

Country	Company, operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating							Alkylation b/cd	Aromatics b/cd	Isomerization			Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d	
				Fluid coking (incl.) b/cd	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd			Other desulfurization b/cd	Other hydrotreating b/cd	C4 feed b/cd						C5/C6 feed b/cd
BRAZIL	Mubadala Capital—MC Brazil Downstream Participações—Acelen—Refinaria de Mataripe—Mataripe, Bahia	279,000	126,058	0	0	0	0	87,888	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,221	2.0	0	72	2,300	
	Petroleo Brasileiro SA—LUBNOR—Fortaleza, Ceara	8,000	6,032	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,076	1.0	0	0	3,500		
	Petroleo Brasileiro SA—RECAP—Capuava, Maua, Sao Paulo	57,000	0	0	0	0	0	17,578	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	9	0		
	Petroleo Brasileiro SA—REDUC—Duque de Caxias, Rio de Janeiro	239,000	112,186	0	0	0	0	49,717	0	11,132	0	0	0	0	0	0	33,340	0	0	11,698	0	0	3,145	0	0	0	13,712	18.0	1,481	70	0		
	Petroleo Brasileiro SA—REFAP—Canoas, Rio Grande do Sul	201,000	33,173	0	0	0	0	18,163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	22	2,600		
	Petroleo Brasileiro SA—REGAP—Betim, Minas Gerais	157,000	77,203	0	22,265	0	0	40,269	0	0	0	0	0	0	0	0	10,547	10,547	35,679	0	0	0	0	0	0	0	0	20.0	1,062	73	6,000		
	Petroleo Brasileiro SA—REMAN—Manaus, Amazonas	46,000	6,635	0	0	0	0	2,930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	1,100		
	Petroleo Brasileiro SA—REPAR—Araucaria, Parana	208,000	89,869	0	0	0	0	53,904	0	0	0	0	0	0	0	0	0	0	29,249	0	0	0	0	0	0	0	0	10.0	0	70	5,000		
	Petroleo Brasileiro SA—REPLAN—Paulinia, Sao Paulo	434,000	155,010	0	62,000	0	0	93,747	0	0	0	0	0	0	0	0	0	0	66,679	0	0	0	0	0	0	0	0	35.0	2,950	212	4,000		
	Petroleo Brasileiro SA—REVAP—Sao Jose dos Campos, Sao Paulo	252,000	120,768	0	0	0	0	82,029	0	0	0	0	0	0	0	0	20,507	17,578	35,094	0	0	0	0	0	0	0	0	10.0	0	173	2,600		
Petroleo Brasileiro SA—RNEST—Ipojuca, Pernambuco	88,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0			
Petroleo Brasileiro SA—RPBC—Cubatão, Sao Paulo	170,000	77,806	0	31,054	0	0	55,662	0	10,254	0	0	0	0	0	10,528	0	0	0	0	0	0	0	3,145	0	0	0	30.0	1,481	70	0			
Petroleo Brasileiro SA—RPCC—Guamaré, Rio Grande do Norte	38,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0			
Total	2,177,000	804,740	0	115,319	0	0	501,887	0	21,386	0	0	0	0	0	10,528	31,054	28,125	200,041	0	0	11,698	0	0	6,290	0	0	20,009	126.0	6,974	771	27,100		
BRUNEI	Brunei Shell Petroleum Co. Sdn. Bhd.—Seria	8,600	0	0	0	0	0	0	5,700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	Hengyi Industries Sdn. Bhd.—Muara, Negara	160,658	0	18,795	0	0	0	0	0	0	42,192	0	0	0	0	63,611	0	28,137	44,904	0	0	0	0	0	29,860	0	0	0.0	0	1,992	0		
Total	169,258	0	18,795	0	0	0	0	0	5,700	0	42,192	0	0	0	63,611	0	28,137	44,904	0	0	0	0	0	29,860	0	0	0.0	0	1,992	0			
BULGARIA	Lukoil Neftochim Bourgas AD—Bourgas	139,000	76,900	26,400	0	0	0	37,100	0	14,400	0	0	0	0	39,000	158,000	0	0	0	0	0	0	0	6,900	0	1,700	0	0	0	91.3	0	509	5,400
	Total	139,000	76,900	26,400	0	0	0	37,100	0	14,400	0	0	0	0	39,000	158,000	0	0	0	0	0	0	0	6,900	0	1,700	0	0	0	91.3	0	509	5,400
CAMEROON	Societe Nationale de Raffinage—Cape Limboh, Limbe	42,000	22,966	0	0	0	0	0	8,000	0	0	0	0	0	10,000	0	0	17,000	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	Total	42,000	22,966	0	0	0	0	0	8,000	0	0	0	0	0	10,000	0	0	17,000	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
CANADA	Genovus Energy Inc.—Husky Energy Inc.—Lloydminster, Alta.	29,000	22,600	6,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	961	339	12,000			
	Federated Co-operatives Ltd.—Regina, Sask.	130,000	37,700	0	2,400	0	0	47,800	0	9,700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	125.0	300	430	4,400		
	Imperial Oil Ltd.—Nanticoke, Ont.	107,350	0	0	0	0	0	44,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	Imperial Oil Ltd.—Sarnia, Ont.	113,050	0	27,900	0	0	0	27,000	0	0	0	0	18,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	Imperial Oil Ltd.—Strathcona, Alta.	186,200	0	0	0	0	0	58,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	Irving Oil Ltd.—St. John, Newf.	320,000	100,000	0	0	20,000	0	95,000	0	35,000	0	34,000	0	0	0	48,000	0	30,000	0	0	0	0	0	14,000	16,000	0	10,000	0	0	47.0	0	200	0
	Parkland Fuel Corp.—Burnaby, BC	55,000	11,800	0	0	0	0	17,800	0	0	9,400	0	0	0	0	15,000	0	0	16,500	0	0	0	14,000	0	3,000	0	0	10,000	0	0	22,000	2,000	
	Shell Canada Ltd.—Sarnia, Ont.	80,750	0	0	0	0	0	18,900	0	0	0	9,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	Shell Canada Ltd.—Scottford, Alta.	95,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	Suncor Energy Inc.—Edmonton, Alta.	146,000	51,800	0	18,000	0	0	40,900	0	11,900	0	0	21,400	0	0	34,600	0	0	62,700	0	0	38,000	0	14,300	14,800	0	8,500	0	0	20.0	800	370	0
	Suncor Energy Inc.—Montreal, Que.	137,000	54,000	0	0	0	0	32,000	0	24,000	12,000	0	22,000	0	0	40,000	29,000	19,500	33,000	0	0	0	0	4,000	21,000	0	0	0	0	48.0	0	0	30,000
	Suncor Energy Inc.—Sarnia, Ont.	85,000	26,700	0	0	0	0	16,700	0	23,000	0	0	32,100	0	0	25,800	9,600	6,000	43,600	0	0	0	0	4,900	13,200	0	0	0	41.0	0	180	5,200	

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				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other disulfide desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd						Alkylation b/cd	Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd
	China National Petroleum Corp.—PetroChina Sichuan Petrochemical Co. Ltd.—Chengdu, Sichuan	202,400	0	0	0	0	0	0	0	40,164	0	0	50,205	0	44,181	0	0	0	70,288	0	60,247	0	0	0	1,305	0	0	0	0.0	0	0	0		
	China National Petroleum Corp.—PetroChina Urumqi Petrochemical Co.—Urumqi, Xinjiang Uygur Autonomous Region	120,493	0	0	24,099	0	0	0	0	8,033	0	0	0	0	0	30,123	0	0	0	0	0	0	0	0	0	0	0	0.0	200	803	0			
	China National Petroleum Corp.—PetroChina Yunnan Petrochemical Co.—Kunming, Yunnan	263,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0				
	CNOOC Huizhou Petrochemicals Co. Ltd.—Huizhou, Guangdong	440,000	167,448	0	84,000	0	0	24,000	0	0	40,200	152,000	0	0	0	37,000	0	0	71,637	0	0	51,419	0	3,200	34,600	0	0	0	0	178.0	0	164	0	
	Fujian Refining and Petrochemical Co. Ltd.—Quanzhou, Fujian	240,985	0	0	0	0	9,000	40,500	0	0	0	0	0	0	42,300	0	0	0	0	0	0	0	0	6,930	0	0	0	0	0	0	0			
	Hebei Xinhai Chemical Group Co. Ltd.—Changzhou, Hebei	98,630	0	0	16,603	0	0	0	0	12,233	0	15,342	0	0	0	0	0	10,000	0	10,000	0	0	0	0	0	0	0.0	0	0	0	10,792	0		
	Hengli Petrochemical (Dalian) Co. Ltd.—Hengli Petrochemical Industrial Park, Changxing Island Harbor Industrial Zone, Dalian, Liaoning	401,643	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,452	0	0	0	0	0	0	0	0		
	Panjin North Asphalt Fuel Co., Ltd.—Panjin, Liaoning	290,000	200,000	0	56,000	0	0	38,000	1,000	59,000	0	17,000	0	23,000	0	42,000	20,000	0	29,000	0	23,000	0	0	32,000	12,000	2,000	2,000	2,000	11,000	100.0	1,500	400	10,000	
	Shandong Dongming Petrochemical Group Co. Ltd.—Heze City, Shandong	298,315	183,935	0	92,411	0	0	80,650	12,914	64,809	0	0	0	0	0	60,329	39,161	0	166,018	0	0	0	39,252	27,391	0	17,616	0	320	0	0	0.6	4,340	693	50,394
	Shenghong Petrochemical Group Co. Ltd.—Shenghong Refining & Chemical (Lianyungang) Co. Ltd.—Lianyungang, Jiangsu	321,315	0	0	37,590	0	0	67,120	69,040	78,290	78,290	66,165	0	61,370	0	0	0	0	63,290	0	0	0	57,530	9,890	55,690	0	0	0	0	0.0	0	1,645	0	
	Sinochem Hongrun Petrochemical Co. Ltd.—Weifang	100,410	0	0	28,100	0	0	12,000	0	0	0	0	0	0	0	0	12,000	0	0	0	0	24,100	0	0	0	0	0	0	0	0.0	0	0	0	
	Sinochem Quanzhou Petrochemical Co. Ltd.—Quanzhou	240,986	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	Sinopec Corp.—Anqing Co.—Anqing, Anhui	160,658	0	0	30,123	0	0	42,173	0	4,418	0	0	0	0	0	0	32,132	0	0	0	0	0	0	44,181	1,000	0	0	0	0	0.0	225	803	0	
	Sinopec Corp.—Beihai Refining & Chemical Co. Ltd.—Beihai, Guangxi	100,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	Sinopec Corp.—Beijing Yanshan Co.—Beijing	220,904	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	Sinopec Corp.—Cangzhou Co.—Cangzhou, Hebei	70,288	0	0	24,099	0	0	24,099	0	3,012	0	0	0	0	0	0	32,132	0	32,132	0	0	0	0	0	0	0	0	0	0.0	0	0	0	4,016	
	Sinopec Corp.—Changling Petrochemical Co.—Yueyang, Hunan	230,945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	Sinopec Corp.—Gaoqiao Co.—Shanghai	261,068	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0			
	Sinopec Corp.—Guangzhou Petrochemical Co.—Guangzhou, Guangdong	265,085	0	0	0	20,000	0	44,000	0	8,000	0	0	0	0	0	20,000	0	0	0	0	0	0	0	1,000	0	0	0	0	0	0.0	0	0	0	
	Sinopec Corp.—Hainan Petrochemical Co. Ltd.—Yangpu Economic Development Zone, Hainan	184,756	0	0	0	0	0	56,230	0	24,099	0	24,099	0	0	0	62,255	0	20,082	40,164	0	0	0	0	0	0	4,016	0	0	0	0.0	0	219	0	
	Sinopec Corp.—Jinan Co.—Jinan City, Shandong	100,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0			
	Sinopec Corp.—Jingmen Co.—Jingmen City, Hubei	120,493	0	0	8,000	0	0	20,000	0	3,000	0	8,000	0	0	0	14,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	270	0	0	
	Sinopec Corp.—Jinling Petrochemical Co.—Nanjing, Jiangsu	421,726	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28,115	0	0	0	0	0.0	0	0	0		
	Sinopec Corp.—Jiujiang Co.—Jiujiang City, Jiangxi	160,658	0	0	0	8,000	0	24,000	0	3,000	0	0	0	0	0	8,000	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	Sinopec Corp.—Luoyang Co.—Luoyang, Henan	160,658	0	0	28,115	0	0	56,230	0	14,000	0	16,066	0	0	0	0	0	52,214	0	0	0	0	44,181	2,000	0	0	0	0	0.0	0	803	0		
	Sinopec Corp.—Maoming Co.—Maoming, Guangdong	471,932	0	0	12,000	0	0	32,000	0	14,058	0	16,000	0	0	0	0	0	0	0	0	0	0	16,000	1,000	0	0	0	0	5,000	0.0	400	0	0	

