAL		
Cokers						
Capacity	483,927	NA	529,400	1,739,395	NA	1,854,188
Inputs	477,655	496,814	—	1,690,641	1,752,153	—
Catalytic Crackers						
Capacity	749,000	NA	818,900	5,298,546	NA	5,543,099
Inputs	714,285	719,244	—	5,125,647	5,123,005	—
Hydrocrackers						
Capacity	436,488	NA	458,175	1,230,088	NA	1,349,875
Inputs	405,044	425,841	—	1,054,693	1,133,953	—

NA=Not available; the Form EIA-820 “Biennial Refinery Report” data were not collected for January 1, 1998.
Note: Capacities are as of January 1 of the indicated year.
Sources: Capacities are from the Energy Information Administration Form EIA-820, “Biennial Refinery Report.” Inputs are from the Energy Information Administration Form EIA-810, “Monthly Refinery Report.

Table 46. Refinery Receipts of Crude Oil by Method of Transportation by PAD District, 1998

(Thousand Barrels)

Method	PAD Districts					United States
	I	II	III	IV	V	
Pipeline						
Domestic	1,805	623,420	715,577	107,199	340,757	1,788,758
Foreign	21,932	598,687	229,546	53,162	38,580	941,907
Tanker						
Domestic	0	0	711	0	424,228	424,939
Foreign	524,957	0	1,457,578	0	139,209	2,121,744
Barge						
Domestic	1,314	0	63,829	0	1,852	66,995
Foreign	20,273	0	35,032	0	9,153	64,458
Tank Cars						
Domestic	4,399	0	1,151	16	7,453	13,019
Foreign	0	0	0	0	0	0
Trucks						
Domestic	4,015	5,760	33,007	14,694	9,716	67,192
Foreign	0	0	0	0	0	0
Total						
Domestic	11,533	629,180	814,275	121,909	784,006	2,360,903
Foreign	567,162	598,687	1,722,156	53,162	186,942	3,128,109

Source: Energy Information Administration (EIA), Form EIA-820, “Biennial Refinery Report.”

Table 47. Fuel Consumed at Refineries by PAD District, 1998

(Thousand Barrels, Except Where Noted)

Commodity	PAD Districts					United States
	I	II	III	IV	V	
1998						
Crude Oil	0	0	2	0	1	3
Liquefied Petroleum Gases	258	1,759	405	102	1,119	3,643
Distillate Fuel Oil	223	88	165	0	285	761
Residual Fuel Oil	2,824	2,842	0	282	581	6,529
Still Gas	19,139	49,334	116,192	7,238	46,602	238,505
Marketable Petroleum Coke	1,209	171	70	152	1,024	2,626
Catalyst Petroleum Coke	11,479	17,750	40,852	2,452	13,447	85,980
Natural Gas (million cubic feet)	37,737	94,628	607,868	16,863	116,654	873,750
Coal (thousand short tons)	31	5	0	0	0	36
Purchased Electricity (million kWh)	3,187	9,041	13,871	1,417	5,071	32,587
Purchased Steam (million pounds)	3,415	4,109	5,525	803	17,381	31,233
Hydrogen (million cubic feet)	0	0	0	0	0	0
Other Products[a]	364	1,649	1,991	687	1,268	5,959

Note: Includes volumes used as fuel at refineries and all nonprocessing losses of crude oil and petroleum products (e.g., spills, fire losses, contamination, etc.)

[a]Includes pentanes plus, other hydrocarbons, oxygenates, unfinished oils, gasoline, special naphthas, jet fuel, lubricants, asphalt, road oil, and miscellaneous products.

Sources: 1995: Energy Information Administration (EIA), Form EIA-810, “Monthly Refinery Report.” 1996: Form EIA-820,"Biennial Refinery Report" and Form EIA-810.

Table 48. Shutdown and Reactivated Refineries During 1998

PAD District / Refinery	Location	Total Atmospheric Crude Oil Distillation Capacity (bbl/cd)	Total Downstream Charge Capacity (bbl/sd)	Date Operable	Date of Last Operation	Date Shutdown
SHUTDOWNS						
PAD District III		**83,650**	**74,750**			
Gold Line Refining Ltd.	Jennings, LA	12,000	0	04/97	07/97	01/98
Petrolite Corp.	Kilgore, TX	600	750	01/52	12/97	02/98
Shell Oil Co.	Odessa, TX	28,300	33,500	01/59	10/98	11/98
Pride Refg. Inc.	Abilene, TX	42,750	40,500	01/61	05/98	04/98
PAD District V		**40,000**	**45,200**			
Sound Refg. Inc.	Tacoma, WA	40,000	45,200	01/68	10/98	12/98
Total U.S. Shutdowns		**123,650**	**119,950**			
REACTIVATIONS						
PAD District III						
Orion Refining Corp.	Good Hope, LA	110,000	182,000	06/98	-———-	———
PAD District IV						
Silver Eagle Refining	Evanston, WY	3,000	5,085	01/96	——-	——-

[a] Refinery was operable prior to 1948.
[b] Wax processing facility, no longer operating as a refinery.
NA=Not Available.
bbl/cd=Barrels per calendar day.
bbl/sd=Barrels per stream day.
Sources: Energy Information Administration (EIA) Form EIA-810, “Monthly Refinery Report” and Form EIA-820, “Annual Refinery Report.”

Table 49. Refinery Sales During 1998

Former Owner	Total Atmospheric Crude Oil Distillation Capacity (bbl/cd)	New Owner	Date of Sale
Amerada Hess Corp.		**Hovensa LLC**	**11/98**
Saint Croix, VI	495,000		
Amoco Corp., USA		**BP Amoco PLC**	**12/98**
Whiting, IN	410,000		
Mandan, ND	58,000		
Texas City, TX	433,000		
Salt Lake City, UT	53,000		
Yorktown, VA	58,600		
Ashland Oil Inc.		**USX Corp**	**01/98**
Cattlettsburg, KY	222,000		
Canton, OH	73,000		
St. Paul Park, MN	70,000		
BHP Hawaii Inc.		**Tesoro Petro. Corp.**	**06/98**
Ewa Beach, HI	93,500		
BP America Inc.		**The Blackstone Group LP**	**08/98**
Lima, OH	161,500		
BP America Inc.		**BP Amoco PLC**	**12/98**
Toledo, OH	152,000		
Alliance, LA	255,000		
Cenex Inc.		**Cenex Harvest States Coop**	**06/98**
Laurel, MT	41,450		
Crysen Corp.		**Inland Resources Inc.**	**01/98**
Woods Cross, UT	11,000		
Crysen Corp.		**Sound Refg. Inc.**	**01/98**
Tacoma, WA	40,000		
Mapco Inc.		**The Williams Company**	**03/98**
Memphis, TN	140,000		
North Pole, AK	196,700		
Mobil Oil Corp.		**Chalmette Refg. LLC**	**01/98**
Chalmette, LA	181,600		
Mobil Oil Corp.		**Valero Energy Corp.**	**10/98**
Paulsboro, NJ	152,000		
Pennzoil Co.		**Pennzoil-Quaker State Co.**	**12/98**
Shreveport, LA	46,200		
Rouseville, PA	12,800		
Petro Source Refg. Corp.		**Foreland Refg. Corp.**	**08/98**
Tonopah, NV	7,000		
Eagle Springs, NV	0		
Shell Oil Co.		**Tesoro Petro. Corp.**	**08/98**
Anacortes, WA	142,000		
Shell Oil Co.		**Equilon Enterprises LLC**	**07/98**
Wood River, IL	288,300		
Martinez, CA	154,800		
Shell Oil Co.		**Motiva Enterprises LLC**	**07/98**
Norco, LA	232,000		

bbl/cd = Barrels per calendar day.
Source: Energy Information Administration (EIA) Form EIA-810, “Monthly Refinery Report.”

Table 49. Refinery Sales During 1998

Former Owner	Total Atmospheric Crude Oil Distillation Capacity (bbl/cd)	New Owner	Date of Sale
Star Enterprise		**Motiva Enterprises LLC**	**07/98**
Convent, LA	225,000		
Delaware City, DE	157,000		
Port Arthur, TX	235,000		
Texaco Inc.			
Anacortes, WA	142,000	**Equilon Enterprises LLC**	**07/98**
El Dorado, KS	98,750		
Wilmington, CA	90,600		
Bakersfield, CA	63,000		
Total Petro N. America Ltd.		**Ultramar Diamond Shamrock Corp.**	**01/98**
Alma, MI	52,000		
Arkansas City, KS	98.750		
Ardmore, OK	75,000		
Commerce City, CO	28,000		
Transamerican Natural Gas Corp.		**Orion Refining Corp.**	**12/98**
Good Hope, LA	110,000		

bbl/cd = Barrels per calendar day.
Source: Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report."

