

APPENDIX G

Texas SIP Upset Rules and Data

Upset Rules: As part of a Notice of Deficiency for Texas' Title V program, EPA informed Texas that its upset rules were illegal and had to be amended. Texas responded by adopting new upset rules in January of 2004. EPA has published proposed approval of the rules, but has not yet issued a final approval. Texas' new rules, which are currently effective in the state, provide an affirmative defense to penalties for excess emissions resulting from upsets and unscheduled startup, shutdown and maintenance that meet certain requirements.¹

The rules state that *scheduled* maintenance, startup and shutdown emissions, however, do not have to be included in Texas' air permits if certain conditions are met.² The rules do include the following provision:

Subsection (c) and (e) of this section do not remove any obligations to comply with any other existing permit, rule or order provisions that are applicable to a scheduled maintenance, startup, or shutdown activity, including complying with any federal permitting requirements.³

This provision should be interpreted to require, at a minimum, that all scheduled startup, shutdown and maintenance be included in federal permits and that any exceedances of federal permit emission limits during scheduled startup, shutdown and maintenance constitute violations. Any interpretation which exempts such emissions from federal permitting or enforcement would violate the Clean Air Act and EPA's guidance.⁴

Texas' new rules include a sunset provision which makes them automatically expire in June 2005. Texas has indicated that it will adopt revised rules before the current rules expire. EPA should

participate actively in Texas' rulemaking process to ensure that any the new rules conform to federal law and EPA's policy and that any problems with the rules are flagged early in the process.

Reporting: Texas requires all excess emissions exceeding a reportable quantity to be reported within 24 hours of discovery. The notification must include the duration of the event, the pollutants emitted in amounts exceeding the reportable quantity, the total quantities emitted, and the authorized emission limits for those pollutants. A final report must be filed within two weeks and must include the methodology used to calculate the quantities emitted and the permit number or rule citation for the emission limits that apply to the facility.⁵

The reporting provisions of Texas' rules are not subject to the sunset provision and will not expire in June 2005.

Suzie Canales, Corpus Christi, TX

“The communities along Refinery Row are plagued with horrific odors that can permeate homes and become trapped inside as well as bright flares that light up the sky in the middle of the night.

During our patrols at Refinery Row in the middle of the night we see numerous bright flares that are massive in size and that emit tons of pollutants. We see stacks that relentlessly spew particulate matter over communities. And we see trailer parks and homes adjacent to the refineries with their lights out for the night. People have a basic right to feel secure and safe, especially while they sleep. But it's this time, in the cover of darkness and when people are most vulnerable, that refinery and chemical plants willfully blast the unsuspecting community with deadly chemicals.”

Data: Data collected from the Texas Emission Event database for the following facilities is attached.⁶ Every effort was made to include only final reports, although it appears that some companies were submitting changes to their online reports well after the two week deadline.

Facility Name	Facility Location
Blalock Booster Station	Garden City, TX
SACROC CO ₂ Plant	Snyder, TX
Welch CO ₂ Gas Processing	Welch, TX
Boyd Compressor Station	San Angelo, TX
Goldsmith Gas Plant	Goldsmith, TX
Wasson CO ₂ Plant	Denver City, TX
BASF	Port Arthur, TX
BP Texas City Plant B	Texas City, TX
Dow Freeport	Freeport, TX
Equistar	Channelview TX
Equistar	La Porte, TX
Equistar Chocolate Bayou	Alvin, TX
Exxon Baytown Chemical	Baytown, TX
Exxon Baytown Olefins	Baytown, TX
Huntsman Port Neches	Port Neches, TX
Huntsman Petrochemical	Odessa, TX
Sid Richardson Carbon	Borger, TX
Atofina	Port Arthur, TX
BP Products North America	Texas City, TX
Citgo Corpus East	Corpus Christi, TX
Exxon Baytown	Baytown, TX
Exxon Beaumont	Beaumont, TX
Flint Hills (East & West)	Corpus Christi, TX
Motiva	Port Arthur, TX
Phillips 66	Borger, TX
Premcor	Port Arthur, TX
Valero (East & West)	Corpus Christi, TX
Western Refinery (formerly Chevron)	El Paso, TX

Collectively, the above facilities reported releasing 45,394,557 pounds of excess emissions during 2003. These emissions included 136,960 pounds of butadiene and 163,666 pounds of benzene. It is still not clear, however, that facilities are always reporting all excess emissions. Some reports suggest that emissions from maintenance activities may either be underestimated, or simply not reported at all. For example, Huntsman's chemical plant in Odessa reports no emissions at all for startup, shutdown, or maintenance activities, making it unique among petrochemical plants in Texas. The Phillips 66 refinery in Borger reports substantial VOC emissions from cleaning out product storage tanks, but other refineries either show much lower releases or do not report any tank maintenance for 2003.