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	Sinopec Corp.—Qilu Petrochemical Corp.—Zibo, Shandong	281,151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	Sinopec Corp.—Qingdao Refining and Chemical Co. Ltd.—Qingdao, Shandong	240,986	0	0	0	0	0	0	0	22,000	0	133,000	0	0	0	0	0	0	100,000	0	0	0	0	0	0	0	0	0	0	0	0	0	602	0				
	Sinopec Corp.—Shanghai Petrochemical Co. Ltd.—Shanghai	321,315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	Sinopec Corp.—Shijiazhuang Refining & Chemical Co.—Shijiazhuang City, Hebei	200,822	0	0	16,066	0	0	40,164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0				
	Sinopec Corp.—Tahe Co.—Dongcheng District of Kuche County, Xinjiang Autonomous Region	100,411	0	52,214	0	0	0	0	0	3,012	0	0	0	0	0	0	0	0	48,197	0	48,197	0	0	0	0	0	0	0	0	0	0	0	110	8,033				
	Sinopec Corp.—Tianjin Co.—Binhai New Area, Tianjin	277,134	0	0	0	0	0	35,000	0	4,000	0	0	0	0	0	0	0	0	0	0	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0				
	Sinopec Corp.—Wuhan Petrochemical Co. Ltd.—Wuhan City, Hubei	160,658	0	0	0	8,000	0	20,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0				
	Sinopec Corp.—Yangzi Petrochemical Co. Ltd.—Nanjing, Jiangsu	281,151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	Sinopec Corp.—Zhenhai Refining & Chemical Co.—Ningbo City, Zhejiang	461,890	200,000	0	27,000	0	0	90,000	0	60,000	0	20,000	0	0	0	0	0	0	250,000	0	0	0	0	0	21,000	0	0	0	0	0	0	1,600	460	0				
	Sinopec Corp.—Zhongke (Guangdong) Refining & Petrochemical Co. Ltd.—Zhanjiang City, Guangdong	200,822	0	0	0	0	0	80,547	0	44,038	0	0	0	0	0	0	0	0	46,027	0	38,356	0	84,384	0	0	0	0	0	0	0	0	0	0	0	0			
	Wudi Xinyue Chemical Co. Ltd.—Shandong	161,000	60,300	0	20,000	0	0	0	0	0	0	0	0	0	0	0	0	0	20,100	0	16,100	0	0	0	0	0	0	0	0	0	0	27.0	0	0	0			
	Yangchang Petroleum (Group) Co. Ltd.—Yanan	160,658	0	0	0	0	0	0	0	24,099	0	28,115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Yangchang Petroleum (Group) Co. Ltd.—Yongping	90,370	34,140	0	0	0	0	0	0	3,012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Yangchang Petroleum (Group) Co. Ltd.—Yulin	200,822	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Zhejiang Petroleum & Chemical Co. Ltd. (Phase 1)—Zhoushan, Zhejiang Province	400,000	400,000	0	60,000	0	0	86,300	0	186,000	0	76,712	143,835	95,890	0	69,041	38,365	26,849	0	0	0	0	0	17,328	79,560	28,000	0	0	0	0	170	0	1,080	0	0			
	Zhejiang Petroleum & Chemical Co. Ltd. (Phase 1)—Zhoushan, Zhejiang Province	400,000	400,000	0	60,000	0	0	86,300	0	186,000	0	76,712	143,835	95,890	0	69,041	38,365	26,849	0	0	0	0	0	17,328	79,560	28,000	0	0	0	0	170	0	1,080	0	0			
Total		12,427,788	1,285,823	52,214	638,001	0	0	1,398,484	82,954	848,039	118,490	630,704	194,040	180,260	147,852	617,748	307,704	46,931	637,285	0	330,921	143,797	39,252	290,619	104,230	263,943	41,422	2,320	2,000	29,000	475.6	9,860	8,275	83,235				
CHINA (TAIWAN)																																						
	Chinese Petroleum Corp.—Kaohsiung	270,000	75,500	0	15,000	0	0	25,000	0	0	15,000	0	0	0	0	0	0	0	0	0	30,000	25,000	0	0	14,000	0	0	10,000	0	0.0	2,722	900	12,120	0	0			
	Chinese Petroleum Corp.—TaLin	300,000	0	0	0	0	0	25,000	0	0	55,000	0	0	0	0	0	0	0	0	0	60,000	0	0	0	0	0	0	10,000	5,300	0.0	0	250	0	0	0			
	Chinese Petroleum Corp.—Tao-Yuan	200,000	36,000	0	0	0	0	0	0	0	20,000	0	0	0	0	0	0	0	0	0	45,000	0	0	0	0	0	0	6,000	0	52.0	0	595	0	0	0			
	Formosa Petrochemical Co.—Maliiao	540,000	137,000	0	36,000	0	0	167,900	0	0	0	0	25,000	0	0	0	0	0	0	0	96,500	42,000	126,000	0	161,000	52,000	0	0	0	0	10,000	289.0	1,800	2,000	3,150	0		
Total		1,310,000	248,500	0	51,000	0	0	217,900	0	0	90,000	0	0	25,000	0	0	0	0	0	0	96,500	42,000	126,000	0	296,000	77,000	0	0	14,200	14,000	0	0	26,000	15,300	341.0	4,522	3,745	15,270
COLOMBIA																																						
	Ecopetrol SA—Apjay, Meta	2,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Ecopetrol SA—Barrancabermeja, Santander	218,600	101,000	0	0	33,000	0	64,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,400	18.0	0	0	0	0	0	0		
	Ecopetrol SA—Orito, Putumayo	2,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Country	Company, operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating							Isomerization			Lubes b/cd	Hydrogen MM-cfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d				
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd	Alkylation b/cd						Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd
	Indian Oil Corp. Ltd.—Paradip, Odisha	301,233	182,307	0	77,058	0	0	80,730	0	73,128	0	0	0	0	0	93,395	0	0	122,304	0	0	103,562	0	0	20,479	0	8,102	0	0	0	0.0	4,085	1,050	0
	Mangalore Refinery & Petrochemicals Ltd.—Mangalore, Karnataka	301,233	135,978	0	56,384	28,192	0	42,192	0	22,233	0	0	63,288	0	0	17,721	15,342	46,104	104,393	0	0	12,466	0	0	30,671	0	17,126	0	0	172.4	2,438	870	1,900	
	Numaligarh Refinery Ltd.—Numaligarh, Golaghat, Assam	60,894	24,549	0	6,241	0	0	0	0	5,703	0	32,429	0	0	7,714	0	0	13,829	0	0	0	0	0	0	0	0	2,745	0	0	60.3	0	18	0	
	Oil & Natural Gas Corp. Ltd.—Andhra, Pradesh	13,254	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	Reliance Industries Ltd.—SEZ, Jamnagar	542,219	305,000	0	0	0	0	200,000	0	0	0	111,000	0	0	0	0	0	0	0	0	0	0	0	85,000	0	0	0	0	0	0.0	0	0	0	
	Reliance Petroleum Ltd.—Jamnagar	662,712	0	124,700	0	0	0	130,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	5,495	0	0	0	
Total		4,894,632	1,718,654	124,700	477,605	134,405	0	800,416	0	282,135	33,648	161,343	466,362	11,699	0	432,307	134,366	94,314	1,238,599	0	0	173,781	0	6,841	105,479	52,035	8,102	117,296	2,451	23,388	1,797.5	23,071	7,366	74,247
INDONESIA																																		
	PT Pertamina—Balikpapan, Kalimantan	247,000	89,110	0	0	0	0	0	0	18,720	0	49,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	PT Pertamina—Balongan	125,000	0	0	0	0	0	83,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	PT Pertamina—Cepu	3,420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	PT Pertamina—Cilacap, Central Java	348,000	37,600	0	0	50,040	0	62,000	0	30,960	0	0	0	0	0	0	0	0	0	0	0	0	12,000	0	0	0	0	0	0.0	0	0	0		
	PT Pertamina—Dumai, Central Sumatra	120,000	87,970	0	32,580	0	0	0	0	12,870	0	50,220	0	0	0	11,430	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	PT Pertamina—Musi, South Sumatra	118,000	51,300	0	0	0	0	18,450	0	30,690	0	0	0	0	0	0	0	0	0	0	0	0	0	16,200	0	0	0	0	0.0	0	0	0		
	PT Pertamina—Sungai Pakning, Central Sumatra	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0			
	PT Pertamina—Tuban, East Java	100,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0			
Total		1,111,620	265,980	0	32,580	50,040	0	163,450	0	93,240	0	99,720	0	0	0	11,430	0	0	0	0	0	0	12,000	16,200	0	0	0	0	0.0	0	0	0		
IRAN																																		
	National Iranian Oil Co.—Abadan	399,000	55,000	0	0	80,000	0	35,000	0	24,000	0	0	0	0	0	26,000	0	0	0	0	0	0	0	0	0	0	0	1,500	0.0	0	0	1,000		
	National Iranian Oil Co.—Arak	242,000	71,000	0	0	0	0	0	0	21,600	0	24,500	0	0	0	21,600	0	0	0	0	0	0	0	0	0	0	0	0	50.0	0	60	5,500		
	National Iranian Oil Co.—Bandar Abbas	344,000	126,000	0	0	31,000	0	0	0	36,000	0	28,000	0	0	0	36,000	0	25,000	0	0	0	0	0	0	0	0	0	0	50.0	0	130	5,000		
	National Iranian Oil Co.—Borzuyeh	240,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0			
	National Iranian Oil Co.—Isafahan	375,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0			
	National Iranian Oil Co.—Kermanshah	22,000	0	0	0	0	0	0	0	2,600	0	0	0	0	0	3,000	0	3,100	0	0	0	0	0	0	0	0	0	0.0	0	0	0			
	National Iranian Oil Co.—Lavan Island	48,000	0	0	0	0	0	0	0	6,200	0	0	0	0	0	7,000	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0			
	National Iranian Oil Co.—Qeshm	120,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0				
	National Iranian Oil Co.—Shiraz	56,000	18,400	0	0	9,000	0	0	0	6,200	0	9,000	0	0	0	3,100	0	3,800	0	0	0	0	0	0	0	0	0	0	17.0	0	30	1,500		
	National Iranian Oil Co.—Tabriz	110,000	50,000	0	0	0	0	0	0	11,200	0	15,000	0	0	0	11,100	0	13,200	0	0	0	0	0	0	0	0	0	0	34.0	0	80	5,000		
	National Iranian Oil Co.—Tehran	245,000	120,000	0	0	35,000	0	0	0	27,300	0	30,000	0	0	0	27,260	0	0	0	0	0	0	0	0	0	0	0	7,700	65.0	0	100	8,800		
Total		2,201,000	440,400	0	0	155,000	0	35,000	0	135,100	0	106,500	0	0	0	135,060	0	45,100	0	0	0	0	0	0	0	0	0	0	7,700	216.0	0	400	26,800	
IRAQ																																		
	Lanaz Co.—Erbil	100,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0			
	Midland Refineries Co.—Daura, Bagdad	140,000	20,000	0	0	0	0	0	0	15,000	5,000	18,000	5,000	13,241	0	31,000	0	0	0	0	0	0	0	0	0	0	0	2,420	0.0	0	0	838		

Country	Company, operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating						Alkylation b/cd	Aromatics b/cd	Isomerization			Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d				
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd			Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd						C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd	
	Midland Refineries Co.—Diwana	20,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Midland Refineries Co.—Najaf	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Midland Refineries Co.—Samawa	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	North Refineries Co.—Kirkuk	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	North Refineries Co.—Bajji	53,000	0	0	0	0	0	0	0	46,000	0	38,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,000	64.0	0	0	26,000	
	North Refineries Co.—Haditha	16,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	North Refineries Co.—Kask	7,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	North Refineries Co.—Qaiyarah, Mosul	14,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,900	
	North Refineries Co.—Sainia	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Qaiwan Group—Bazan	38,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	South Refineries Co.—Basra	280,000	20,000	0	0	0	0	0	0	16,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,000	0.0	0	0	7,000		
	South Refineries Co.—Missan	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	South Refineries Co.—Nasirah	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total		848,000	40,000	0	0	0	0	0	0	77,000	5,000	56,000	5,000	0	13,241	283,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38,738
IRELAND																																			
	Irving Oil Ltd.—Whitegate, Cork	71,000	0	0	0	0	0	0	0	11,000	0	0	0	0	0	0	0	26,000	9,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		71,000	0	0	0	0	0	0	0	11,000	0	0	0	0	0	0	0	26,000	9,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ISRAEL																																			
	Oil Refineries Ltd.—Haifa	130,000	73,000	0	0	41,000	0	22,000	0	15,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,700
	Paz Oil Co. Ltd.—Ashdod	90,000	45,000	0	0	25,000	0	27,500	0	11,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		220,000	118,000	0	0	66,000	0	49,500	0	26,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ITALY																																			
	Api Faffineria di Ancona SPA—Falconara, Marittima	82,900	37,500	0	0	24,500	0	0	0	14,000	0	0	0	0	0	0	0	44,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Eni SPA—Livorno	84,000	36,000	0	0	0	0	0	0	14,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,500
	Eni SPA—Sannazzaro, Pavia	200,000	84,500	0	0	29,000	0	34,000	0	28,700	0	30,000	0	0	0	0	0	12,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,500
	Eni SPA—Taranto	104,000	60,590	0	0	0	0	0	0	17,000	0	20,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,500
	ExxonMobil Corp.—ExxonMobil Refining & Supply Co.—S. Martino Di Trecate	125,400	0	0	0	0	0	31,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Ipiom SPA—Bussalla	34,500	19,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	ISAB SRL—Priolo, Sicily	320,000	120,800	0	0	24,000	75,000	38,000	0	41,000	0	90,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33,000
	Raffineria di Milazzo SPA—Milazzo, Messina	200,000	69,700	0	0	0	0	44,500	0	12,900	0	33,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Saras SPA—Sarroch	300,000	105,000	0	0	41,000	0	90,000	0	50,000	0	120,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sonatrach SPA—Agusta, Siracusa	198,000	92,500	0	0	0	0	50,000	0	23,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total		1,848,800	626,090	0	0	118,500	75,000	288,000	0	200,600	0	283,900	0	23,400	314,400	13,500	22,000	36,500	39,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IVORY COAST																																			
	Societe Ivoirienne de Raffinage—Vridi District, Abidjan	76,312	28,979	0	0	0	0	0	0	15,000	0	17,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total		76,312	28,979	0	0	0	0	0	0	15,000	0	17,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
JAMAICA																																			
	Petrojam Ltd.—Kingston	36,000	1,800	0	0	0	0	0	0	3,700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total		36,000	1,800	0	0	0	0	0	0	3,700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
JAPAN																																			
	Petrojam Ltd.—Kingston	36,000	1,800	0	0	0	0	0	0	3,700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	850
Total		36,000																																	