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.

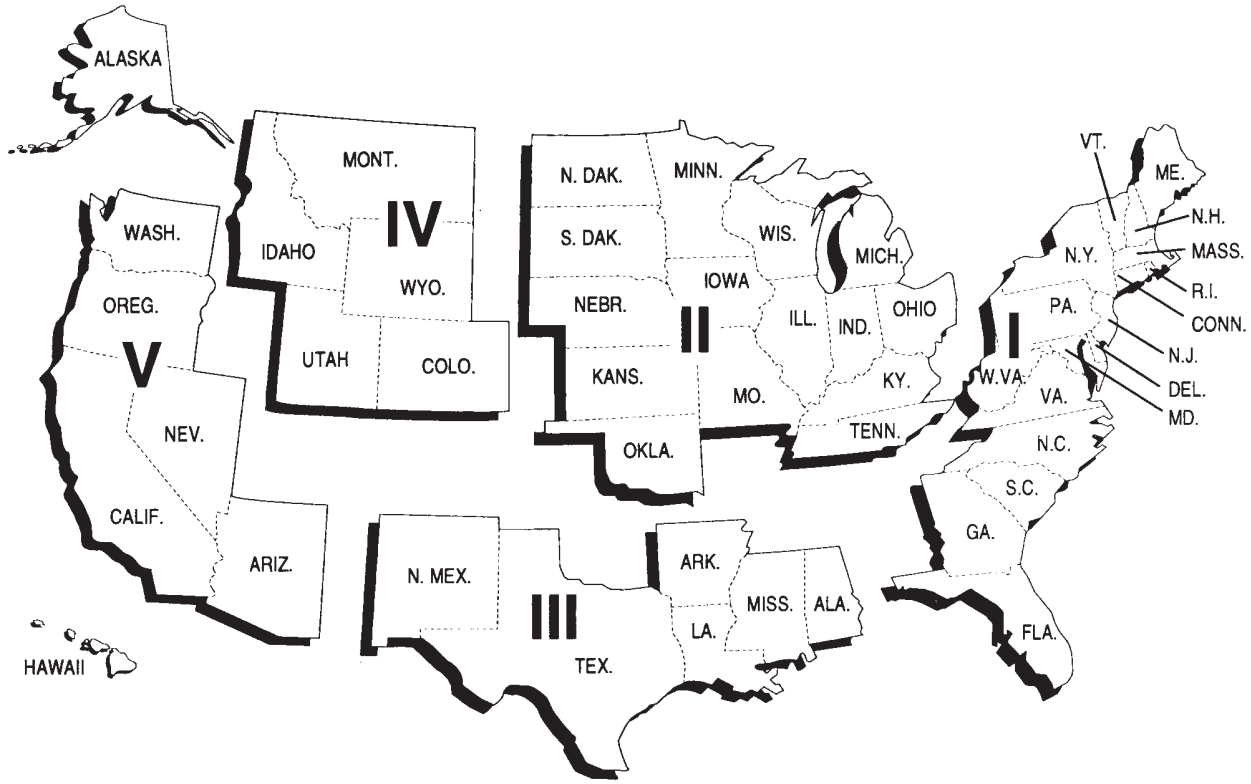
PAD District IV

Rocky Mountain: The States of Montana, Idaho, Wyoming, Utah, and Colorado.

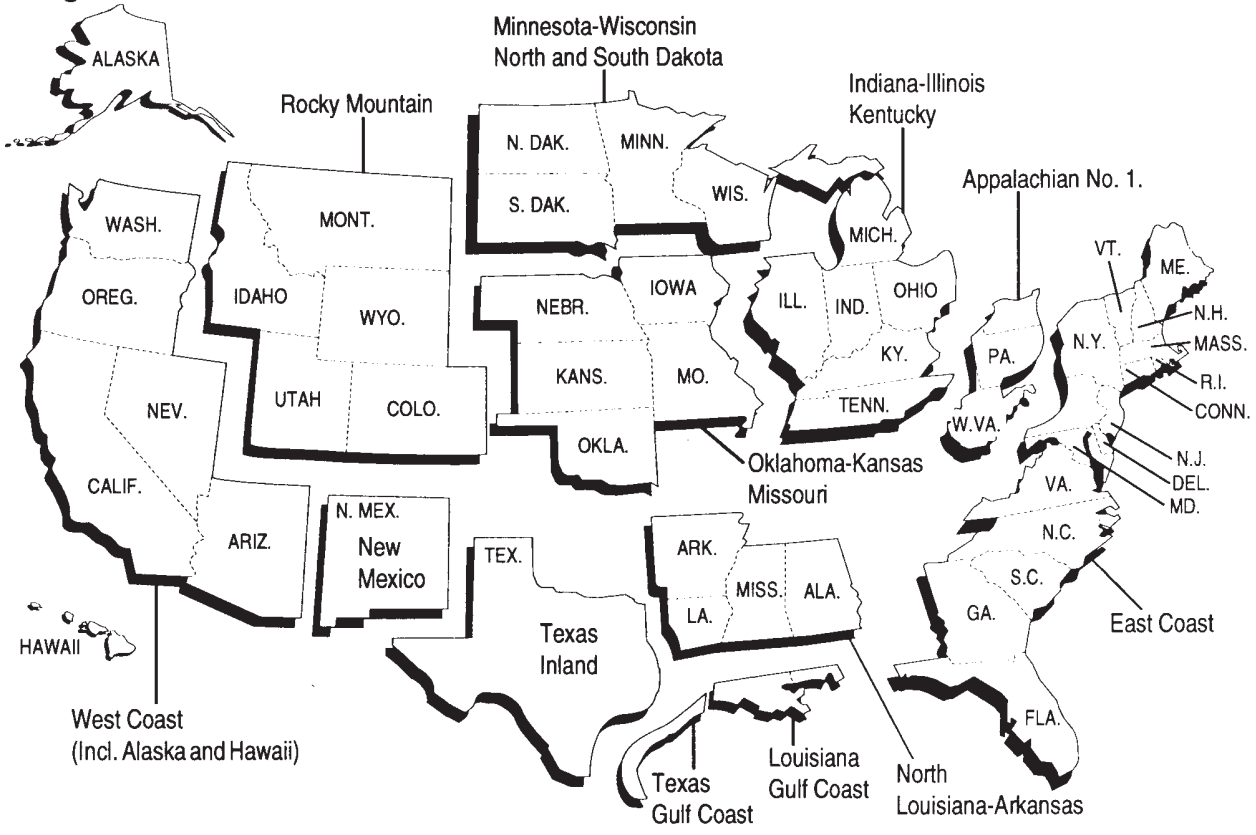
PAD District V

West Coast: The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

Petroleum Administration for Defense (PAD) Districts



Refining Districts



Explanatory Notes

The following Explanatory Notes are provided to assist in understanding and interpreting the data presented in this publication.

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 -819M	"Monthly Oxygenate Telephone Report"
EIA-820	"Biennial 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 pro-

pane. 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/blender and natural gas plant operations data; refinery/blender, 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 *Petroleum Supply Annual* (PSA), Volumes 1 and 2.

Summary information on the revision error between preliminary and final data is published once a year in the *PSM* feature article entitled, "Accuracy of Petroleum Supply Data." The next article will evaluate the accuracy of the data for 1997 and 1998 compared with previous years.

The Form EIA-819M, "Monthly Oxygenate Telephone Report," is used to collect preliminary data on production 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 from a sample of fuel ethanol producers. Data are published in Appendix D of the *PSM* and also in the *WPSR*.

The Form EIA-819A, "Annual Oxygenate Capacity Report," was used to collect data on current and projected production capacity of oxygenates and annual production and end-of-year inventories of fuel ethanol. This survey, which was last conducted for January 1, 1995 and published in the *Petroleum Supply Annual* 1994, has been eliminated.

The Form EIA-820, "Biennial 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, operable capacity for atmospheric crude oil distillation units and downstream units, as well as production capacity and storage capacity for petroleum products. In 1996, this survey was moved to a biennial schedule (every other year). The survey was last conducted in January 1997. This survey is described in more detail in Explanatory Note 3.

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 and 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. 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 250 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. Approximately 300 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 190 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 525 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 45 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 from the universe of fuel ethanol producers who reported on the Form EIA-819A, "Annual Oxygenate Capacity Report", in 1995. 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 100 respondents report on the Form EIA-819M.