NOTES

¹ 30 TEX. ADMIN. CODE §101.222(b) & (d).

² 30 TEX. ADMIN. CODE §101.222(c) & (e).

³ 30 TEX. ADMIN. CODE §101.222(f).

⁴ As noted previously, EPA has made clear to Texas that these emissions must be included in permits. Letter from David Neleigh, EPA Region 6 Chief Air Permits, to John Steib, Texas Commission on Environmental Quality Director Air Permits Division (May 1, 2002).

⁵ TEX. ADMIN. CODE §101.201.

⁶ The duration included in the Texas spreadsheets generally indicates the duration of the event and not necessarily the duration of the excess emissions caused by the event.

ATOFINA PETROCHEMICALS PORT ARTHUR COMPLEX • Port Arthur, Jefferson County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/30/04	Boiler	Boiler Stack		48.0				240.0					Malfunction
1/30/04	FCCU Blind	North Flare		27.0	776.0								Maintenance
1/28/04	FCCU	North Flare		144.0	1,527.2								Malfunction
1/28/04	H300 Package Boiler	Package Boiler Stack		120.0				600.0					Maintenance
12/31/03	SRU-1 Condensor Dip Leg Valve	North Flare		4.6	27,426.0	297.3							Malfunction
12/31/03	SCOT	Tail Gas Incinerator		11.3	10,711.0	117.0							Malfunction
12/31/03	Continuous Catalyst Regeneration Reformer Unit	North Flare		336.0	3,672.0	39.8							Shutdown
12/31/03	Continuous Catalyst Regeneration Reformer Unit	South Flare		336.0	544.7								Shutdown
12/27/03	Middle/South Header	Flare		24.0	6,750.0								Malfunction
12/23/03	ACU-2 Compressor	Flare		5.4	2,148.4	23.3							Malfunction
12/13/03	Refinery Powerloss	South Flare		9.8		218.3							Malfunction
12/12/03	Main Air Blower	North Flare		3.3					800.0				Malfunction
12/11/03	Refinery Powerloss	North Flare		62.5		910.1							Malfunction
12/9/03	Refinery Power Loss	Tailgas		192.9	25,898.3	280.8	806.4	158.3					Malfunction
12/9/03	Power Loss	South Flare		14.0	53,551.8	436.7	784.8	115.0					Malfunction
12/9/03	Resid Processing Complex	North flare		101.8	97,847.3		2,834.4	420.5					Malfunction
12/9/03	Refinery Powerloss	North Flare		8.4		112.9							Malfunction
11/19/03	Cogen Stack	Cogen Stack Breakout		19.7				2,448.0					Malfunction
11/19/03	Electrical supply	North Flare		0.6	865.5								Startup
11/18/03	SCOT Tailgas Incinerator	SCOT Tail Gas Incinerator		22.4	12,409.0	101.7							Malfunction
11/9/03	Flare Recovery System	South Flare		1.0	6,785.7			169.0	332.8	42.7			Malfunction
10/20/03	Cogeneration Unit	Cogen Unit		240.0				300.0					Startup
10/16/03	SCOT	Tailgas Incinerator		8.5	6,735.0	73.0							Malfunction