Country	Company, operator, refinery name, location	Crude b/c/d	Vacuum b/c/d	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating						Isomerization			Lubes b/c/d	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d				
				Fluid coking (incl. b/c/d)	Delayed coking b/c/d	Visbreaking b/c/d	Other b/c/d	Fresh feed b/c/d	Recycled feed b/c/d	Low-pressure b/c/d	High-pressure b/c/d	Distillate b/c/d	Gas oil b/c/d	Residual b/c/d	Other b/c/d	Naphtha/Reformer feed desulfurization b/c/d	Gasoline desulfurization b/c/d	Kerosine/Jet desulfurization b/c/d	Diesel desulfurization b/c/d	Other distillate desulfurization b/c/d	Resid desulfurization b/c/d	Heavy gas oil desulfurization b/c/d	Other desulfurization b/c/d	Other hydrotreating b/c/d						Alylation b/c/d	Aromatics b/c/d	C4 feed b/c/d	C5/C6 feed b/c/d
	Cosmo Oil Co. Ltd.—Chiba	177,000	60,000	0	0	0	0	40,000	0	36,500	0	0	0	0	0	24,000	0	0	0	72,000	35,000	139,000	0	0	0	6,000	0	0	0	76.9	0	480	0
	Cosmo Oil Co. Ltd.—Sakai	100,000	45,000	0	31,000	0	0	24,000	0	9,000	0	0	0	0	11,000	14,000	15,000	0	0	42,500	21,000	0	42,000	8,000	0	0	0	0	58.9	0	323	0	
	Cosmo Oil Co. Ltd.—Yokkaichi	86,000	74,000	0	0	0	0	31,000	0	21,500	0	0	0	24,000	7,000	18,000	65,000	0	0	0	0	0	37,350	0	23,300	0	0	0	6,650	13.3	0	200	1,300
	ENEOS Holdings Inc.—ENEOS Corp.—Kashima Oil Co. Ltd.—Kashima Refinery, Kamisu City, Ibaraki	203,100	50,000	0	0	0	0	35,500	0	22,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	
	ENEOS Holdings Inc.—ENEOS Corp.—Kawasaki Refinery, Kawasaki City, Kanagawa	247,000	123,000	0	0	0	0	92,000	0	56,000	0	0	0	0	0	0	0	0	0	0	34,500	0	0	0	0	0	0	0	0.0	0	0	0	
	ENEOS Holdings Inc.—ENEOS Corp.—Marifu Refinery, Kuga District, Yamaguchi	120,000	75,000	0	0	22,000	0	30,000	0	27,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,000	0	0	0	0.0	450	0	0	
	ENEOS Holdings Inc.—ENEOS Corp.—Mizushima Refinery, Kurashiki City, Okayama	350,200	186,000	30,000	0	0	0	95,000	0	78,600	0	13,000	0	0	0	0	0	0	0	0	45,000	0	0	18,300	37,600	0	0	0	11,000	186.2	0	3,911	22,000
	ENEOS Holdings Inc.—ENEOS Corp.—Negishi Refinery, Iosgo-ku, Yokohama	270,000	130,000	0	0	0	0	80,000	0	50,000	0	0	0	0	0	0	0	0	0	35,000	0	0	0	9,000	0	0	0	0	0.0	0	0	0	
	ENEOS Holdings Inc.—ENEOS Corp.—Oita Refinery, Oita City, Oita	136,000	66,000	0	0	0	0	26,000	0	0	30,000	0	0	0	9,200	0	0	0	0	0	0	0	0	0	12,300	0	0	0	0.0	0	0	0	
	ENEOS Holdings Inc.—Osaka International Refining Co. Ltd.—Chiba Refinery, Keiyo Seaside Industrial Zone, Ichihara, Chiba	129,000	83,000	0	0	0	0	34,000	0	28,000	0	0	0	0	40,000	0	0	0	0	0	0	111,500	0	0	0	0	0	0	0.0	0	0	0	
	ENEOS Holdings Inc.—ENEOS Corp.—Sakai Refinery, Sakai Senboku Seaside Industrial Zone, Osaka	141,000	70,000	0	0	0	0	46,000	0	34,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	
	ENEOS Holdings Inc.—ENEOS Corp.—Sendai Refinery, Sendai City, Miyagi	145,000	60,000	0	0	0	0	43,000	0	36,000	0	0	0	0	0	0	0	0	0	0	52,000	0	0	0	0	0	0	0	0.0	0	0	0	
	ENEOS Holdings Inc.—ENEOS Corp.—Wakayama Refinery, Arida City, Wakayama	127,500	74,000	0	0	0	0	39,000	0	45,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	
	Fuji Oil Co. Ltd.—Sodegaura, Chiba	143,000	0	0	0	0	0	60,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
	Idemitsu Kosan Co. Ltd.—Chita City, Aichi	160,000	16,000	0	0	0	0	50,000	0	20,000	0	0	0	0	30,000	15,800	49,000	34,000	0	0	60,000	0	0	10,000	0	10,000	0	0	0.0	0	436	0	

Country	Company operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating						Isomerization				Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d					
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd	Alylation b/cd						Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd	
	Idemitsu Kosan Co. Ltd.—Ichihara City, Chiba	190,000	66,000	0	0	0	0	45,000	0	17,000	0	0	0	0	0	5,020	0	60,000	0	0	0	40,000	0	11,600	0	8,200	0	0	0	2,000	0.0	0	0	0	
	Idemitsu Kosan Co. Ltd.—Showa Yokkaichi Sekiyu Co. Ltd.—Seibu Oil Co. Ltd.—Sanyo-Onoda City, Yamaguchi	120,000	44,000	0	0	0	0	0	28,000	27,500	0	0	0	0	0	34,000	13,000	32,000	30,000	0	0	51,500	0	0	0	6,425	6,800	0	0	0	28.3	0	340	0	
	Idemitsu Kosan Co. Ltd.—Showa Yokkaichi Sekiyu Co. Ltd.—Yokkaichi City, Mie	255,000	0	0	0	0	0	61,000	0	0	0	0	0	0	0	0	0	0	0	0	0	45,000	0	0	0	0	0	0	0	0	0	0	0	0	0
	Idemitsu Kosan Co. Ltd.—TOA Oil Co. Ltd.—Kehin, Kawasaki City, Kanagawa	70,000	58,000	0	0	0	27,000	42,000	0	9,500	0	0	0	0	0	17,000	0	15,000	20,000	0	0	0	46,000	0	0	0	0	0	0	0	0	0	0	0	0
	Idemitsu Kosan Co. Ltd.—Tomakomai City, Hokkaido	150,000	24,000	0	0	0	0	33,000	0	18,000	0	0	0	0	16,500	27,000	14,500	36,500	27,000	0	37,800	42,000	0	0	0	0	0	0	0	0	0	0	0	395	0
	Taiyo Oil Co. Ltd.—Shikoku, Imabari City, Ehime	138,000	30,000	0	0	0	0	19,000	0	37,000	0	0	0	32,000	0	43,000	17,000	0	0	0	0	52,000	0	17,200	64,500	0	0	0	0	109.5	0	0	0	0	
Total		3,457,800	1,334,000	30,000	31,000	22,000	27,000	925,500	28,000	572,600	30,000	13,000	0	32,000	80,500	183,220	116,300	272,500	111,000	0	187,300	426,000	348,500	90,950	62,500	165,325	12,800	10,000	0	19,650	473.1	450	6,085	23,300	
JORDAN																																			
	Jordan Petroleum Refinery Co.—Zarga	90,400	21,500	0	0	0	0	4,000	0	10,900	0	5,220	0	0	0	17,300	0	0	0	0	0	0	0	0	0	0	0	0	0	16.0	0	0	0	4,250	
Total		90,400	21,500	0	0	0	0	4,000	0	10,900	0	5,220	0	0	0	17,300	0	0	0	0	0	0	0	0	0	0	0	0	16.0	0	0	0	0	4,250	
KAZAKHSTAN																																			
	KazakOil Aktobe LLP—Atyrau	100,000	27,064	0	13,720	0	0	0	0	8,808	0	0	0	0	0	9,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	500	0	0	0	
	KazakOil Aktobe LLP—Pavlodar	120,000	93,973	0	11,277	30,071	0	38,356	0	26,178	0	0	0	0	0	27,200	0	0	0	0	0	46,027	0	49,863	0	0	0	0	21.5	500	64	8,550	0		
	PetroKazakhstan—Shymkent	120,000	0	0	0	22,000	0	0	0	16,600	0	0	0	0	0	16,600	0	9,100	19,900	0	0	0	0	0	0	0	0	0	0.0	0	60	0	0	0	
Total		340,000	121,037	0	24,997	52,071	0	38,356	0	51,586	0	0	0	0	0	53,000	0	9,100	19,900	0	0	46,027	0	49,863	0	0	0	21.5	1,000	124	8,550	0	0	0	
KENYA																																			
	Kenya Petroleum Refineries Ltd.—Mombasa	90,000	1,700	0	0	0	0	0	0	8,260	0	0	0	0	0	36,000	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	1,000	
Total		90,000	1,700	0	0	0	0	0	0	8,260	0	0	0	0	0	36,000	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	1,000	
KUWAIT																																			
	Kuwait National Petroleum Co.—Mina Abdulla	454,000	142,500	0	72,000	0	0	0	0	0	0	38,250	0	0	0	0	0	36,000	36,000	0	107,100	0	0	9,000	0	0	0	0	232.6	2,800	1,200	0	0	0	
	Kuwait National Petroleum Co.—Mina Al-Ahmadi	346,000	80,750	0	0	0	0	36,000	0	32,400	0	36,900	0	0	0	51,300	0	18,720	118,440	0	130,320	0	0	0	5,616	0	0	0	287.0	0	1,600	0	0	0	
Total		800,000	223,250	0	72,000	0	0	36,000	0	32,400	0	36,900	0	0	51,300	0	18,720	118,440	0	130,320	0	0	9,000	5,616	0	0	0	519.6	2,800	2,800	0	0	0	0	
KYRGYZSTAN																																			
	KYRGYZ Petroleum Co.—Dzhalalabad	10,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	
Total		10,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	
LAOS																																			
	Lao Petroleum & Chemical Co. Ltd. (aka Lao-China Dongyan Petrochemical Co. Ltd., Lao Petrochemical Co. Ltd., or Laos Petrochemical Co. Ltd.)—Vientiane Saysettha Development Zone, Vientiane	20,000	0	0	0	0	0	0	0	7,340	0	0	0	0	0	0	0	0	9,590	0	0	0	0	0	0	1,591	0	0	0	0	0	0	0	14	0
Total		20,000	0	0	0	0	0	0	0	7,340	0	0	0	0	0	0	0	9,590	0	0	0	0	0	0	1,591	0	0	0	0	0	0	0	14	0	
LIBERIA																																			
	Liberia Petroleum Refining Co.—Monrovia	15,000	1,000	0	0	0	0	0	0	2,000	0	0	0	0	0	2,300	0	0	0	0	0	0	0	1,000	0	0	0	0	0.0	0	0	0	0	200	
Total		15,000	1,000	0	0	0	0	0	0	2,000	0	0	0	0	0	2,300	0	0	0	0	0	0	0	1,000	0	0	0.0	0	0	0	0	0	200		
LIBYA																																			
	Azzawiya Oil Refining Co.—Azzawiya and Benghazi	120,000	3,775	0	0	0	0	0	0	15,750	0	0	0	0	0	16,604	0	0	0	0	0	0	19,926	0	0	0	0	635	0.0	0	0	0	3,432	0	
	Ras Lanuf Oil & Gas Processing Co.—Ras Lanuf	220,000	0	0	0	0	0	0	0	3,300	0	0	0	0	0	0	0	0	0	0	0	0	5,600	0	0	0	0	0.0	0	0	0	0	0	0	
	Sarir Refining Co.—Sarir	10,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	
	Sirte Oil Co.—Brega	10,000	0	0	0	0	0	0	0	1,200	0	0	0	0	0	0	0	0	0	0	0	0	1,200	0	0	0	0	0.0	0	0	0	0	0	0	
	Tobruk Refining Co.—Tobruk	20,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	
Total		380,000	3,775	0	0	0	0	0	0	20,250	0	0	0	0	0	16,604	0	0	0	0	0	0	26,726	0	0	0	635	0.0	0	0	0	0	0	3,432	