Sampling

The sampling procedure used for the survey Form EIA-819M is the cut-off method and is performed using software developed for EIA's Survey Methods Group. 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 the previous year. Companies are chosen for the sample beginning with the largest and adding companies until the sample covers approximately 90 percent of the total for each oxygenate product and supply type by geographic region (PAD Districts I through V).

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 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 pipe-

line. 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 collection for the EIA-819M begins on the seventh working day of each month. Data are solicited by telephone or transmitted to the EIA by facsimile. 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. On the EIA-819M, data are aggregated for each geographic region. Estimation factors, which are derived from the previous year's 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 and lubricants are suppressed on Table 16, "Refinery Net Production of Finished Petroleum Products by PAD and Refining Districts" to avoid disclosure of company identifiable data.

Statistics representing data aggregated from less than three companies or aggregated data representing 60 percent or more of a single company's data are suppressed on the PSA tables listed below. In addition, complementary suppression is performed to avoid any residual disclosure.

- Table 16, "Refinery Input of Crude Oil and Petroleum Products by PAD and Refining Districts," (inputs of oxygenates)
- Table 18, "Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining Districts," (stocks of oxygenates)
- Table 30, "Stocks of Crude Oil and Petroleum Products by PAD District," (stocks of oxygenates)
- Table 31, "Refinery, Bulk Terminal, and Natural Gas Plant Stocks of Selected Petroleum Products," (all products)

With the exception of the tables listed above, the tables in the *PSA* 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. Form EIA-820: Biennial Refinery Report

Refinery capacity data collection was begun in 1918 by the Bureau of Mines, then in the Department of Commerce, and was operated on a voluntary basis until 1980. In 1980, the mandatory Energy Information Administration (EIA) Form EIA-177, *Capacity of Petroleum Refineries*, was implemented. Information on refining capacity was expanded to include not only current year operations, two-year projections, and refinery input/production data. Working storage capacity data was also added to the form and product categories were added for total coverage. Information on refinery downstream facilities was expanded to include a breakdown of thermal operations and to add vacuum distillation, catalytic hydrorefining and hydrotreating. Production capacity was also added to include information on isomerization, alkylation, aromatics, asphalt/road oil, coking, lubricants and hydrogen.

In 1983, the form was revised to improve the consistency and quality of the data collected by the EIA and redesignated as Form EIA-820, "Annual Refinery Report." Two sections for data previously reported monthly were added: (1) refinery receipts of crude oil by method of transportation, and (2) fuels consumed for all purposes at refineries. Also, the second year projections on refining capacity were eliminated. As a result of a study conducted by the EIA evaluating motor gasoline data collected by the Federal Highway Administration (FHWA) and by the EIA, motor gasoline blending plants were included for the first time to the respondent frame in order to produce more accurate statistics on the production of motor gasoline.

In 1987, the form was revised to reduce respondent burden and to better reflect current refinery operations through updated terminology. Information on projected input/production of refinery processing facilities was deleted. Several categories under catalytic hydrotreating were combined: naphtha and reformer feeds were combined into a single category as well as residual fuel oil and other. Thermal cracking types, gas oil and "other" were also combined into a single category. Catalytic reforming types, conventional and bi-metallic were replaced with low and high pressure processing units. Two new categories were added: fuels solvent deasphalting was added to downstream charge capacity and sulfur recovery was added to production capacity.

In 1994, the form was revised to enable EIA to calculate utilization rates for certain downstream processing units and to reflect storage capacity of fuels mandated by the Clean Air Act Amendments of 1990. Additions to the form included calendar day downstream charge capacity for fluid and delayed coking, catalytic cracking, and catalytic hydrocracking. Also storage capacity categories for reformulated, oxygenated, and other finished motor gasoline were added, as well as oxygenate storage capacity and separate categories for high and low sulfur distillate fuel oil.

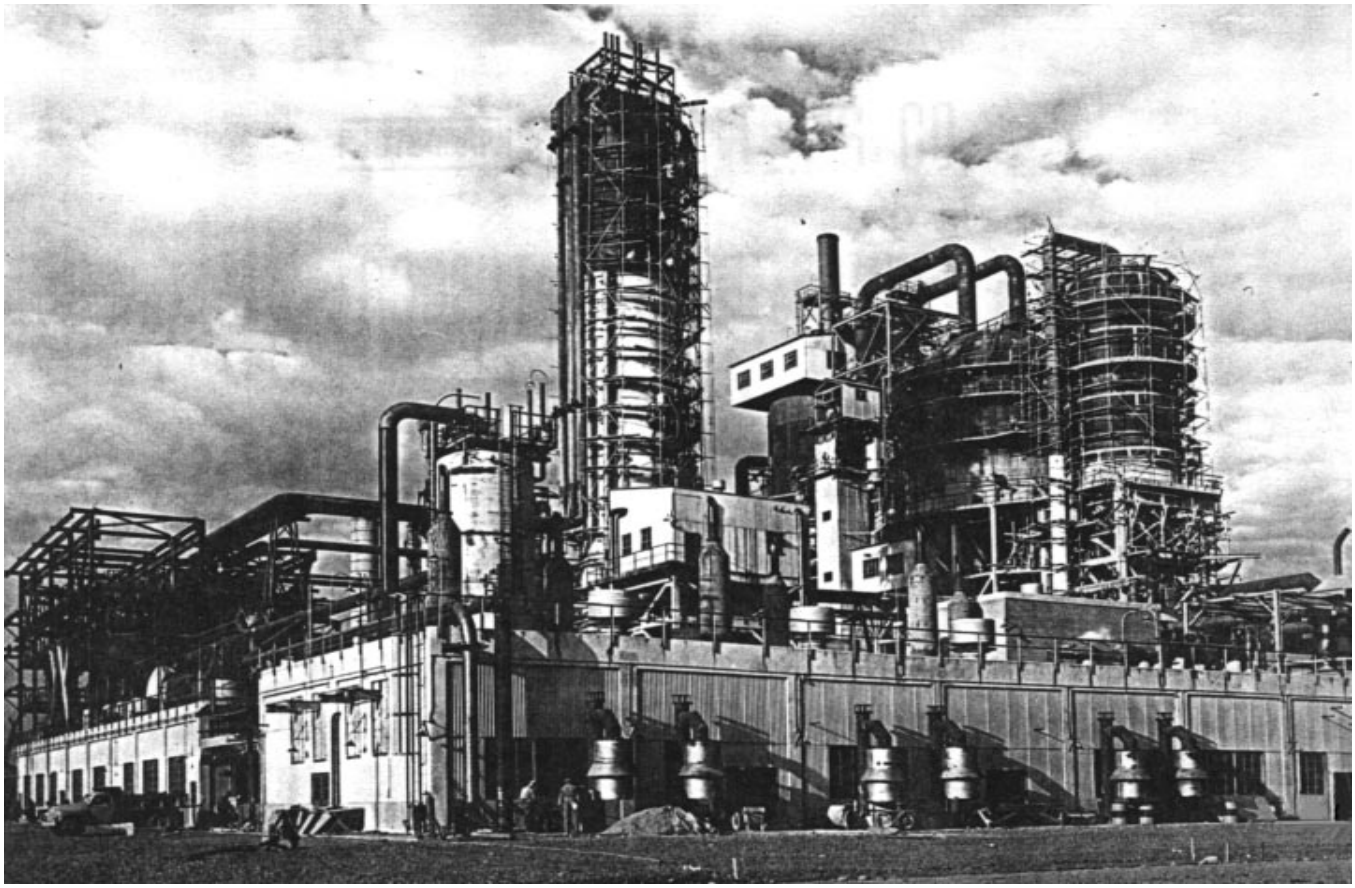
In 1995, motor gasoline blending plants were dropped from the survey frame, since by this time, the only section of the form that applied to them was working and shell storage capacity. Also in 1995, a decision was made to no longer collect storage capacity from shutdown refineries; therefore, these refineries were also eliminated from the survey frame.

In 1996, the survey was moved to a biennial schedule (every other year) and was renamed "Biennial Refinery Report". The survey was not conducted for January 1, 1998 .

In 1997, respondents were not required to submit data for crude oil and petroleum products consumed at refineries during 1996. These data are available from the Form EIA-810, "Monthly Refinery Report." The requirement to submit data for refinery consumption of natural gas, coal, and purchased steam and electricity on the Form EIA-820 remains.

Respondent Frame

The respondent frame consists of all operating and idle petroleum refineries (including new refineries under construction), located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam and other U.S. possessions. As of January 1, 1999, there were 159 refineries



Refinery cat-cracker.

and 45 motor gasoline blending plants in the 50 States. A list of motor gasoline blending plants operating during 1998 is provided in Explanatory Note 23.