Country	Company, operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating						Isomerization			Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d							
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd						Alkylation b/cd	Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd		
	Myanma Petrochemical Enterprise—Thanbajaka n	25,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
NETHERLANDS	Total	57,000	4,000	0	5,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	BP PLC—BP Raffinaderij Rotterdam BV—Rotterdam	374,153	86,038	0	0	30,566	0	60,263	0	29,208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	ExxonMobil Corp.—ExxonMobil Refining & Supply Co.—Rotterdam	182,400	0	0	0	0	0	36,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Shell PLC—Shell Nederland Raffinaderij BV—Pernis	420,850	0	0	0	0	0	47,700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Smid & Hollander Raffinaderij BV—Amsterdam	10,000	8,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,800		
	Zeeland Refinery NV—Vissingen	148,000	68,000	0	0	0	0	0	0	28,600	0	77,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NETHERLANDS ANTILLES	Total	1,135,403	162,038	0	0	30,566	36,900	107,963	0	57,808	0	77,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,800		
	Refineria Isla Curazao SA—Emmstad	320,000	195,000	0	0	0	80,000	50,000	0	20,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NICARAGUA	Total	320,000	195,000	0	0	0	80,000	50,000	0	20,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Puma Energy International—Puma Energy Bahamas SA—Managua	19,950	1,425	0	0	0	0	0	0	2,700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	378	
NIGERIA	Total	19,950	1,425	0	0	0	0	0	0	2,700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	378		
	Niger Delta Exploration & Production PLC—Niger Delta Petroleum Resources Ltd.—Ogbele	10,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Nigerian National Petroleum Corp.—Kaduna Refinery & Petrochemical Co.—Kaduna	104,500	36,290	0	0	0	0	18,000	0	15,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,850
	Nigerian National Petroleum Corp.—Port Harcourt Refining Co.—Alesa Eleme	57,000	0	0	0	0	0	0	0	6,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Nigerian National Petroleum Corp.—Port Harcourt Refining Co.—Port Harcourt	142,500	54,000	0	0	0	0	40,000	0	33,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Nigerian National Petroleum Corp.—Warri Refinery & Petrochemical Co.—Warri	118,750	34,200	0	0	0	0	24,700	0	15,770	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Waltersmith Refining & Petrochemical Ltd.—Ibigwe, Ohaji Egbema Local Government Area, Imo	5,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NORTH KOREA	Total	437,750	124,490	0	0	0	0	82,700	0	70,070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,850	
	North Korean Government—Ponghwa Chemical Factory—Sinuiju, Huich'on-kun, North Pyongan	29,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	North Korean Government—Sonbong-gun, Rason Special Economic Zone	42,000	0	0	0	0	0	0	0	7,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORWAY	Total	71,000	0	0	0	0	0	0	0	7,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Mongstad Refining Co.—Mongstad	203,000	0	0	23,000	0	0	0	55,000	24,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OMAN	Total	203,000	0	0	23,000	0	0	0	55,000	24,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Oman Refinery Co.—Mina Al Fahal	85,000	0	0	0	0	0	0	0	16,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PAKISTAN	Total	85,000	0	0	0	0	0	0	0	16,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Attock Refinery Ltd.—Rawalpindi	42,000	5,415	0	0	0	0	0	0	4,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Boscor Refinery Ltd.—Karachi	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Dhodak Refinery Ltd.—Dera Ghazi, Khan Enar Petrotech Services Ltd.—Karachi	2,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	National Refinery Ltd.—Korangi, Karachi	2,646	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	National Refinery Ltd.—Korangi, Karachi	62,050	14,400	0	0	0	0	0	0	3,800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,200

Country	Company operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating						Isomerization				Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d						
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd	Alylation b/cd						Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd		
	PJSC Tatneft—JSC Taneos—Nizhnekamsk, Tatarstan	200,820	0	0	73,179	45,107	0	21,096	0	0	0	0	0	0	0	0	70,959	0	0	16,301	0	0	0	0	0	0	0	752	29.7	0	50	767				
	PJSC Tatneft—JSC Tatneftegazpererabotka — Yelkhovsky, Samara Region	9,640	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0					
Total		5,410,727	1,956,861	128,917	175,976	236,660	64,371	447,975	0	671,608	21,775	84,378	0	0	155,411	629,133	0	0	113,151	0	64,000	16,301	19,200	1,310,655	24,878	49,187	45,800	8,219	10,627	58,959	338.8	3,238	4,480	166,653		
SAUDI ARABIA		0																																		
	Saudi Arabian Oil Co. (Saudi Aramco)—Rabigh	400,000	0	0	0	0	0	0	0	0	0	0	0	0	0	47,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12.0	0	0	0	
	Saudi Arabian Oil Co. (Saudi Aramco)—Ras Tanura	550,000	135,000	0	0	60,000	0	0	0	107,000	0	50,000	0	0	0	54,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Saudi Aramco Jubail Refinery Co. (SASREF)—Al-Jubail	305,000	82,200	0	0	0	61,000	0	0	18,800	0	45,000	0	0	0	20,000	0	54,000	0	0	0	0	48,400	8,000	6,500	0	0	0	0	0	0	0	98.0	0	0	0
	Saudi Aramco Mobil Refinery Company Ltd. (SAMREF)—Yanbu	380,000	142,400	0	0	0	45,900	86,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Saudi Aramco Total Refinery & Petrochemicals Co. (SATORP)—Jubail	460,000	223,100	0	118,500	0	0	37,500	0	66,600	0	132,700	0	0	0	96,000	0	61,000	151,600	0	0	0	0	13,800	14,000	0	0	0	0	0	0	0.0	6,500	1,100	0	
	Yanbu Aramco Sinopec Refining Co. Ltd. (YASREF)—Yanbu Industrial City	430,000	0	0	114,000	0	0	96,000	0	85,000	0	0	0	0	111,600	84,000	0	0	177,000	0	0	0	15,000	0	0	20,000	0	0	0	0	263.0	6,200	1,200	0		
Total		2,525,000	582,700	0	232,500	60,000	106,900	219,900	0	277,400	0	227,700	0	0	111,600	301,000	0	115,000	328,600	0	0	0	63,400	21,800	20,500	20,000	0	0	0	373.0	12,700	2,300	0			
SENEGAL		0																																		
	Ste. Africaine de Raffinage—M'Bao, Dakar	24,000	7,192	0	0	0	0	0	0	3,000	0	0	0	0	0	5,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total		24,000	7,192	0	0	0	0	0	0	3,000	0	0	0	0	0	5,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	
SERBIA & MONTENEGRO		0																																		
	NIS-Oil Refinery Novi Sad—Novi Sad	116,826	10,483	0	0	0	0	0	0	10,902	0	0	0	0	0	14,300	0	0	5,200	0	0	0	9,500	0	0	0	0	0	0	0	0	0	0	0	2,400	
	NIS-Rafinerija Nafta Pančevo—Pančevo	63,058	40,100	0	0	20,340	0	7,671	0	5,627	0	0	0	18,411	0	0	0	0	0	0	0	20,521	3,070	200	0	0	0	0	0	0	0	0.0	0	27	0	
Total		179,884	50,583	0	0	20,340	0	7,671	0	16,529	0	0	0	18,411	14,300	0	0	5,200	0	0	0	30,021	3,070	200	0	0	0	0	0	0	0.0	0	27	2,400		
SIERRA LEONE		0																																		
	Sierra Leone Petroleum Refining Co. Ltd.—Freetown	10,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total		10,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0		
SINGAPORE		0																																		
	ExxonMobil Corp.—ExxonMobil Refining & Supply Co.—Jurong/Pulau Ayer, Chawan	562,400	0	0	0	43,200	0	0	0	0	0	30,600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Shell PLC—Shell Eastern Petroleum (Pte.) Ltd.—Pulau Bukom	288,800	0	0	0	0	72,900	34,200	0	0	0	0	0	54,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Singapore Refining Co. Private Ltd.—Pulau Merimau	145,000	87,400	0	0	16,000	0	23,000	0	0	19,800	0	16,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total		996,200	87,400	0	0	59,200	72,900	57,200	0	0	19,800	30,600	16,000	0	54,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	
SLOVAKIA		0																																		
	Slovnaft PLC—Bratislava	124,000	55,000	0	0	0	0	18,000	0	21,000	0	19,000	23,000	0	0	16,000	0	0	29,000	0	0	22,000	0	20,800	4,500	2,904	0	0	6,000	2,000	89.6	3,900	270	2,600		
Total		124,000	55,000	0	0	0	0	18,000	0	21,000	0	19,000	23,000	0	0	16,000	0	0	29,000	0	0	22,000	0	20,800	4,500	2,904	0	0	6,000	2,000	89.6	3,900	270	2,600		
SOUTH AFRICA		0																																		
	National Petroleum Refiners of South Africa Pty Ltd.—Sasolburg	105,000	72,200	0	0	0	0	24,535	0	17,900	0	13,000	0	0	0	15,740	0	0	28,600	0	14,739	0	0	4,565	0	0	0	0	0	0	35.2	0	139	889		
	South African Petroleum Refineries (Pty.) Ltd. (SAPREF)—Durban	175,920	70,400	0	0	0	22,000	33,000	0	26,500	0	0	0	0	0	46,000	0	20,000	10,000	0	0	0	0	4,000	0	0	0	0	0	8,000	0.0	240	300	4,000		
Total		280,920	142,600	0	0	0	22,000	57,535	0	44,400	0	13,000	0	0	0	61,740	0	20,000	38,600	0	14,739	0	0	8,565	0	0	0	0	8,000	35.2	240	439	4,889			
SOUTH KOREA		0																																		
	GS Caltex Corp.—Yeosu, Jeollanam-do	800,000	167,000	0	0	0	0	151,000	0	98,350	10,000	62,000	66,000	0	119,700	58,000	60,000	222,000	0	0	0	0	34,650	17,000	58,870	0	0	65,853	26,500	290.4	0	1,753	32,000			
	Hanwha Total Petrochemicals Co. Ltd.—Daesan	186,000	0	0	0	0	0	102,220	0	0	0	0	0	0	148,300	0	35,600	21,900	0	0	0	0	0	66,500	0	0	0	0	0	0	0	0	69	0		
	Hyundai Oilbank Corp.—Daesan, Chungcheongnam-do	520,000	99,000	0	50,000	0	0	86,000	0	4,600	0	0	0	77,500	12,000	41,000	70,000	151,000	0	65,000	0	0	0	25,000	0	0	0	0	0	204.0	3,843	1,790	0			
	SK Innovation Co. Ltd.—SK Incheon Petrochem Co. Ltd.—Seo-gu, Incheon	375,000	20,000	0	0	0	0	0	0	4,000	73,000	0	0	0	114,000	0	0	90,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0		