The respondent frame is maintained by monitoring the monthly Form EIA-810, "Monthly Refinery Report," and industry publications for changes and developments in the petroleum industry such as refinery sales, mergers and new operations.

Description of Survey Form

The Form EIA-820 is used to collect data on fuels consumed for all purposes at the refinery during the preceding year; refinery receipts of crude oil by method of transportation during the preceding year; current and next year projections for operable atmospheric crude oil distillation capacity, downstream charge capacity and production capacity; and current year working and shell storage capacity for crude oil and petroleum products at the refinery.

Collection Methods

The Form EIA-820 is sent to respondents in December. Survey forms can be submitted by mail or facsimile. Completed forms are required to be postmarked by the 15th day of February of the current report year. Receipt of the reports is monitored using an automated respondent mailing list. Telephone follow-up calls are made to secure responses from those companies failing to report by February 15th.

Response Rate

The response rate for the Form EIA-820 is normally very high. Data are estimated and non-compliance procedures are implemented for those companies still not reporting data by close-out for the report year.

Data Imputation

Imputation is performed for companies that fail to file prior to the publication deadline. For the January 1, 1999 survey, there was one nonrespondent, and their total operable capacity is estimated to be about 0.1 percent of the U.S. total. When nonresponse occurs, values for these companies are imputed from data reported on the most recent year's Form EIA-820 and/or from data reported on Form EIA-810, "Monthly Refinery Report," for that company. For most surveyed items, the value imputed for nonrespondents is the value that company reported on the Form EIA-820 for the most recent year. For three categories of information however, the imputed value is also based on their data from the Form EIA-810 as follows:

Section 1: Fuel, Electricity, and Steam Consumed for all Purposes at Refineries

Data for crude oil, distillate and residual fuel oil, liquefied petroleum gases, still gas, and marketable and catalyst petroleum coke are based upon data reported on the monthly Form EIA-810.

Estimates for natural gas, coal, electricity and steam are taken directly from data reported on the previous year's annual Form EIA-820.

Section 2: Refinery Receipts of Crude Oil by Method of Transportation

The imputation methodology for this section is based on data reported on both the monthly Form EIA-810 and the annual Form EIA-820. Annual refinery receipts of domestic and foreign crude oil for a nonrespondent are imputed by aggregating the values for the refinery on the monthly survey. These values are allocated to the method of transportation by using the percentages reported for the refinery in the previous year. The difference between the values reported on the two surveys by all respondents in 1998 is about 2.0 percent.

Section 3: Operable and Storage Capacity as of January 1

Operable atmospheric crude oil distillation capacity in barrels per calendar day is collected on the monthly Form EIA-810 as of the first day of each month and on the annual Form EIA-820 as of January 1. As part of the editing process for the Form EIA-820, these two values are compared. Companies are contacted and any discrepancies are resolved by the time of publication. Imputed values for operable atmospheric crude oil distillation capacity in barrels per calendar day are taken directly from the January Form EIA-810. A barrels per stream day capacity is then derived by dividing the reported barrels per calendar day capacity by .95.

Current year and projected year data for downstream charge capacity, production capacity, and data for working and shell storage capacity are taken directly from the previous year's annual report.

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 other 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.

Information on operable atmospheric crude oil distillation capacity, downstream charge capacity, and production capacity on Form EIA-820 are not considered as confidential, and historically have not been treated as such. Company identifiable data are published in the *Petroleum Supply Annual* (PSA) 1998, Volume 1, Tables 38, 39, and 40.

Other data on the Form EIA-820 are kept confidential and not disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C.552, Department of Energy (DOE) regulations, 10 C.F.R.1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C.1905.

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.

The data collected on Form EIA-820, "Biennial Refinery Report," is used to report aggregate statistics on and conduct analyses of the operation of U.S. petroleum refineries. The data appear in EIA publications such as *PSA*, and the *Annual Energy Review.* Company specific data are also provided to other DOE offices for the purpose of examining specific refinery operations in the context of emergency response planning and actual emergencies.

The tables pertaining to refinery receipts of crude oil by method of transportation and fuels consumed at the refinery published in the *PSA* 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.

Quality Control

There are two types of errors usually associated with data produced from a survey - sampling errors and nonsampling errors. Because estimates from the Form EIA-820 survey are based on a complete census of the frame of petroleum refineries, there is no sampling error in the data presented in this report. The data, however, are subject to nonsampling errors. Nonsampling errors are those which can arise from: (1) the inability to obtain data from all companies in the frame or sample (nonresponse) and the method used to account for nonresponses; (2) definitional difficulties and/or improperly worded questions which lead to different interpretations; (3) mistakes in recording or coding the data obtained from respondents; and (4) other errors of collection, response, coverage, and estimation. Quality control procedures are employed in the collection and editing operations to minimize misrepresentation and misreporting. Nonresponse follow-up procedures are employed to reduce the number of nonrespondents, and procedures employed to impute missing data, introduce a minimal amount of error, given the relatively small volume of imputed data.

Resubmissions

Resubmissions are required whenever an error greater than 5 percent of the true value is discovered. In the event of a reporting error, company reports are updated after contact with the company and are followed up by corrected report resubmissions. Late submissions or resubmissions received after the publication date are entered into a "working" file. This file contains the most up-to-date data for the Form EIA-820 and is used to edit next year's data.

Note 4. Technical Notes for Detailed Statistics Tables

The detailed statistics tables in the *Petroleum Supply Annual* provide complete supply and demand information for the previous 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 5 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 10 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 alcohol, 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 the prior year'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 products 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/alcohol 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 5. 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. Currently, all except four crude oil producing States (New York, Pennsylvania, Ohio and West Virginia) 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 and the Minerals Management Service. The EIA incorporates production data into its Crude Oil Production System (COPS) as the data are received from the reporting agencies. EIA publications show portions of this database at specific points in time. Table 14 of this publication presents the 1998 crude oil production data received by the EIA as of April 1999. Crude oil production data for 1998 received after April 1999 will be published later as an appendix in the following year's *Petroleum Supply Annual (PSA)*. Table Cl of this publication presents the 1997 crude oil production a year after it was published in the *PSA* 1997.

Note 6. 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 Annual* 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 7. 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.

Sampling and Nonsampling Errors

There are two types of errors usually associated with data produced from a survey — nonsampling errors and sampling errors. Because the estimates for the monthly surveys 810 through 813, 816, and 817 are based on a complete census of the frame, there is no sampling error in the data presented. The data, however, are subject to nonsampling errors. Nonsampling errors, sometimes referred to as biases, are those which can arise from a number of sources: (1) the inability to obtain data from all companies in the frame or sample (nonresponse and the method used to account for nonresponses, (2) definitional difficulties and/or improperly worded questions which lead to different interpretations. (3) mistakes in recording or coding the data obtained from respondents, and (4) other errors of collection, response, coverage, and estimation.

Response rates on the monthly surveys are very high. 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.

Monthly data are compared to weekly data on a regular basis. Discrepancies between weekly and monthly data are documented and respondents are called when discrepancies are either large (usually over 300 thousand barrels) or consistent (e.g., weekly data are always lower than monthly data). In addition, a comparison of the data collected on the PSRS with other similar data series from sources outside of the Petroleum Division is performed each year. The results of this data comparison are published once a year in the *Petroleum Supply Monthly* (PSM) feature article, "Comparisons of Independent Petroleum Supply Statistics."

Sampling errors are those errors that occur when survey estimates are based on a sample rather than being derived from a complete census of the frame. 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.

Data Revision

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 of the PSM.

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 8. Frames Maintenance

The Petroleum Division (PD) 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 on a monthly and annual basis. 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.

Annual frames maintenance focuses on re-evaluating the "must submit" companies filing the Form EIA-814 and reviewing the sample frame for the Form EIA-819M, "Monthly Oxygenate Telephone Report."

To supplement the monthly and annual frames maintenance activities and to provide more comprehensive coverage, the PD periodically conducts a comprehensive frames investigation. These investigations result in the reassessment and recompilation of the complete frame for each survey. The effort also includes the evaluation of the impact of potential frame changes on the historical time series data published from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.

Changes in Survey Frames

Beginning in January 1981, the Energy Information Administration (EIA) expanded its universe to include nonrefinery 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 11 for further discussion.

In January 1981, 1983, and 1984 numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported and stock change calculations. Table B1 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 B2 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 18, "Stocks of Crude Oil and Petroleum Products by PAD District," of the *Petroleum Supply Annual*, 1986 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.

Table B1. New Basis Stocks[1]
(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	1,454
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
Propane/Propylene Liquefied Petroleum Gases	69	57	55
Other Petroleum Products	128	102	108
	207	219	210

[1] Stocks as of December 31.

Note 9. Descriptive Monthly Statistics

The universe of each of the Petroleum Supply surveys (refinery, bulk terminal, pipeline, crude oil stock, import, etc.) is relatively small and ever-changing due to company formations, shutdowns, mergers and splits. The frequency distributions of the petroleum supply variables are non-normal, highly variable, positive skewed and leptokurtic;

Table B2. 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.

that is, there are many small units and few large ones. Zeros often dominate the responses; that is, not all of the sampling units produce and/or store all products.

The statistics described in Table B3 were calculated from the 1996 monthly surveys and display the following petroleum supply variables:

(1) The number of active sampling units (respondents).

(2) The number of sampling units reporting nonzero values (nonzero respondents).

(3) The average of nonzero values reported in thousand barrels (average).

(4) The standard deviation of nonzero values reported in thousand barrels (standard deviation).

Note 10. Practical Limitations of Data Collection Efforts

Crude Oil Lease Stock Adjustment

End-of-month crude oil stocks held on leases are reported on the 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 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 EIA reported data and the state government data was made and the difference added to the EIA data for the 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 Petroleum Administration for Defense (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.

Trans Alaskan Pipeline System Adjustment

Beginning with the January 1989 data, adjustments are made to refinery inputs and product supplied of natural gas liquids (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 is made to refinery input in all states receiving Alaskan crude oil. The adjustment reduces the crude oil inputs and increases the NGL inputs by an equal amount. Each state adjustment is a portion of the known Alaskan-NGL production that is proportional to the state'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 which began in 1987 grew as injections on NGLs into the TAPS increased. Data for 1988 was revised in the *Petroleum Supply Annual* to account for the adjustment.

Finished Motor Gasoline Product Supplied Adjustment

Beginning with the reporting of January 1993 data, adjustments were made 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 (refer to Table B4 in the 1994 *PSA*).

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 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 was calculated (refer to Table B4). This estimate was calculated as production (from the EIA-819M, "Monthly Oxygenate Tele-

Table B3. Descriptive Statistics for Selected Petroleum Supply Variables[1], 1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Refinery Gross Input to Atmospheric Crude Oil Distillation Units												
Respondents	249	245	244	244	244	242	242	241	239	242	240	237
Nonzero Respondents	152	153	152	152	152	153	153	153	153	152	152	152
Average	2990	2610	3039	3020	3154	3073	3182	3203	2949	2901	2979	3094
Standard Deviation	3004	2621	3029	3047	3165	3068	3168	3182	2876	2819	2981	3157
Refinery Crude Oil Input												
Respondents	249	245	244	244	244	242	242	241	239	242	240	237
Nonzero Respondents	160	161	160	161	161	162	162	162	161	161	161	161
Average	2774	2439	2836	2811	2950	2868	2976	3008	2767	2695	2753	2857
Standard Deviation	2960	2595	3001	3016	3139	3041	3140	3168	2836	2799	2938	3123
Refinery Finished Motor Gasoline Gross Production												
Respondents	249	245	244	244	244	242	242	241	239	242	240	237
Nonzero Respondents	167	165	163	160	156	153	154	156	156	158	158	156
Average	1422	1266	1429	1496	1605	1608	1640	1608	1506	1546	1549	1627
Standard Deviation	1492	1259	1456	1553	1659	1603	1657	1648	1568	1576	1622	1678
Refinery Distillate Fuel Oil Gross Production												
Respondents	249	245	244	244	244	242	242	241	239	242	240	237
Nonzero Respondents	152	148	152	149	150	150	149	152	152	154	151	151
Average	713	658	729	732	753	721	764	724	696	673	698	717
Standard Deviation	744	691	761	751	729	706	733	705	659	649	703	712
Refinery Residual Fuel Oil Gross Production												
Respondents	249	245	244	244	244	242	242	241	239	242	240	237
Nonzero Respondents	115	113	110	113	109	109	109	108	107	108	110	107
Average	215	181	230	231	229	209	225	228	214	205	218	247
Standard Deviation	283	240	327	299	303	284	314	308	320	271	301	328
Refinery Finished Gasoline Stocks												
Respondents	249	245	244	244	244	242	242	241	239	242	240	237
Nonzero Respondents	168	168	167	172	172	171	171	171	170	167	164	164
Average	327	343	329	307	314	326	320	294	294	289	293	312
Standard Deviation	351	384	355	330	363	383	402	317	327	317	318	368
Bulk Terminal Finished Motor Gasoline Stocks												
Respondents	300	299	298	297	297	296	295	295	295	295	294	294
Nonzero Respondents	135	134	133	134	131	134	133	134	134	132	131	131
Average	507	512	468	472	517	505	499	488	476	474	526	533
Standard Deviation	1009	1010	980	993	997	1018	982	982	926	952	1034	1059
Pipeline Finished Motor Gasoline Stocks												
Respondents	81	81	82	82	80	80	80	80	80	79	79	79
Nonzero Respondents	53	52	53	53	52	52	52	52	51	50	50	49
Average	962	901	937	985	1003	1038	981	995	984	984	1012	1038
Standard Deviation	2186	1711	2005	2067	2083	2150	2011	2210	2073	1973	2313	2154
Refinery Distillate Fuel Oil Stocks												
Respondents	249	245	244	244	244	242	242	241	239	242	240	237
Nonzero Respondents	201	198	198	197	197	198	198	197	197	196	195	195
Average	239	230	233	226	239	237	243	245	261	240	258	255
Standard Deviation	378	385	381	327	394	377	397	410	475	445	499	478
Bulk Terminal Distillate Fuel Oil Stocks												
Respondents	300	299	298	297	297	296	295	295	295	295	294	294
Nonzero Respondents	186	185	186	186	185	185	187	187	187	188	185	186
Average	300	294	267	285	320	335	367	384	381	382	392	400
Standard Deviation	652	594	519	555	615	665	764	795	819	849	860	850
Pipeline Distillate Fuel Oil Stocks												
Respondents	81	81	82	82	80	80	80	80	80	79	79	79
Nonzero Respondents	54	54	53	53	52	52	50	52	50	51	51	50
Average	539	514	541	524	578	528	604	558	598	558	626	639
Standard Deviation	1445	1356	1357	1361	1548	1387	1487	1405	1413	1538	1633	1612
Refinery Residual Fuel Oil Stocks												
Respondents	249	245	244	244	244	242	242	241	239	242	240	237
Nonzero Respondents	124	125	125	124	123	123	122	121	121	121	121	121
Average	152	144	149	145	147	146	143	157	141	142	156	159
Standard Deviation	249	210	221	202	224	244	237	262	208	235	249	297
Bulk Terminal Residual Fuel Oil Stocks												
Respondents	300	299	298	297	297	296	295	295	295	295	294	294
Nonzero Respondents	54	55	56	57	56	57	57	56	57	57	55	56
Average	375	367	389	365	367	379	387	401	393	413	430	453
Standard Deviation	733	702	774	731	729	731	745	769	783	841	830	842
Refinery Crude Oil Stocks												
Respondents	249	245	244	244	244	242	242	241	239	242	240	237
Nonzero Respondents	161	160	161	160	160	160	160	161	160	161	159	158
Average	607	628	647	670	676	668	686	642	622	653	632	627
Standard Deviation	692	683	692	721	741	743	743	677	669	720	682	662
Pipeline/Tank Farm Crude Oil Stocks												
Respondents	174	175	175	173	173	174	171	170	170	170	170	171
Nonzero Respondents	120	121	121	120	120	119	117	116	116	116	115	115
Average	1593	1580	1684	1827	1818	1681	1759	1747	1633	1726	1821	1759
Standard Deviation	3099	3234	3487	3857	3855	3477	3634	3847	3259	3693	3910	3670

[1] The respondent averages and standard deviations exclude zero reporting companies.