Country	Company operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating				Isomerization		Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d									
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosine/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd						Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd	Alkylation b/cd	Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd	
	SK Innovation Co. Ltd.—SK Energy Co. Ltd.—Ulsan	840,000	87,000	0	0	0	0	0	164,000	8,000	0	0	0	45,000	0	29,000	71,000	59,000	200,000	0	0	0	0	0	31,000	0	0	0	0	0.0	0	0	0		
	S-Oil Corp.—Onsan	669,000	168,000	0	0	0	0	151,200	0	105,000	0	75,000	0	0	0	122,300	53,770	70,000	50,000	0	254,000	0	0	0	23,640	0	0	0	0	44,700	0.0	0	0	21,400	
SPAIN	Total	3,390,000	541,000	0	50,000	0	0	388,200	266,220	219,950	83,000	75,000	62,000	188,500	0	545,300	223,770	294,600	734,900	0	319,000	0	0	34,650	96,640	125,370	0	0	65,853	71,200	494.4	3,843	3,812	53,400	
	BP PLC—BP Oil Espana SA—Castellon	104,500	44,745	0	22,050	0	0	27,000	0	0	14,850	0	0	0	0	42,120	9,630	19,800	30,150	29,430	0	0	0	0	3,116	0	0	17,100	0	0	37.0	1,175	65	0	
	Cia. Espanola de Petroles SA—Cadiz	240,000	40,000	0	0	38,000	0	40,000	0	36,000	0	0	0	0	0	35,000	0	0	54,000	0	0	30,000	0	0	5,600	11,500	5,500	0	2,300	4.8	0	246	0		
	Cia. Espanola de Petroles SA—Cadiz	100,000	38,000	0	0	9,000	0	19,000	0	17,000	0	17,000	0	0	0	0	0	0	30,000	0	0	15,000	0	0	0	0	14,300	0	0	0	2,600	33.5	0	115	5,500
	Cia. Espanola de Petroles SA—Tenerife Petronor SA—Muskiz, Abanto-Zierbena, Basque County	87,000	8,000	0	0	35,000	0	0	0	16,000	0	0	0	0	0	16,000	0	15,000	14,000	0	0	0	0	0	0	0	0	0	0	0.0	0	45	4,500		
	Repsol SA—Cartagena, Murcia	220,000	89,500	0	0	39,600	0	43,100	0	28,900	0	0	0	0	33,100	40,500	19,700	0	89,100	0	0	0	0	0	4,800	0	0	2,600	0	0	38.7	0	346	4,500	
	Repsol SA—La Coruna	120,000	52,000	0	19,000	0	0	31,600	0	19,700	0	0	0	0	0	19,700	0	0	43,400	0	0	26,800	0	0	0	0	0	1,200	0	0	40.3	1,050	251	1,700	
	Repsol SA—Puertollano, Ciudad Real	150,000	55,500	0	24,100	0	0	30,600	0	16,300	0	34,500	0	0	0	16,300	0	0	83,100	0	0	0	0	0	3,000	3,400	0	1,900	0	0	2,100	57.1	1,340	381	5,200
	Repsol SA—Tarragona	186,000	72,000	0	0	27,600	0	0	0	22,000	0	46,900	0	0	0	22,000	0	0	67,900	0	0	0	0	0	0	0	0	6,900	0	0	79.8	0	243	0	
SRI LANKA	Total	1,427,500	414,245	0	65,150	149,200	0	191,300	0	181,900	14,850	98,400	0	0	33,100	217,620	29,330	34,800	443,450	29,430	0	0	0	3,000	16,916	25,800	10,800	25,200	0	9,600	292.6	3,565	1,762	26,600	
	Ceylon Petroleum Corp.—Sapugaskanda	40,000	24,000	0	0	12,500	0	0	0	5,300	0	0	0	0	0	9,885	0	0	9,410	0	0	0	0	0	0	0	0	0	0.0	0	0	0	1,000		
SUDAN	Total	40,000	24,000	0	0	12,500	0	0	0	5,300	0	0	0	0	0	9,885	0	0	9,410	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,000	
	Khartoum Refinery Co. Ltd.—El Gily	50,205	0	0	37,589	0	0	34,521	0	9,786	0	0	0	0	0	0	0	0	23,013	0	9,589	0	0	0	0	0	0	0	0.0	0	822	0	0	0	
	Regional Petroleum Products Corp.—Port Sudan	21,700	0	0	0	0	0	0	0	1,900	0	0	0	0	0	8,100	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
SURINAME	Total	71,905	0	0	37,589	0	0	34,521	0	11,686	0	0	0	0	0	8,100	0	0	23,013	0	9,589	0	0	0	0	0	0	0	0.0	0	822	0	0	0	
	Staatsolie Maatschappij Suriname NV—Tout Lui Faut	15,000	7,000	0	0	2,800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
SWEDEN	Total	15,000	7,000	0	0	2,800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0		
	AB Nynas Petroleum NV—Gothenburg	13,000	13,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	8,700		
	AB Nynas Petroleum NV—Nyishamm	28,000	28,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,400	0	0	0	0	0	8.1	0	22	18,760		
	Preem Raffinaderi AB—Brofjorden, Lysekil	210,000	64,600	0	0	37,800	0	29,700	0	32,400	0	0	0	0	48,600	0	0	0	0	0	0	0	0	94,500	0	0	0	14,400	0	9.7	0	200	0		
	Preem Raffinaderi AB—Gothenburg	106,000	0	0	0	0	0	0	0	20,500	0	0	0	0	0	46,000	0	0	0	0	0	0	0	57,500	0	0	0	10,000	0	36.0	0	112	0		
	Shell Raffinaderi AB—Gothenburg	80,000	30,000	0	0	0	29,000	0	0	17,760	0	0	0	0	0	28,140	0	5,000	0	0	0	0	0	28,000	0	0	0	4,130	0	0.0	0	0	0		
SWITZERLAND	Total	437,000	135,600	0	0	37,800	29,000	29,700	0	70,660	0	0	0	0	48,600	74,140	0	5,000	0	0	0	0	0	189,400	0	0	0	28,530	0	53.8	0	334	27,460		
	Varo Energy BV—VARO Refining Cressier SA—Cressier	68,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0		
SYRIA	Total	68,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0		
	Banias Refining Co.—Banias	132,725	50,935	0	0	22,689	0	0	0	21,430	0	0	0	0	26,410	21,480	0	0	16,070	0	0	0	0	0	0	0	0	8,583	0	27.0	0	120	2,223		
	Homs Refinery Co.—Homs	107,140	12,200	0	18,200	0	0	0	0	9,812	0	0	0	0	0	12,665	0	5,987	21,634	0	0	0	0	3,050	0	0	2,910	0	0.0	500	30	0	0		
THAILAND	Total	239,865	63,135	0	18,200	22,689	0	0	0	31,242	0	0	0	0	26,410	34,145	0	5,987	37,704	0	0	0	0	3,050	0	0	2,910	0	8,583	0	27.0	500	150	2,223	
	Bangchak Corp. PLC—Phra Khanong, Bangkok	120,000	37,050	0	0	0	0	0	0	13,500	0	0	0	0	22,500	19,170	0	0	38,700	0	0	0	0	0	0	0	0	6,750	0	0	40.0	0	80	0	
	ExxonMobil Corp.—Esso (Thailand) Public Co. Ltd.—Laem Chabang, Sriracha, Chon Buri	158,650	0	0	0	0	0	36,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	PTT PLC—IRPC PLC—Choeng Noen, Rayong	215,000	0	0	0	0	0	24,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,965	0	0	7,140	0.0	0	0	9,960
	PTT Group—PTT Global Chemical PLC—Map Ta Phut, Rayong	280,000	0	0	0	22,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48,115	0	0	0	14.9	0	0	

Country	Company operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating						Isomerization			Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d						
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosine/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd						Alkylation b/cd	Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd	
	Star Petroleum Refining PLC—Map Ta Phut, Rayong	175,000	65,000	0	0	0	0	42,000	0	0	19,000	0	0	0	0	20,000	0	20,000	69,400	0	0	35,000	28,000	49,000	0	0	0	0	0	0.0	0	234	4,671		
	Thai Oil Co. Ltd.—Siracha, Chonburi	275,000	95,000	0	0	19,000	0	10,400	0	25,000	25,000	18,460	24,613	0	6,927	85,000	0	20,000	75,000	0	0	0	28,000	0	0	16,670	20,000	0	0	5,310	28.8	0	420	5,810	
TUNISIA	Total	1,223,650	197,050	0	0	41,000	0	113,300	0	38,500	44,000	18,460	24,613	0	29,427	124,170	0	40,000	183,100	0	0	35,000	28,000	49,000	0	0	74,750	20,000	6,750	0	12,450	83.7	0	734	20,441
	Ste. Tunisienne Industries des Raffinage—Bizerte	34,000	0	0	0	0	0	0	0	3,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
TURKEY	Total	34,000	0	0	0	0	0	0	0	3,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0		
	Ersan Petrol Sanayii AS—Narlı, Kahramanmaraş, Pazarcık	3,800	4,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	44	3,000			
	STAR Rafineri AS—Izmir, Alağa	238,980	0	0	40,000	0	0	0	0	28,000	0	0	0	0	66,000	20,000	0	26,000	68,000	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	Türkiye Petrol Rafinerileri AS (Tüpraş)—Alağa, İzmir	220,000	75,490	0	0	18,870	0	15,095	0	9,810	0	16,360	0	0	0	11,320	0	11,320	0	0	0	0	0	34,415	0	0	0	0	5,870	122.9	0	98	472		
	Türkiye Petrol Rafinerileri AS (Tüpraş)—Batman, Siirt	28,115	2,140	0	0	0	4,720	0	0	1,302	0	0	0	0	0	1,302	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0			
	Türkiye Petrol Rafinerileri AS (Tüpraş)—Izmit	226,930	89,947	0	0	0	0	13,840	0	6,920	0	0	0	50,000	0	20,760	0	27,050	0	0	0	39,000	0	52,212	0	0	0	5,030	0	50.7	180	137	9,435		
	Türkiye Petrol Rafinerileri AS (Tüpraş)—Kırıkkale	108,445	30,190	0	0	0	0	0	0	20,130	0	14,500	0	0	0	20,130	0	0	15,096	0	0	0	0	0	0	0	0	9,025	0	43.9	0	80	5,170		
TURKMENISTAN	Total	826,270	201,767	0	40,000	18,870	4,720	28,935	0	66,162	0	30,860	0	50,000	66,000	73,512	0	64,370	83,096	0	0	39,000	0	86,627	0	0	0	14,055	9,870	217.5	180	359	20,216		
	Turkmenbashi Complex of Oil Refineries (TCOR)—Turkmenbashi-Seydi	200,820	40,900	0	28,568	0	0	15,151	0	28,074	0	0	0	0	0	38,600	0	0	0	0	0	0	0	0	1,028	0	0	0	2,000	0.0	1,040	0	415		
UKRAINE	Total	200,820	40,900	0	28,568	0	0	15,151	0	28,074	0	0	0	0	0	38,600	0	0	0	0	0	0	0	0	1,028	0	0	0	2,000	0.0	1,040	0	415		
	Alliance Oil Co. Ltd.—JSC NNK-Khabarovsk Oil Refinery—Khabarovsk City, Khabarovsk Region	100,000	43,000	0	12,000	0	0	0	0	16,637	0	0	0	0	0	13,041	0	0	0	0	0	0	0	0	0	0	0	0.0	0	340	0	5,811			
	PJSC Ukrnatnafta—Kremenchug	373,529	119,997	0	0	0	0	29,600	0	44,400	0	0	0	7,200	0	0	0	65,999	0	0	0	0	0	0	0	1,594	0	9,589	0	500	0.0	0	86	0	
UNITED ARAB EMIRATES	Total	473,529	162,997	0	12,000	0	0	29,600	0	61,037	0	0	0	7,200	0	13,041	0	0	65,999	0	0	0	0	0	0	1,594	0	9,589	0	500	0.0	0	86	0	
	Abu Dhabi Oil Refining Co.—Ruweis	817,000	56,680	0	0	0	0	19,150	0	0	0	31,050	57,000	0	0	69,000	0	108,000	75,000	0	0	0	0	82,987	37,000	0	26,000	0	0	53.0	0	0	0		
	Abu Dhabi Oil Refining Co.—Umm Al-Nar	85,000	0	0	0	0	0	0	0	14,000	0	0	0	0	0	0	0	0	0	0	0	0	46,000	0	0	0	0	0.0	0	0	35	0			
	Emirates National Oil Co.—Jebel Ali	140,000	0	0	0	0	0	0	0	36,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	6	0				
	Vitol Group—Fujairah Refinery Ltd.—Fujairah	82,000	17,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0			
UNITED KINGDOM	Total	1,124,000	73,680	0	0	0	0	19,150	0	50,000	0	31,050	57,000	0	0	69,000	0	108,000	75,000	0	0	0	0	128,987	37,000	0	26,000	0	0	53.0	0	41	0		
	AB Nynas Petroleum NV—Eastham Refinery Ltd.—Eastham, England	27,000	27,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	18,000			
	Essar Energy PLC—Essar UK Ltd.—Stanlow, Cheshire, England	195,000	130,000	0	0	0	0	68,000	0	27,000	30,000	0	0	0	0	60,000	0	0	0	0	0	0	0	97,298	11,000	8,700	5,738	0	0	4,999	0.0	0	3	0	
	ExxonMobil Corp.—Esso UK Ltd.—Fawley, Hampshire, England	248,900	0	0	0	0	33,300	80,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,100	0.0	0	0	0	0		
	Ineos AG—Petroines Refining Ltd.—Grangemouth, Firth of Forth, Lothian, Scotland	145,000	64,600	0	0	0	0	0	0	39,600	0	36,000	0	0	0	0	0	0	0	0	0	0	0	56,700	4,500	0	0	0	0	49.0	0	0	0		
	Phillips 66 Co.—Phillips 66 Ltd.—Humber, North Lincolnshire, England	221,000	156,912	0	67,860	0	55,016	53,758	0	53,856	0	0	0	0	0	0	7,254	0	0	175,655	0	30,744	0	39,831	11,880	4,500	8,352	13,158	0	0	0.0	2,400	140	0	
	Prax Petroleum Ltd.—State Oil Ltd.—Prax Lindsey Oil Refinery Ltd.—Grimsby, Killingholme, North Lincolnshire, England	120,582	78,868	0	0	20,377	0	47,126	0	0	16,669	0	0	0	0	36,683	0	0	36,683	0	0	30,676	0	0	6,792	0	7,065	0	0	22.4	0	147	4,810		