Table B4. Finished Motor Gasoline Product Supplied Adjustment, 1993 to Present (Thousand Barrels per Day)

Item/Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1993													
Fuel Ethanol Adj	61	67	70	61	58	63	62	48	68	69	84	81	66
Motor Gas Blending	-59	-61	15	-32	-3	-5	-19	54	79	-72	-72	48	-10
Product Supplied	6,639	7,112	7,389	7,435	7,585	7,700	7,785	7,864	7,607	7,382	7,533	7,661	7,476
1994													
Fuel Ethanol Adj	86	73	76	71	69	63	65	73	59	90	82	82	74
Motor Gas Blending	33	-7	27	58	51	82	98	98	81	-16	56	113	57
Product Supplied	6,980	7,275	7,395	7,564	7,644	7,922	7,884	7,975	7,615	7,548	7,464	7,924	7,601
1995													
Fuel Ethanol Adj	66	66	79	74	58	81	49	36	57	72	91	58	65
Motor Gas Blending	8	37	56	86	131	113	46	110	35	89	28	29	64
Product Supplied	7,163	7,481	7,788	7,651	7,894	8,220	7,888	8,187	7,786	7,781	7,866	7,742	7,789
1996													
Fuel Ethanol Adj	58	53	50	37	27	14	9	20	22	36	43	39	34
Motor Gas Blending	61	75	(s)	-8	43	48	103	52	21	80	60	43	48
Product Supplied	7,271	7,599	7,792	7,873	8,071	8,088	8,165	8,343	7,662	8,093	7,915	7,794	7,891
1997													
Fuel Ethanol Adj	39	50	51	46	48	38	59	37	47	69	50	61	50
Motor Gas Blending	-20	61	-27	87	73	113	89	95	115	107	165	80	78
Product Supplied	7,301	7,668	7,796	8,064	8,139	8,288	8,496	8,233	8,023	8,141	7,965	8,065	8,017
1998													
Fuel Ethanol Adj	66	55	61	55	42	50	49	58	62	71	55	75	58
Motor Gas Blending	84	39	117	140	142	246	111	88	171	89	145	205	132
Product Supplied	7,618	7,711	8,004	8,312	8,279	8,520	8,680	8,568	8,310	8,378	8,167	8,451	8,253

Note: Totals may not equal sum of components due to independent rounding.
Source: • Energy Information Administration, *Petroleum Supply Annual*, Volumes I and II.

phone 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 was 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 13 published in the *PSA*.

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 the field production of "other" finished gasoline. The PAD District level detail was obtained by allocating the national level estimates according to the percent of gasohol sales from the U.S. Department of Transportation, Federal Highway Administration, Monthly Motor Fuel Reported by States, 1991.

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 corrected this series by including the quantity of "product supplied" for motor gasoline blending components with "other" finished motor gasoline. This change was accomplished in Tables 2 through 13 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."

Fuel Ethanol Stock Adjustment

Total end-of-month stocks of fuel ethanol are underreported in the PSRS because of the inability to collect data from downstream fuel ethanol motor gasoline blenders. 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. If the stocks for the PSRS are higher than those reported on the EIA-819M, no adjustment is made.

Note 11. 1981 Changes in the Petroleum Supply Reporting System

Petroleum statistics 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 B5 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 B5. 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 B6 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.

Table B6. 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

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.

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 (Total) and 380 million barrels (Other Primary).

Note 12. 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.
- Number 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 401 degrees end-point and other-oils equal to or greater than 401 degrees end-point on Form EIA-817.
- Data aggregation for Petroleum Administration for Defense District (PADD) I was divided into three subdistricts on Forms EIA-812 and 817.
- Detailed categories of Gross Input to Crude Oil Distillation Units were eliminated, and only Total Gross Inputs are collected on Form EIA-810.
- Waterborne movements of crude oil and petroleum products between PADDs, on Form EIA-817, no longer reflect shipping and receiving States.
- Reporting of production and stocks of Number 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 13. 1984 Changes in the Petroleum Supply Reporting System

In January 1984, a number of changes in the reporting of natural gas liquids (NGLs) 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 B7 shows the product category under the new and old basis. 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 (Liquefied Petroleum Gases) and 210 million barrels (Other Petroleum Products).

Table B7. 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					•

A fifth survey, Form EIA-814, "Monthly Imports Report" (formerly Form ERA-60), was not modified. Therefore, in order 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 B8 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

Table B8. 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	—	—

during 1983. The percentages shown in Table B8 are derived from the weighted averages of the data provided by the exporters. It was necessary to derive percentages by Petroleum Administration for Defense Districts of exportation, due to the wide variation of components included in the mixed streams.

Note 14. 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 4-8) and by *PAD District of Processing* (Table 14).

The tables in the *Petroleum Supply Annual* that were changed due to the inclusion of inter-PAD District pipeline movements of crude oil are listed below:

- Tables 4 through 8, "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 20, "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 21, "Movements of Crude Oil and Petroleum Products by Pipeline Between PAD Districts."
  - A line was added to report crude oil movements.
- Table 23, "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 15. 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* and were subsequently published in the *Petroleum Supply Annual* (PSA). Refer to Explanatory Note 8 for a detailed description of frames maintenance and updates.

Changes in Data Collection

- The unit of measure used on Form EIA-814, "Monthly Imports Report," has been changed from barrels to thousands of barrels.
- Unfinished oil imports data, previously reported as one product on the Form EIA-814, are now reported separately under four classifications. These classifications are:
  - 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-814.

Changes in Publication Tables

Several changes were also made to tables in the *PSA* either as a direct result of changes in reporting requirements or to improve the usefulness of the publication. These changes were:

- Table 11, "Refinery Input of Crude Oil and Petroleum Products by PAD District."
  - Alaskan crude oil receipts were shown separately.
- Table 12, "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.
- Table 14, "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.
- Table 15, "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 18, "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 16. 1987 Changes in the Petroleum Supply Reporting System

Several changes to the Petroleum Supply Reporting System 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* (PSA).

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 *PSA* Tables 10 through 13, 18, 24, and 25.

- Fresh feed inputs to catalytic cracking units, hydrocracking units, and cokers were added to Table 11, “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 *PSA* statistics. The principal differences in the *PSA* 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 17. 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 are subsequently reflected in the *Petroleum Supply Annual* (PSA) publication.

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 the 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 the Form EIA-816, “Monthly Natural Gas Liquids Report.”

- Fractionators were required to report only end-of-month stocks of NGLs on the 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 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 developed affecting 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

Table B9. Conversion Table for 1989 PSA

Table Numbers									
Old	New	Old	New	Old	New	Old	New	Old	New
1	1	NA	9	12, 24	17	15	25	21	33
2	2	7	10	18, 25	18	27	26	22, 26	34
3	3	NA	11	13	19	16	27	23	35
4	4	8	12	14, 27	20	17	28		
NA	5	NA	13	15	21	NA	29		
5	6	9	14	15	22	18, 25	30		
NA	7	10	15	15	23	19	31		
6	8	11	16	15	24	20	32		

NA = Not Applicable

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*.

Changes in Publication Tables

- "Stock Withdrawal" was renamed "Stock Change" and was moved from Supply to Disposition in Tables 2 through 13. 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 2-13, 17, 18, 20, 32-35.
- PAD District Supply and Disposition tables (Tables 4 through 13) now display liquefied petroleum gases on a component basis.
- A table showing net imports by country for the current month (Table 29) was added.
- Table numbers were changed as a result of data additions and table reorganization. Table B9 is provided to show the new to old table numbers for the detailed statistics tables.
- Table 15, "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 on Table 10 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 17, "Net Refinery Production of Finished Petroleum Products by PAD and Refining District."
  - 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 24, was added.
- Table 18, "Refinery Stocks of Crude Oil and Petroleum Products by PAD and Refining District."
  - Stocks at refineries by Refining District were added from Table 18.
  - Stocks of residual fuel oil by percent sulfur content, previously published as Table 25, were added.
- Tables 21 through 25, "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.
- Table 20,"Imports of Crude Oil and Petroleum Products by PAD District."
  - Sulfur content categories for residual fuel oil, previously published as Table 27, were added.
- Table 28, "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 30, "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 Table 18.

  – Sulfur content categories for residual fuel oil, previously published as Table 25, were added.

Note 18. 1990 Changes in the Petroleum Supply Reporting System

Beginning with the May 1990 issue of the *Petroleum Supply Monthly* (PSM), 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 is also reflected in the corresponding table in the *Petroleum Supply Annual* (PSA).

Beginning with the 1991 March issue of the *PSM*, several changes were made to the Petroleum Supply Reporting System to provide additional data and to improve the usefulness of the publication. Although these changes were made in 1991, these changes have been incorporated into the 1990 *PSA* to provide consistent energy information.

Changes in Publication Tables

Summary Statistics Tables

- A new table (Table S7) has been added to display jet fuel supply and disposition.

- Table S8, "Other Petroleum Products Supply and Disposition" has been redesignated as Table S9. Jet fuel data are no longer included. Historical data have been revised to exclude jet fuel.

- Table S3, "Crude Oil and Petroleum Product Imports" has been expanded to display all Organization of Petroleum Exporting Countries (OPEC) and additional Non-OPEC countries. A separate column for crude oil imports has also been added for each country.

- Time periods have been included in table titles.

Figures

- Time periods have been included in figure titles.

- Sources have been provided for each figure.

- Bar graphs used to display end-of-month stocks have been replaced with line graphs.