Country	Company, operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating							Isomerization			Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d				
				Fluid coking (incl.) b/cd	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd	Alkylation b/cd						Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd
	Delek Group Ltd.—Lion Oil Co.—El Dorado	80,750	42,750	0	0	0	0	18,900	0	13,770	0	0	0	0	0	18,000	7,875	0	31,500	0	0	18,900	7,200	0	4,500	0	0	6,750	0	0	10.0	0	142	18,450
	Martin Resource Management Corp.—Cross Refining & Marketing Co. Inc.—Smackover	7,315	3,658	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,950	0	0	0	0	0	4,950	3.0	0	0	900	
Total	California	88,065	46,408	0	0	0	0	18,900	0	13,770	0	0	0	0	0	18,000	7,875	0	31,500	0	0	18,900	12,150	0	4,500	0	0	6,750	0	4,950	13.0	0	142	19,350
	Chevron Corp.—Chevron USA Inc.—El Segundo	269,000	160,645	0	69,030	0	0	66,420	0	44,100	0	0	49,500	0	0	56,250	0	37,350	46,350	12,600	0	66,600	0	12,600	29,970	0	9,450	20,070	0	0	74.0	27,000	570	0
	Chevron Corp.—Chevron USA Inc.—Richmond	244,340	117,283	0	0	0	0	81,000	0	64,170	0	0	93,060	0	0	51,840	58,320	86,400	58,320	0	0	58,500	30,600	0	29,396	0	6,480	41,400	0	30,600	330.0	0	914	50,400
	Kern Oil & Refining Co. Inc.—Bakersfield	25,650	0	0	0	0	0	0	0	2,250	2,970	0	0	0	0	4,500	0	0	0	8,100	0	0	0	0	0	0	0	0	0	0.0	0	10	0	
	Marathon Petroleum Co. LP—Los Angeles Refining Division—Los Angeles	363,000	194,800	0	103,700	0	0	97,400	0	0	78,500	57,000	36,100	0	0	110,400	16,200	26,600	22,800	0	0	139,700	0	0	27,600	0	15,500	24,200	0	0	116.0	3,901	683	0
	PBF Energy Co. LLC—PBF Holding Co. LLC—Martinez	150,100	96,900	20,250	22,500	0	0	65,000	0	27,900	0	38,000	0	0	0	24,750	83,250	0	0	44,100	0	76,050	13,050	0	11,250	0	0	13,500	0	0	193.0	1,224	375	0
	PBF Energy Co. LLC—Torrance Refining Co. LLC—Torrance	157,890	96,900	0	47,700	0	0	79,200	0	0	0	20,700	0	0	0	0	0	0	0	0	0	0	135,900	24,300	0	0	0	0	0	146.0	2,271	363	0	
	Phillips 66 Co.—Los Angeles Refinery—Carson-Wilmington	138,700	78,000	0	48,150	0	0	45,000	0	34,000	0	24,750	0	0	0	50,900	0	11,250	28,800	0	0	50,000	0	0	14,400	0	8,550	12,500	0	0	100.0	2,000	340	0
	Phillips 66 Co.—San Francisco Refinery—Rodeo-Arroyo Grande	120,000	87,000	0	48,000	0	0	0	0	0	31,000	38,000	24,000	0	0	29,000	0	0	32,000	15,000	0	0	0	0	0	0	0	9,000	0	0	23.0	2,500	451	0
	San Joaquin Refining Co. Inc.—San Joaquin Refining Co. Inc.—Bakersfield	23,750	13,585	0	0	4,500	0	0	0	0	0	0	0	0	0	0	0	0	0	3,240	0	1,620	0	0	0	1,350	0	0	0	5,220	4.0	0	5	7,200
	Valero Energy Corp.—Valero Refining Co. California—Benicia	137,750	81,225	26,550	0	0	0	67,770	0	0	33,480	30,600	0	0	0	27,000	38,880	13,860	13,500	4,500	0	35,100	19,530	0	15,390	0	3,780	0	0	0	135.0	925	275	8,100
	Valero Energy Corp.—Valero Refining Co. California—Wilmington	80,750	43,700	0	25,920	0	0	50,670	0	16,200	0	0	0	0	0	28,800	0	0	40,500	0	0	60,300	0	0	19,800	0	0	0	0	50.0	1,360	254	0	
Total	Colorado	1,710,930	970,038	46,800	365,000	4,500	0	552,460	0	188,620	145,950	209,050	202,660	0	0	383,440	196,650	175,460	242,270	87,540	0	487,870	63,180	148,500	172,106	1,350	43,760	120,670	0	35,820	1,171.0	41,181	4,240	65,700
	Suncor Energy Inc.—Suncor Energy (USA) Inc.—Commerce City	98,000	34,200	0	0	0	0	30,200	0	21,900	0	0	0	0	0	21,900	0	15,000	21,200	0	0	28,000	0	5,000	0	0	0	0	0	26.0	0	94	10,500	
Total	Delaware	98,000	34,200	0	0	0	0	30,200	0	21,900	0	0	0	0	0	21,900	0	15,000	21,200	0	0	28,000	0	5,000	0	0	0	0	0	26.0	0	94	10,500	
	PBF Energy Co. LLC—Delaware City Refining Co. LLC—Delaware City	180,500	96,900	46,500	0	0	0	73,800	0	38,700	0	0	18,900	0	0	0	0	0	0	0	0	0	144,000	9,900	13,500	5,400	0	0	0	40.0	1,852	541	0	
Total	Hawaii	180,500	96,900	46,500	0	0	0	73,800	0	38,700	0	0	18,900	0	0	0	0	0	0	0	0	144,000	9,900	13,500	5,400	0	0	0	40.0	1,852	541	0		
	Par Petroleum Inc.—Par Hawaii Refining LLC—Ewa Beach	144,400	67,450	0	0	9,900	0	0	0	12,150	0	1,800	16,200	0	0	11,700	0	0	0	0	0	0	0	0	0	0	0	0	0	18.0	0	35	0	
Total	Hawaii	144,400	67,450	0	0	9,900	0	0	0	12,150	0	1,800	16,200	0	0	11,700	0	0	0	0	0	0	0	0	0	0	0	0	18.0	0	35	0		
	ExxonMobil Corp.—ExxonMobil Refining & Supply Co.—Joliet	261,250	120,365	0	55,000	0	0	94,000	0	47,340	0	0	0	0	0	152,550	0	0	76,590	0	0	0	0	0	26,190	0	0	0	0	0.0	2,529	620	13,590	
	Marathon Petroleum Co. LP—Illinois Refining Division—Robinson	253,000	72,200	0	29,500	0	0	51,800	0	77,900	0	0	41,800	0	13,100	67,500	43,700	0	79,300	0	0	0	0	0	17,100	3,100	0	15,200	0	0	0.0	1,360	175	0

Country	Company, operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating							Isomerization			Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Alphalt (incl. road oil) b/d					
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd	Alkylation b/cd						Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd	
	PDV America Inc. (Petroleos de Venezuela SA)—PDV Midwest Refining LLC (Citgo Petroleum Corp.)—Lemont	179,265	73,340	0	36,360	0	0	62,550	0	0	31,410	0	0	0	0	99,180	0	12,330	85,050	0	0	0	0	6,120	0	18,900	8,460	0	0	0	0	12.0	1,632	442	0
	WRB Refining LP—Wood River (Roxana)	345,000	187,000	0	75,000	0	0	91,000	0	72,000	0	51,500	0	0	0	76,000	49,000	48,000	57,500	0	0	0	0	18,000	8,500	20,000	4,100	0	0	0	0	171.0	5,100	825	26,000
Total	Indiana	1,038,515	452,805	0	195,860	0	0	299,350	0	197,240	31,410	51,500	41,800	0	13,100	395,230	92,700	60,330	298,440	0	0	0	24,120	8,500	82,190	15,660	0	15,200	0	0	183.0	10,621	2,062	39,590	
	BP PLC—BP Products North America Inc.—Whiting	418,000	262,390	0	91,800	0	0	159,300	0	60,300	0	0	0	0	0	197,730	0	41,400	109,350	0	0	0	0	0	0	28,800	0	0	27,270	0	0	30.0	6,000	1,700	26,550
	Countrymark Cooperative Holding Corp.—CountryMark Refining & Logistics—Mount Vernon	29,260	12,341	0	0	0	0	7,544	0	5,886	0	0	0	0	0	8,990	4,838	0	11,837	0	0	0	0	0	0	1,695	0	0	2,271	0	0	7.4	0	7	0
Total	Kansas	447,260	274,731	0	91,800	0	0	166,844	0	66,186	0	0	0	0	0	206,720	4,838	41,400	121,187	0	0	0	0	0	0	30,495	0	0	29,541	0	0	37.4	6,000	1,707	26,550
	CHS Inc.—CHS McPherson Refinery Inc.—McPherson	109,184	36,100	0	22,500	0	0	21,600	450	21,600	0	0	34,650	0	0	34,200	0	0	38,880	0	0	0	0	0	0	8,550	0	3,420	10,800	0	0	34.0	593	152	0
	CVR Refining LP (CVR Energy Inc.)—Coffeyville Resources Refining & Marketing LLC—Coffeyville	129,200	43,700	0	22,500	0	0	32,400	0	23,400	0	0	0	0	0	32,400	19,800	8,100	27,000	24,300	0	0	0	0	0	9,000	0	0	7,000	0	0	22.0	1,183	208	0
	HollyFrontier Corp.—HollyFrontier El Dorado Refining LLC—El Dorado	156,750	60,800	0	17,100	0	0	39,600	0	6,750	21,150	0	0	0	0	43,650	22,500	10,800	48,600	0	0	0	0	0	0	12,600	0	1,350	13,500	0	0	56.0	952	286	3,600
Total	Kentucky	395,134	140,600	0	62,100	0	0	93,600	450	51,750	21,150	0	34,650	0	0	110,250	42,300	18,900	114,480	24,300	0	0	0	0	0	30,150	0	4,770	31,300	0	0	112.0	2,728	646	3,600
	Marathon Petroleum Co. LP—Kentucky Refining Division—Cattlettsburg	291,000	127,300	0	0	0	0	98,800	0	23,300	31,800	0	0	0	0	56,100	0	30,400	73,600	0	0	0	0	0	0	20,400	10,000	0	16,200	0	0	32.0	0	386	33,600
Total	Louisiana	291,000	127,300	0	0	0	0	98,800	0	23,300	31,800	0	0	0	0	56,100	0	30,400	73,600	0	0	0	0	0	0	20,400	10,000	0	16,200	0	0	32.0	0	386	33,600
	Calumet Specialty Products Partners LP—Calumet Lubricants Co. LP—Cotton Valley	13,300	0	0	0	0	0	0	0	0	0	0	0	0	0	5,580	0	0	0	0	0	0	0	0	0	0	0	450	0	0	2.0	0	0	0	
	Calumet Specialty Products Partners LP—Calumet Lubricants Co. LP—Princeton	8,222	6,650	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,300	4.0	0	3	1,800		
	Calumet Specialty Products Partners LP—Calumet Lubricants Co. LP—Shreveport	57,000	26,600	0	0	0	0	0	0	10,800	0	0	0	0	0	14,400	0	0	12,600	0	0	0	0	0	0	0	0	0	11,250	12.0	0	36	5,850		
	Delek US Holdings Inc.—Krotz Springs	78,850	34,390	0	0	0	0	30,600	0	0	11,700	0	0	0	0	12,600	16,200	0	0	0	0	0	0	0	0	0	0	0	5,598	0	0	0.0	0	0	0
	ExxonMobil Corp.—ExxonMobil Refining & Supply Co.—Baton Rouge	513,000	233,795	0	117,000	0	0	231,000	0	68,400	0	25,000	0	0	0	68,400	214,200	0	182,250	0	0	0	0	0	0	36,900	0	0	0	16,000	0.0	4,287	726	0	
	Marathon Petroleum Co. LP—Louisiana Refining Division—Garyville	585,000	282,700	0	103,100	0	0	141,600	0	130,200	0	0	123,500	0	0	118,300	116,900	0	252,800	0	0	0	0	0	0	36,100	0	21,900	25,200	0	0	114.0	5,735	1,274	31,400
	PBF Energy Co. LLC—Chalmette Refining LLC—Chalmette	187,150	0	0	36,000	0	0	64,800	0	36,000	0	0	0	0	0	0	0	0	0	0	0	0	0	167,400	13,500	0	0	0	0	0	0.0	1,224	835	0	
	PDV America Inc. (Petroleos de Venezuela SA)—Citgo Petroleum Corp.—Lake Charles	418,000	218,500	0	99,000	0	0	133,200	2,700	53,640	47,880	0	42,660	0	0	114,300	76,860	61,200	90,000	0	0	0	0	21,420	0	23,760	18,810	0	25,200	0	0	0.0	4,080	650	0
	Phillips 66 Co.—Lake Charles Refinery—Westlake	263,700	110,600	0	61,200	0	10,600	46,900	0	43,200	0	0	0	0	0	50,600	60,750	25,700	56,000	0	0	0	0	0	0	8,370	0	0	21,150	0	0	127.0	4,133	337	5,269
	Placid Refining Co. LLC—Port Allen	78,375	27,000	0	0	0	0	25,000	1,000	11,000	0	0	0	0	11,000	20,000	0	25,000	0	0	0	0	0	0	0	7,500	0	0	0	0	0.0	0	50	0	
	Shell PLC—Norco	237,500	0	0	0	0	26,100	107,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	
	Transworld Oil USA Inc.—Calcasieu Refining Co.—Lake Charles	130,150	28,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,150	0	0	0.0	0	0	0	