Sources

The sources and explanatory notes for this section have been updated and are now located at the end of the Summary Statistics section.

Detailed Statistics Tables

- Table 1, "U.S. Petroleum Balance"

  – A line has been added to display jet fuel as a separate category for Total Products Supplied and Total Stocks (Lines 34 and 44, respectively).

- Imports of Crude Oil and Petroleum Products by PAD District

  – Residual fuel oil sulfur categories have been added.

- Imports of Crude Oil and Petroleum Products by Country of Origin

  – Residual fuel oil sulfur categories by country of origin have been eliminated. These categories are now reported on a PAD District basis.

  – Separate daily average columns have been added for crude oil and petroleum products.

Note 19. 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 are 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 oxygenates 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.

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 13. 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.

  – 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 16. 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 17. 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, 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.
- Table 18. Refinery Stocks
  - 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.
- Table 20. 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 21-25. 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.
- Table 27. 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.
- Table 28. Exports by Destination
  - Miscellaneous products category has been renamed Other Products to accommodate exports of other hydrocarbons/ oxygenates and motor gasoline blending components.
- Table 29. 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 30. 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 31. 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 32. 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 33. 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 34. 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 35. 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 (PSM)

- 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 oxygenates 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 oxygenates 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 oxygenates 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.

Note 20. 1994 Changes in the Petroleum Supply Reporting System

Effective with January 1994 data, several enhancements were made to the tables to reflect changes in the petroleum industry and to provide more meaningful petroleum statistics. These changes primarily affect data reported for imports, exports, and product supplied.

- On December 31, 1992, Ecuador withdrew as a member of the Organization of Petroleum Exporting Countries (OPEC). As of January 1994, imports of petroleum from Ecuador now appear under imports from Non-OPEC sources. No revision was made to 1993 data. This change is evident in Tables S3 and 35 through 44, 49 and 50.
- Exports data are now published for oxygenates and the sub-categories of finished motor gasoline (reformulated, oxygenated, and other) and distillate fuel oil (0.05% sulfur and under, and greater than 0.05% sulfur).
- Product supplied is now calculated for reformulated, oxygenated, and other finished motor gasoline as well as the sulfur categories of distillate fuel oil (0.05% sulfur and under, and greater than 0.05% sulfur).

Note 21. 1995 Changes in the Petroleum Supply Reporting System

- Annual U.S. refinery capacity data collection and publication normally presented each year in Volume 1 of the PSA has been moved to a biennial schedule (every other year). Collection and publication of January 1, 1996 refinery capacity data did not occur.
- Annual U.S. oxygenate production capacity data collection and publication normally presented each year in Volume 1 of the PSA has been eliminated. This information was first collected by EIA to effectively monitor the transition of reformulated motor gasoline into the market.

Note 22. 1997 Changes in the Petroleum Supply Reporting System

- During 1997, Zaire became the Democratic Republic of the Congo. Zaire has been changed to read Congo (Kinshasa). This change is evident in Tables 21 through 25, and Table 29.

Note 23. Motor Gasoline Blending Plants Operating During 1998

BP Amoco PLC
(formerlyAmoco Oil Co.)
Forest View, IL
Milwaukee, WI

Clark Refg. & Mktg. Inc.
Blue Island, IL
Milwaukee, WI

Citgo Petroleum Corp.
East Chicago, IN
Linden, NJ
Milwaukee, WI
Mt. Prospect, IL

Equilon Enterprises LLC
(formerly Shell Oil Co.)
Argo, IL
Carson, CA
Des Plaines, IL
(formerly Texaco Inc.)
Phoenix, AZ
Tucson, AZ

GATX Terminals Corp.
Carteret, NJ

Getty Petro. Corp.
East Providence, RI
New Haven, CT
Newark, NJ

Global Petroleum Corp.
Revere, MA

Hartford/WoodRiver Term.
Hartford, IL

Int'l Matex Tank Term.
Bayonne, NJ

Itochu International Inc.
Sewaren, NJ

Marathon-Ashland Petro LLC
(formerly Marathon Oil Co.)
Hammond, IN
Milwaukee, WI
Mt. Prospect, IL
Willow Springs, IL
(formerly Ashland Oil Inc.)
Clarksville, IN
Covington, KY

Mobil Oil Corp.
Arlington Heights, IL
Hammond, IN
Lockport, IL

New Haven Term, Inc.
East Haven, CT

Northville Industries Corp.
Linden, NJ

Oiltanking Houston Inc.
Houston, TX

Phillips 66 Co.
Forsythe, IL
East Chicago, IN

Phillips Pipeline Co.
Denver, CO
East Saint Louis, IL

SFPP L.P.
(formerly Santa Fe Pacific
Pipeline)
Phoenix, AZ

Sinclair Oil Corp.
Denver, CO

Stolthaven Inc.
Perth Amboy, NJ

Unocal Corp.
Beaumont, TX

Westec Petro. Inc.
Denver, CO

Westfrac Inc. Blending
Grand Junction, CO

Williams Pipeline Co.
Des Moines, IA
Iowa City, IA

Appendix C

Table C1. Revised[a] Crude Oil Production by PAD District and State, 1997
(Thousand Barrels)

PAD District and State	January	February	March	April	May	June	July
PAD District I	**857**	**741**	**783**	**770**	**771**	**759**	**732**
Florida	570	494	543	541	542	533	497
New York	23	22	22	18	22	30	21
Pennsylvania	113	98	102	79	75	70	82
Virginia	1	1	1	1	1	1	1
West Virginia	151	127	115	131	131	126	131
PAD District II	**17,140**	**15,897**	**17,971**	**17,227**	**18,007**	**17,284**	**17,959**
Illinois	1,234	1,204	1,379	1,289	1,324	1,309	1,399
Indiana	175	193	200	204	202	147	252
Kansas	3,658	3,350	3,828	3,690	3,688	3,589	3,731
Kentucky	269	149	258	344	275	302	268
Michigan	877	780	838	860	890	839	856
Missouri	10	9	10	9	11	11	9
Nebraska	284	261	290	274	284	269	274
North Dakota	2,767	2,613	2,862	2,816	3,071	2,982	3,078
Ohio	744	724	702	747	743	700	746
Oklahoma	6,987	6,484	7,459	6,854	7,369	6,995	7,203
South Dakota	104	101	115	106	116	111	112
Tennessee	31	29	31	32	33	30	30
PAD District III	**98,829**	**91,698**	**101,034**	**97,409**	**101,213**	**98,494**	**100,783**
Alabama	1,299	1,184	1,298	1,229	1,270	1,190	1,226
Arkansas	707	698	763	656	738	722	743
Louisiana[b]	11,134	10,331	11,398	10,591	11,029	10,203	10,778
Mississippi	1,644	1,535	1,695	1,671	1,731	1,681	1,910
New Mexico	6,525	6,040	6,786	6,563	6,665	6,319	6,558
Texas[b]	45,150	41,756	45,836	44,464	45,636	44,138	45,316
Federal Offshore Padd III	32,371	30,155	33,258	32,237	34,144	34,240	34,253
PAD District IV	**11,027**	**10,176**	**11,215**	**10,640**	**11,141**	**10,735**	**11,029**
Colorado	2,058	1,926	2,164	2,083	2,024	2,032	2,002
Montana	1,323	1,240	1,363	1,309	1,360	1,318	1,376
Utah	1,645	1,516	1,636	1,482	1,668	1,591	1,654
Wyoming	6,001	5,494	6,052	5,766	6,088	5,794	5,997
PAD District V	**71,195**	**64,493**	**70,059**	**67,689**	**69,374**	**66,159**	**67,720**
Alaska[b]	42,767	38,746	41,262	39,915	40,404	37,795	38,376
South Alaska	1,100	1,082	1,103	1,032	1,040	1,000	1,013
North Slope	41,667	37,664	40,159	38,882	39,363	36,796	37,363
Arizona	6	7	6	6	7	7	7
California[b]	23,508	21,347	23,882	23,260	23,903	23,416	24,341
Nevada	81	77	88	82	100	88	86
Federal Offshore Padd V	4,832	4,317	4,820	4,426	4,960	4,853	4,909
U.S. Total[b]	**199,048**	**183,005**	**201,061**	**193,735**	**200,507**	**193,431**	**198,223**
Daily Average[b]	**6,421**	**6,536**	**6,486**	**6,458**	**6,468**	**6,448**	**6,394**

This table contains updates on 1997 crude oil production statistics published in the *Petroleum Supply Annual* (PSA), 1997.