Country	Company, operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating						Alkylation b/cd	Aromatics b/cd	Isomerization			Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Alpha (incl. road oil) b/d			
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd			Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd						C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd
	Valero Energy Corp.—Valero Refining Meroux LLC—Meroux	118,750	57,000	0	0	0	0	0	0	28,800	0	0	43,830	0	0	33,930	0	14,760	36,000	0	0	0	0	0	0	0	0	0	0	0	0.0	0	203	0
	Valero Energy Corp.—Valero Refining New Orleans LLC—St. Charles Refinery, Norco	204,250	152,000	0	75,600	0	0	90,000	0	24,750	0	25,200	63,000	0	0	39,600	54,000	10,800	45,000	39,600	0	21,600	0	0	18,900	2,700	0	0	0	0	100.0	3,536	798	0
Total	Michigan	2,893,247	1,177,735	0	491,800	0	36,700	870,200	3,700	406,790	59,580	50,200	272,990	0	56,100	468,710	558,910	112,460	699,650	39,600	0	186,990	34,600	167,400	145,030	21,510	25,050	77,598	0	33,550	359.0	22,995	4,912	44,319
	Marathon Petroleum Co. LP—Michigan Refining Division—Detroit	140,000	84,600	0	36,100	0	0	41,800	0	20,400	0	0	0	0	0	33,700	0	6,700	44,200	0	0	42,300	0	0	7,600	0	0	0	0	59.0	2,214	397	30,400	
Total	Minnesota	140,000	84,600	0	36,100	0	0	41,800	0	20,400	0	0	0	0	0	33,700	0	6,700	44,200	0	0	42,300	0	0	7,600	0	0	0	0	59.0	2,214	397	30,400	
	Flint Hills Resources LP—Flint Hills Resources Pine Bend LLC—Rosemount	335,000	222,300	0	74,000	0	0	90,200	0	34,000	10,000	59,000	0	0	0	46,170	46,080	39,150	55,800	0	0	115,200	0	0	12,600	0	0	16,200	0	0	179.1	4,981	1,106	40,500
	Marathon Petroleum Co. LP—Minnesota Refining Division—St. Paul	105,000	47,500	0	0	0	0	29,000	0	0	22,300	0	0	0	0	23,800	0	9,500	30,400	0	0	29,000	0	0	6,700	0	0	14,700	0	0	9.5	0	106	16,200
Total	Mississippi	440,000	269,800	0	74,000	0	0	119,200	0	34,000	32,300	59,000	0	0	0	69,970	46,080	48,650	86,200	0	0	144,200	0	0	19,300	0	0	30,900	0	0	188.6	4,981	1,212	56,700
	Chevron Corp.—Chevron USA Inc.—Pascagoula	375,200	313,500	0	93,600	0	0	79,200	0	55,400	36,000	0	107,100	0	0	54,720	0	30,600	31,950	0	0	93,600	45,000	45,000	19,350	14,040	0	0	22,500	229.0	31,950	1,138	0	
	Ergon Inc.—Ergon Refining Inc.—Vicksburg	25,935	17,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,980	0	0	0	18,720	22,000	0	0	0	0	0	20,700	13.0	0	0	9,000	
	Hunt Consolidated Inc.—Hunt Southland Refining Co.—Sandersville	11,875	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,513	
Total	Montana	413,010	330,600	0	93,600	0	0	79,200	0	55,400	36,000	0	107,100	0	0	54,720	0	30,600	33,930	0	0	93,600	63,720	67,000	19,350	14,040	0	0	43,200	242.0	31,950	1,138	14,513	
	Calumet Specialty Products Partners LP—Calumet Montana Refining LLC—Great Falls	25,000	19,000	0	0	0	0	2,700	0	0	1,350	0	21,600	0	0	2,475	0	5,400	5,400	0	0	0	0	0	720	0	0	1,350	0	0	20.0	0	0	9,000
	CHS Inc.—Laurel	62,000	30,590	0	14,440	0	0	14,850	0	11,250	0	0	0	0	0	15,300	0	0	0	22,500	0	18,000	0	0	3,600	0	1,125	0	0	0	70.0	655	219	17,820
	ExxonMobil Corp.—ExxonMobil Refining & Supply Co.—Billings	59,755	27,455	9,000	0	0	0	21,000	0	0	11,250	6,000	0	0	0	12,510	18,450	6,840	9,900	0	0	0	7,110	0	4,590	0	0	0	0	23.0	544	0	13,050	
	Phillips 66 Co.—Billings Refinery—Billings	66,000	42,900	0	16,900	0	0	21,000	0	0	10,200	0	0	0	0	0	0	0	24,500	27,000	0	23,500	0	0	6,500	0	3,800	0	0	45.5	1,070	295	0	
Total	New Jersey	212,755	119,945	9,000	31,340	0	0	59,550	0	11,250	22,800	6,000	21,600	0	0	30,285	18,450	12,240	39,800	49,500	0	41,500	7,110	0	15,410	0	4,925	1,350	0	158.5	2,269	514	39,870	
	PBF Energy Co. LLC—Paulsboro Refining Co. LLC—Paulsboro	100,000	81,700	0	0	0	0	0	0	0	0	0	0	0	0	28,800	0	26,190	0	0	0	0	0	0	0	0	0	0	10,800	9.0	0	290	18,900	
	Phillips 66 Co.—Bayway Refinery—Linden	258,500	71,250	0	0	0	0	130,500	0	0	32,300	0	0	0	0	30,500	58,500	0	97,200	0	0	0	0	6,000	16,500	0	4,000	0	0	32.2	0	0	0	
Total	New Mexico	358,500	152,950	0	0	0	0	130,500	0	0	32,300	0	0	0	0	59,300	58,500	26,190	97,200	0	0	0	0	6,000	16,500	0	4,000	0	0	10,800	41.2	0	290	18,900
	HollyFrontier Corp.—HollyFrontier Navajo Refining LLC—Artesia	117,800	32,585	0	0	0	0	27,000	0	21,600	0	0	16,200	0	0	37,800	0	13,500	38,700	0	0	16,200	0	0	9,270	0	0	12,600	0	0	38.0	0	203	6,300
Total	North Dakota	117,800	32,585	0	0	0	0	27,000	0	21,600	0	0	16,200	0	0	37,800	0	13,500	38,700	0	0	16,200	0	0	9,270	0	0	12,600	0	0	38.0	0	203	6,300
	Marathon Petroleum Co. LP—Mandan Refining Division—Mandan	71,000	0	0	0	0	0	25,700	0	0	11,900	0	0	0	0	12,400	15,800	6,700	22,600	0	0	0	0	4,800	0	0	0	0	0	0.0	0	15	0	
Total	Ohio	71,000	0	0	0	0	0	25,700	0	0	11,900	0	0	0	0	12,400	15,800	6,700	22,600	0	0	0	0	4,800	0	0	0	0	0.0	0	15	0		
	BP-Husky Refining LLC—Toledo	152,000	68,875	0	32,400	0	0	49,500	0	37,800	0	0	28,620	0	0	37,800	0	0	20,250	0	0	47,700	0	0	10,350	0	0	0	0	0.0	2,060	413	8,100	
	Genovus Energy Inc.—Husky Energy Co.—Lima	175,750	50,350	0	20,700	0	0	40,770	0	0	49,500	0	23,400	0	0	56,700	31,500	21,600	32,400	0	0	0	0	0	0	8,280	4,050	16,830	0	0	0.0	571	100	0
	Marathon Petroleum Co. LP—Ohio Refining Division—Canton	100,000	33,300	0	0	0	0	22,800	0	22,300	0	0	0	0	0	32,800	0	12,800	24,200	0	0	21,400	0	0	8,100	0	0	0	0	0.0	0	89	16,200	
	PBF Energy Co. LLC—Toledo Refining Co. LLC—Toledo	178,600	0	0	0	0	0	71,100	0	0	40,500	40,500	0	0	0	0	0	0	0	0	0	0	85,500	9,000	14,670	0	0	0	0	0.0	0	105	0	
Total	Oklahoma	606,350	152,525	0	53,100	0	0	184,170	0	60,100	90,000	40,500	52,020	0	0	127,300	31,500	34,400	76,850	0	0	69,100	0	85,500	27,450	22,950	4,050	16,830	0	0	0.0	2,631	707	24,300
	CVR Refining LP (CVR Energy Inc.)—Wynnewood Refining Co.—Wynnewood	74,100	38,285	0	0	0	0	19,980	0	16,200	0	0	16,380	0	0	24,210	13,500	0	23,400	0	0	0	0	0	4,950	18,900	0	0	0	10.0	0	50	6,300	
	HollyFrontier Corp.—HollyFrontier Tulsa Refining LLC—Tulsa	158,194	56,050	0	9,900	0	0	22,500	1,800	20,700	0	0	0	0	0	45,000	26,100	0	40,500	0	0	0	19,440	0	4,950	0	810	11,700	0	9,000	0.0	374	68	19,530
	Phillips 66 Co.—Ponca City Refinery—Ponca City	216,700	80,000	0	23,700	0	0	61,600	0	0	44,300	0	0	0	0	44,300	35,600	16,800	64,300	0	0	19,800	0	13,900	14,600	0	6,800	15,400	0	59.1	1,150	200	0	