Statistics on crude oil production for States and for Federal offshore areas are reported to the Energy Information Administration (EIA) by State government agencies and by the Minerals Management Service, U.S. Department of the Interior. These data are updated periodically by the reporting agencies and are received by the EIA on an ongoing basis. At the time of publication of the 1997 PSA, the EIA had not received complete and/or updated statistics on crude oil production for several States. This table is provided to inform the user of updated monthly and annual crude oil production statistics for 1997, and are not subject to further revision by the EIA.

Table C1. Revised[a] Crude Oil Production by PAD District and State, 1997 (Continued)
(Thousand Barrels)

PAD District and State	August	September	October	November	December	Total	Daily Average
PAD District I	**767**	**765**	**777**	**769**	**837**	**9,328**	**26**
Florida	536	523	538	511	554	6,381	17
New York	25	22	31	23	17	276	1
Pennsylvania	69	78	74	106	124	1,069	3
Virginia	(s)	(s)	(s)	1	1	10	(s)
West Virginia	137	141	133	128	141	1,592	4
PAD District II	**17,366**	**17,248**	**16,874**	**16,924**	**16,475**	**206,371**	**565**
Illinois	1,489	1,444	1,384	1,369	1,289	16,115	44
Indiana	201	224	219	191	224	2,430	7
Kansas	3,446	3,468	2,854	3,418	2,707	41,427	113
Kentucky	170	268	301	269	114	2,988	8
Michigan	837	803	815	803	854	10,052	28
Missouri	10	8	10	8	9	114	(s)
Nebraska	277	271	285	283	286	3,337	9
North Dakota	3,107	3,042	3,184	3,107	3,195	35,826	98
Ohio	686	777	670	645	709	8,593	24
Oklahoma	6,993	6,803	7,001	6,692	6,945	83,786	230
South Dakota	117	113	115	111	114	1,335	4
Tennessee	31	27	36	29	29	367	1
PAD District III	**101,240**	**100,253**	**104,140**	**102,395**	**104,743**	**1,202,230**	**3,294**
Alabama	1,186	1,232	1,236	1,240	1,220	14,810	41
Arkansas	769	723	767	736	769	8,791	24
Louisiana[b]	10,765	10,922	11,646	11,425	11,388	131,609	361
Mississippi	1,819	1,744	1,905	1,770	1,825	20,930	57
New Mexico	6,570	6,245	6,290	6,457	6,425	77,442	212
Texas[b]	45,066	44,074	45,682	44,657	45,602	537,376	1,472
Federal Offshore Padd III	35,065	35,312	36,613	36,110	37,513	411,271	1,127
PAD District IV	**10,894**	**10,591**	**10,943**	**10,608**	**11,300**	**130,299**	**357**
Colorado	1,985	1,956	1,944	1,963	2,237	24,374	67
Montana	1,378	1,341	1,392	1,360	1,403	16,164	44
Utah	1,629	1,613	1,720	1,710	1,721	19,585	54
Wyoming	5,902	5,681	5,887	5,575	5,939	70,176	192
PAD District V	**66,727**	**66,770**	**68,633**	**66,090**	**69,000**	**813,908**	**2,230**
Alaska[b]	37,205	38,283	39,869	38,340	39,987	472,949	1,296
South Alaska	1,011	936	977	947	991	12,234	34
North Slope	36,194	37,347	38,893	37,392	38,996	460,716	1,262
Arizona	8	7	7	7	5	82	(s)
California[b]	24,558	23,771	24,685	23,875	24,627	285,172	781
Nevada	79	76	77	73	72	980	3
Federal Offshore Padd V	4,877	4,632	3,994	3,795	4,309	54,725	150
U.S. Total[b]	**196,994**	**195,626**	**201,366**	**196,786**	**202,355**	**2,362,136**	**6,472**
Daily Average[b]	**6,355**	**6,521**	**6,496**	**6,560**	**6,528**	**6,472**	**-**

[a] Data are based upon revisions received as of April 1999.

[b] Includes the following offshore production (thousand barrels): Alaska: State - 90,100; California: State - 21,495; Louisiana: State - 21,102; Texas: State - 1,060; U.S. Total, including Federal Offshore - 599,753.

(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: Sources: State government agencies, U.S. Department of the Interior, Minerals Management Service, and EIA Reserves and Production Division estimates based on Form EIA-182, "Domestic Crude Oil First Purchase Report" data.

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; CH_3-(CH_2)n-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 may be calculated in terms of the following formula:

$$\text{Degrees API} = \frac{141.5}{\text{sp.gr.60° F/60 °F}} - 131.5$$

The higher the API gravity, the lighter the compound. Light crudes generally exceed 38 degrees API and heavy crudes are commonly labeled as all crudes with an API gravity of 22 degrees or below. Intermediate crudes fall in the range of 22 degrees to 38 degrees API gravity.

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 *(C_6H_6).* 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 (C_4H_{10}). 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 (C_4H_{10}). 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 (C_4H_{10}). 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 (C_4H_8). 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 (tar sands from Canada) 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,* for use in on-highway diesel engines which could be described as meeting EPA regulations; and *greater than 0.05% sulfur***,** for use in all other distillate applications.

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) $(CH_3)_3COC_2H_5$. An oxygenate blend stock formed by the catalytic etherification of isobutylene with ethanol.

Ethane (C_2H_6). 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 (C_2H_4). An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

Exports. Shipments of crude oil and petroleum products 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 (C_2H_5OH). 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.

Gasohol. A blend of finished motor gasoline and alcohol (generally ethanol but sometimes methanol), limited to 10 percent by volume of alcohol.

Gasoline Blending Components. Naphthas which will be used for blending or compounding into finished aviation or motor gasoline (e.g., straight-run gasoline, alkylate, reformate, 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 crude oil and petroleum products 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 (C_4H_8). An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

Isohexane (C_6H_{14}). 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 (C_4), an alkylation process feedstock, and normal pentane and hexane into isopentane (C_5) and isohexane (C_6), 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 Specifications MIL-T-5624R and MIL-T-83133D (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 use in commercial aircraft.

Military. Kerosene-type jet fuel intended for use in military aircraft.

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 intended 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 D-4814 or Federal Specification VV-G-1690C, includes a range in distillation temperatures from 122 degrees to 158 degrees F at the 10-percent recovery point and from 365 degrees to 374 degrees 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 meet the requirements of the reformulated gasoline regulations promulgated by the U.S. Environmental Protection Agency under Section 211K of the Clean Air Act. Includes oxygenated fuels program reformulated gasoline (OPRG). Excludes reformulated gasoline blendstock for oxygenate blending (RBOB).

Oxygenated Gasoline. Gasoline formulated for use in motor vehicles that has an oxygen content of 1.8 percent or higher, by weight. Includes gasohol. Excludes reformulated gasoline, oxygenated fuels program reformulated gasoline (OPRG) and reformulated gasoline blendstock for oxygenate blending (RBOB).

OPRG. "Oxygenated Fuels Program Reformulated Gasoline" is reformulated gasoline which is intended for use in an oxygenated fuels program control period.

Other Finished or Conventional Gasoline. Motor gasoline not included in the oxygenated or reformulated gasoline categories. Excludes reformulated gasoline blendstock for oxygenate blending (RBOB).

Motor Gasoline Blending. Mechanical mixing of motor gasoline blending components and oxygenates to produce finished motor gasoline. Mechanical mixing of finished motor gasoline with motor gasoline blending components or oxygenates which results in increased volumes of finished motor gasoline, and/or changes in the classification of finished motor gasoline (e.g., other finished motor gasoline mixed with MTBE to produce oxygenated motor gasoline), is considered motor gasoline blending.

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, xylene) and includes reformulated gasoline blendstock for oxygenate blending (RBOB). 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) ($(CH_3)_3COCH_3$). An ether intended for gasoline blending as described in Oxygenate definition.

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 ramjet 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, (C_5H_{12}), 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, 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. Prior to January 1, 1993, Ecuador was a member of OPEC. Prior to January 1995, Gabon was a member of OPEC.

OPRG. "Oxygenated Fuels Program Reformulated Gasoline" is reformulated gasoline which is intended for use in an oxygenated fuels program control area during an oxygenated fuels program control period.

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 defined during World War II for purposes of administering oil allocation.

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 maximum 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 (C_3H_8). 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 (C_3H_6). An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

RBOB. "Reformulated Gasoline Blendstock for Oxygenate Blending" is a motor gasoline blending component which, when blended with a specified type and percentage of oxygenate, meets the definition of reformulated gasoline.

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 Specification D396. 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.

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 yellowish nonmetallic element, 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) $(CH_3)_3COH$. 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 *($C_6H_5CH_3$).* 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 ($C_6H_4(CH_3)_2$). 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.