Country	Company, operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating						Isomerization		Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d						
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd						Other hydrotreating b/cd	Alkylation b/cd	Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd
	Valero Energy Corp.—Valero Refining Co.—Oklahoma—Ardmore	81,700	30,400	0	0	0	0	27,000	0	18,450	0	12,600	0	0	24,300	0	0	28,800	0	0	31,005	0	0	6,311	0	0	0	0	0	27.0	0	225	13,243	
Total	Pennsylvania	530,694	204,735	0	33,600	0	0	131,080	1,800	55,350	44,300	12,600	16,380	0	137,810	75,200	16,800	157,000	0	0	50,805	19,440	13,900	30,811	18,900	7,610	27,100	0	9,000	96.1	1,324	544	39,073	
	American Refining Group Inc.—American Refining Group Inc.—Bradford	11,210	0	0	0	0	0	0	0	0	1,980	0	0	0	3,240	0	0	0	0	0	0	0	0	0	0	0	0	0	2,651	0.0	0	0	59	
	Delta Air Lines Inc.—Monroe Energy LLC—Trainer	204,000	71,000	0	0	0	0	52,000	0	0	48,000	0	22,000	0	60,000	42,000	20,000	26,000	28,000	0	0	0	0	14,000	0	0	0	0	0	0.0	0	0	135	0
	Red Apple Group Inc.—United Refining Co.—Warren	66,500	38,000	0	0	0	0	22,500	900	0	12,600	0	0	0	21,600	4,500	4,500	15,300	0	0	0	0	0	4,050	0	0	7,650	0	0	0.0	0	61	19,800	
Total	Tennessee	281,710	109,000	0	0	0	0	74,500	900	0	62,580	0	22,000	0	84,840	46,500	24,500	41,300	28,000	0	0	0	18,050	0	0	7,650	0	2,651	0.0	0	196	19,859		
	Valero Energy Corp.—Premcor Refining Group Inc.—Memphis	171,000	0	0	0	0	0	63,000	0	32,400	0	23,850	0	0	46,800	35,100	0	34,200	0	0	0	0	0	11,430	26,100	0	0	0	30.0	0	105	0		
Total	Texas	171,000	0	0	0	0	0	63,000	0	32,400	0	23,850	0	0	46,800	35,100	0	34,200	0	0	0	0	0	11,430	26,100	0	0	0	30.0	0	105	0		
	Chevron Corp.—Pasadena	112,229	36,100	0	0	0	0	46,800	0	20,700	0	0	0	0	20,700	40,500	0	0	14,400	0	0	0	0	11,250	0	0	0	0	0.0	0	25	0		
	Delek Group Ltd.—Delek Refining Ltd.—Tyler	72,200	26,600	0	5,850	0	0	18,225	0	11,700	4,050	0	0	0	25,200	11,700	0	32,400	0	0	0	0	0	4,230	0	0	0	0	0.0	204	35	0		
	Delek US Holdings Inc.—Big Spring	70,300	22,800	0	0	0	0	22,500	0	18,900	0	0	0	0	22,950	0	4,500	20,700	0	0	5,850	0	0	4,500	900	0	0	0	0.0	0	136	6,840		
	ExxonMobil Corp.—ExxonMobil Refining & Supply Co.—Baytown	554,800	282,150	37,800	48,600	0	0	193,500	7,200	111,150	0	27,000	0	0	139,950	176,400	119,430	131,670	0	0	105,300	41,850	0	33,300	0	0	0	28,000	0.0	3,094	1,658	0		
	ExxonMobil Corp.—ExxonMobil Refining & Supply Co.—Beaumont	365,180	141,360	0	44,000	0	0	110,000	0	131,400	0	62,000	0	0	143,820	22,500	45,900	37,800	0	0	0	21,240	0	13,410	0	10,080	23,220	0	0	0.0	2,045	535	0	
	Flint Hills Resources LP—Flint Hills Resources Corpus Christi LLC—Corpus Christi (East)	73,500	0	0	0	0	0	44,365	0	0	0	0	0	0	29,700	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	92	0			
	Flint Hills Resources LP—Flint Hills Resources Corpus Christi LLC—Corpus Christi (West)	265,000	83,125	0	0	0	0	50,786	0	53,100	0	0	13,460	0	54,000	64,800	28,800	76,500	0	0	0	0	13,950	27,180	0	0	0	0	0.0	0	144	0		
	LyondellBasell Industries NV (Access Industries Inc.)—Houston Refining LP—Houston	274,550	191,900	0	89,550	0	0	99,000	0	0	0	0	0	0	54,450	68,400	39,150	82,958	0	0	104,490	4,680	0	10,125	17,370	0	0	0	3,506	0.0	4,060	1,019	0	
	Marathon Petroleum Co. LP—Galveston Bay Refining Division—Texas City	593,000	246,600	0	28,600	0	0	195,300	0	139,200	0	75,100	0	80,300	121,700	144,500	72,200	55,600	0	0	103,100	0	0	58,000	34,700	0	0	0	9.5	2,053	1,375	0		
	Marathon Petroleum Co. LP—Texas Refining Division—El Paso	133,000	52,700	0	0	0	0	33,300	0	28,000	0	0	0	0	37,500	33,300	8,600	46,600	0	0	0	0	0	11,900	0	3,800	0	0	9.5	0	0	3,800		
	Motive Enterprises LLC—Port Arthur	607,715	309,000	0	150,000	0	0	88,000	0	0	106,000	98,700	0	20,000	147,500	52,000	75,000	142,000	0	0	45,000	0	19,000	19,000	0	0	41,925	0	34,125	40.0	8,862	1,509	0	
	PDV America Inc. (Petróleos de Venezuela SA)—Citgo Refining & Chemical Inc.—Corpus Christi	165,300	81,035	0	40,410	0	0	75,420	0	46,350	0	0	0	0	47,520	32,850	0	83,340	0	0	64,710	0	0	21,600	14,580	0	0	0	0.0	2,334	334	0		
	Petróleos Mexicanos—Deer Park Refining LP—Deer Park	323,000	171,000	0	82,000	0	0	68,000	4,500	40,500	22,050	0	53,000	0	67,950	38,700	36,000	0	40,500	44,550	72,000	38,700	0	16,650	0	0	0	0.0	4,771	984	0			
	Phillips 66 Co.—Sweeny Refinery—Sweeny	264,500	125,500	0	70,900	0	0	100,000	0	37,900	0	0	0	0	66,100	60,000	0	0	113,700	0	99,200	0	16,000	21,600	18,500	0	9,100	0	0	140.0	4,000	698	0	
	Startlight Relativity Acquisition Co. LLC—San Antonio	19,950	0	0	0	0	0	0	0	0	5,400	0	0	0	5,400	0	0	6,300	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0		
	TotalEnergies SE—Total Petrochemicals & Refining USA Inc.—Port Arthur	238,000	106,300	0	54,082	0	0	74,800	0	39,700	0	0	0	0	54,507	33,462	29,800	72,600	0	0	51,568	0	0	6,200	7,100	0	7,522	0	0	0.0	2,800	683	0	
	Valero Energy Corp.—McKee Refinery, Sunray	185,250	47,500	0	0	0	0	49,050	0	26,100	16,200	0	24,300	0	38,700	35,640	0	42,750	0	0	0	0	0	8,820	0	2,700	0	0	30.0	0	68	10,800		

Country	Company, operator, refinery name, location	Crude b/cd	Vacuum b/cd	Thermal Processes				Catalytic Cracking		Catalytic Reforming		Catalytic Hydrocracking				Catalytic Hydrotreating						Isomerization			Lubes b/cd	Hydrogen MMcfd	Coke tonne/day	Sulfur tonne/day	Asphalt (incl. road oil) b/d						
				Fluid coking (incl. b/cd)	Delayed coking b/cd	Visbreaking b/cd	Other b/cd	Fresh feed b/cd	Recycled feed b/cd	Low-pressure b/cd	High-pressure b/cd	Distillate b/cd	Gas oil b/cd	Residual b/cd	Other b/cd	Naphtha/Reformer feed desulfurization b/cd	Gasoline desulfurization b/cd	Kerosene/Jet desulfurization b/cd	Diesel desulfurization b/cd	Other distillate desulfurization b/cd	Resid desulfurization b/cd	Heavy gas oil desulfurization b/cd	Other desulfurization b/cd	Other hydrotreating b/cd						Alkylation b/cd	Aromatics b/cd	C4 feed b/cd	C5/C6 feed b/cd	C8 feed b/cd	
	Valero Energy Corp.—Premcor Refining Group Inc.—Port Arthur	318,250	209,000	0	89,640	0	0	67,500	0	49,500	0	0	110,700	0	0	43,830	76,500	29,700	94,140	0	0	54,000	0	0	17,550	0	0	0	0	0.0	4,385	1,352	0		
	Valero Energy Corp.—Three Rivers	84,550	31,825	0	0	0	0	21,150	0	21,150	9,000	0	25,200	0	0	21,600	0	9,000	22,500	0	0	18,000	0	0	5,850	9,720	2,700	0	0	1,710	0.0	0	122	0	
	Valero Energy Corp.—Valero Refining Co. Texas LP—Corpus Christi	275,500	92,150	0	15,300	0	0	85,950	0	35,100	9,000	0	45,000	0	0	57,600	54,000	9,900	56,925	0	66,600	27,000	0	0	19,170	13,950	15,300	10,800	0	0	275.0	853	1,168	34,200	
	Valero Energy Corp.—Valero Refining Co. Texas LP—Houston	194,750	37,050	0	0	0	0	67,500	0	0	0	30,600	0	0	0	0	8,550	14,400	34,200	0	0	0	0	0	29,700	10,800	0	0	0	0	0.0	0	300	0	
	Valero Energy Corp.—Valero Refining Co. Texas LP—Texas City	213,750	126,825	0	48,150	0	0	77,400	0	16,290	0	0	0	0	0	22,500	55,350	25,200	49,500	0	99,000	0	0	0	13,230	0	0	5,850	0	0	0.0	2,584	617	0	
	WRB Refining LP—Borger	149,000	77,000	0	27,000	0	0	50,000	0	0	28,000	0	0	0	0	37,000	0	0	27,000	13,000	0	70,000	0	0	17,000	0	16,000	27,000	0	0	96.0	1,250	340	0	
Total		5,553,274	2,497,520	37,800	794,082	0	0	1,638,546	11,700	826,740	199,700	293,400	271,660	80,300	28,600	1,260,177	1,009,152	547,580	1,115,483	181,600	210,150	820,218	112,320	64,700	338,135	144,000	50,580	125,417	0	67,341	600.0	43,295	13,194	55,640	
Utah																																			
	Chevron Corp.—Chevron USA Inc.—Salt Lake City	54,720	26,505	0	9,000	0	0	13,950	0	0	8,190	0	0	0	0	8,190	0	0	11,970	18,630	0	0	0	0	5,040	0	1,275	0	0	0	0.0	2,250	57	0	
	FJ Management Inc.—Big West Oil LLC—North Salt Lake	31,350	0	0	0	0	0	10,350	0	0	7,650	0	0	0	0	10,350	0	0	9,900	0	0	0	0	0	2,700	0	1,710	2,700	0	0	0.0	0	4	0	
	HollyFrontier Corp.—HollyFrontier Woods Cross Refining LLC—Woods Cross	39,330	0	0	0	0	0	15,750	0	0	7,560	0	13,500	0	0	11,250	0	2,610	0	9,720	0	0	0	0	4,770	0	0	2,700	0	0	0.0	0	9	1,620	
	Marathon Petroleum Co. LP—Salt Lake City Refining Division—Salt Lake City	66,000	0	0	0	0	0	24,700	0	0	10,900	0	0	0	0	14,300	10,900	0	21,400	0	0	0	0	0	7,600	0	0	0	0	0	0.0	0	16	0	
	Silver Eagle Refining Inc.—Silver Eagle Refining Woods Cross Inc.—Woods Cross	14,915	6,650	0	0	0	0	0	0	0	0	0	0	0	0	900	0	0	2,700	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	
Total		206,315	33,155	0	9,000	0	0	64,750	0	0	34,300	0	13,500	0	0	44,990	10,900	2,610	45,970	28,350	0	0	0	6,480	0	20,110	0	2,986	5,400	0	0	0.0	2,250	86	1,620
Washington																																			
	BP PLC—BP West Coast Products LLC—Cherry Point (Ferndale)	238,450	132,050	0	55,350	0	0	0	0	58,500	0	0	58,500	0	0	68,220	0	13,500	57,960	0	0	0	0	23,400	0	0	0	23,400	0	0	186.3	2,767	258	0	
	HollyFrontier Corp.—Puget Sound, Anacortes	141,550	62,510	0	22,500	0	0	52,200	0	0	19,530	0	0	0	0	30,150	32,130	17,100	36,630	0	0	0	0	10,890	0	0	0	0	0	0.0	1,142	318	0		
	Marathon Petroleum Co. LP—Anacortes Refining Division—Anacortes	119,000	45,600	0	0	0	0	48,900	0	27,600	0	0	0	17,600	55,600	25,200	0	35,200	0	0	0	0	0	0	16,200	0	8,300	11,400	0	0	0.0	0	47	0	
	Par Petroleum Inc.—US Oil & Refining Co.—Tacoma	39,900	18,240	0	0	0	0	0	0	0	6,120	0	0	0	9,360	0	0	7,650	0	0	0	0	0	0	0	0	0	4,050	0	0	0.0	0	10	7,830	
	Phillips 66 Co.—Ferndale Refinery—Ferndale	105,000	45,700	0	0	0	0	34,000	0	16,700	0	0	0	0	17,500	30,700	0	34,000	0	0	0	0	0	0	11,400	0	4,500	0	0	0	0.0	0	100	0	
Total		643,900	304,100	0	77,850	0	0	135,100	0	102,800	25,650	0	58,500	0	17,600	180,830	88,030	30,600	171,440	0	0	0	0	23,400	38,490	0	12,800	38,850	0	0	186.3	3,909	733	7,830	
West Virginia																																			
	Ergon Inc.—Ergon West Virginia Inc.—Newell	21,850	8,170	0	0	0	0	0	0	3,555	0	0	0	0	0	3,870	0	0	8,100	0	0	5,670	0	0	0	0	0	0	0	5,490	3.0	0	1	630	
Total		21,850	8,170	0	0	0	0	0	0	3,555	0	0	0	0	3,870	0	0	8,100	0	0	5,670	0	0	0	0	0	0	0	5,490	3.0	0	1	630		
Wisconsin																																			
	Genovus Energy Inc.—Husky Energy Inc.—Superior	47,500	19,475	0	0	0	0	9,900	0	7,200	0	0	0	0	9,900	6,750	6,930	5,850	0	0	0	0	0	0	1,440	5,400	0	0	0	0	0.0	0	31	7,110	
Total		47,500	19,475	0	0	0	0	9,900	0	7,200	0	0	0	0	9,900	6,750	6,930	5,850	0	0	0	0	0	1,440	5,400	0	0	0	0	0.0	0	31	7,110		
Wyoming																																			
	Par Petroleum Inc.—Hermes Consolidated LLC—Newcastle	17,575	0	0	0	0	0	6,750	0	0	3,600	0	0	0	0	2,700	0	0	5,400	0	0	0	0	0	0	0	0	4,500	0	0	0.0	0	0	0	
	Sinclair Oil Corp.—Little America Refining Co.—Evansville	24,225	0	0	0	0	0	10,350	450	4,500	0	0	0	0	6,750	5,850	0	9,450	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	9	0	
	Sinclair Oil Corp.—Sinclair Refining Co.—Sinclair	87,400	38,950	0	18,000	0	0	19,800	0	0	13,050	14,040	0	0	0	17,100	0	13,500	16,200	0	0	18,000	0	0	4,050	0	0	0	0	52.0	952	188	7,200		
Total		129,200	38,950	0	18,000	0	0	36,900	450	4,500	16,650	14,040	0	0	26,550	5,850	13,500	31,050	0	0	18,000	0	0	4,050	0	0	4,500	0	0	52.0	952	197	7,200		