Atofina Petrochemicals Port Arthur Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
10/16/03	SCOT	North Flare		1.8	1,212.0								Malfunction
10/10/03	Cogen Unit	Cogen Unit		600.0				300.0					Shutdown
10/8/03	SRU-3 & SCOT	Flare		1.0	2,881.0	31.2	2.7	0.5					Malfunction
10/7/03	SCOT Feed Valve	Tail Gas Thermal Oxidizer		1.2	1,820.4		2.3	0.4					Malfunction
10/7/03	SCOT Feed Valve	North Flare		1.2	33,370.0	361.8	42.0	8.3	1.2				Malfunction
9/29/03	NOx Steam Injection System	Cogen Unit		193.0				1,779.4					Malfunction
9/26/03	SRU-1 SRU3	SRU & Tailgas		6.7	3,576.8	38.8							Malfunction
9/24/03	SRU	North Flare		125.8	19.1	0.2	2,745.3	538.8	701.1				Malfunction
9/21/03	SCOT Stripper Reboiler	North Flare		8.7	1,483.3	21.9	1.9	0.4					Malfunction
9/20/03	Flare Gas Recovery Compressor	South Flare		128.0	1,154.0	12.5	3.9	0.8	38.8	6			Maintenance
9/9/03	SRU1, SWS2	Sulfur Recovery Tail Gas TO		1.0	141.9	1.5	4.4	0.9					Startup
9/8/03	SCOT Inlet Feed Valve	Sulfur Recovery Tail Gas Thermal Oxidizer		25.7	21,741.3	261.0							Malfunction
9/8/03	SRU-3	North Flare		5.5	82,972.0	899.4							Malfunction
9/8/03	Sour Water Stripper	South Flare		1.6	2,939.0								Startup
9/8/03	SRU1, SWS2	South Flare		0.4	382.7	4.2	0.4	0.1					Startup
9/3/03	Unibon	North Flare		1.9	3,869.8	42.0							Startup
8/25/03	SRU 1 & 3	North Flare		72.0		17,000.0							Shutdown
8/25/03	SRU 1 & 3	South Flare		125.8	16,000.0	17,000.0	2,021.3	269.6					Shutdown
8/25/03	C-200	South Flare		398.6		161.5			3,738.3	62			Shutdown
8/16/03	13C-1B Compressor	North Flare		18.0	23,600.7	256.2	1,476.4	242.8	407.8				Malfunction
7/25/03	ISOM Unit	North Flare		92.0			5.7	0.8	10.5				Malfunction
7/17/03	SRU-1 SWS2 line	South Flare		5.8	3,936.0	44.8	10.8	2.1	5.2				Malfunction
7/5/03	DH1 & DH2	S. Flare		385.0	3,193.3	34.6	432.8	83.8	808.4	20			Maintenance
7/4/03	DHT1 & DHT2	North Flare		412.8	82,14	,89	15,030.8	2,709.1	5,253.1				Maintenance
7/4/03	East End Turnaround	North Flare		400.0				240.7					Malfunction
6/21/03	C200 Leaking Valve	South Flare		1.3	2,241.0								Malfunction

Atofina Petrochemicals Port Arthur Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
6/20/03	Sour Fuel Gas Compressor leaking valve	Sour Fuel Gas Compressor		5.8		100.0							Malfunction
6/14/03	SRU-1	SRU Reactor		120.0		100.0							Malfunction
6/14/03	SRU-1	North Flare		120.0	354,255.3	3,841.0		83.2					Malfunction
6/13/03	Sour Water Stripper 1	South Flare		3.0	5,371.0			1.1					Startup
6/12/03	SRU-3	Flare		131.0	250,822.4	7,138.0		55.7					Malfunction
6/12/03	SRU-3	SRU Reactor		0.2		24.3							Malfunction
6/5/03	Tank 926	Tank 926		5.7						49			Maintenance
6/4/03	Ground Fault 69 KV power line	FCCU Regenerator Flue Gas Wet Scrubber		29.0	1,362.0								Malfunction
6/3/03	Ground Fault 69 KV power line	North Flare		72.0		159.0							Malfunction
6/3/03	Ground Fault 69 KV power line	North Flare		219.5	66,261.0			1,678.0					Malfunction
6/3/03	Ground Fault 69 KV power line	South Flare		1.4		58.0							Malfunction
6/3/03	Ground Fault 69 KV power line	South Flare		178.5	28,847.0			1,281.0					Malfunction
5/27/03	FCCU	Regenerator Stack		12.0				208.0					Malfunction
5/17/03	Incinerator Waste Heat Boiler	Sulfur Recovery Tail Gas Thermal Oxidizer		28.8	2,709.9	29.4	84.4	16.6					Malfunction
5/17/03	Incinerator Waste Heat Boiler	South Flare		28.8	3,691.0	40.0	3.4	0.7					Malfunction
5/17/03	Incinerator Waste Heat Boiler	North Flare	35.0 % op	28.8	764,859.1	8,292.5	963.6	189.2	26.4				Malfunction
5/1/03	Depentanizer Overhead Drum	Reformer Unit		31.0					5,599.4	220.0			Malfunction
4/17/03	C200 Compressor	South Flare		4.1		114.8	328.4	45.5	179.0				Malfunction
4/7/03	C200 Compressor	South Flare		2.0	8,820.5	95.6	174.8	24.2	110.5				Malfunction
4/7/03	PAR Substation Lightning Strike	Sulfur Recovery Tail Gas Thermal Oxidizer		55.8	48.6	0.5	3.4	0.5					Malfunction
4/7/03	PAR Substation Lightning Strike	South Flare		55.8	1,323.0	14.3	1.4	231.2	0.5				Malfunction
4/7/03	PAR Substation Lightning Strike	North Flare		55.8	2,591,492.0	28,124.0	3,956.0	736.5	3,286.0				Malfunction
4/4/03	V-6 Water Boot	North Flare		45.2			383.3	57.1	1,851.0				Malfunction

Atofina Petrochemicals Port Arthur Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
3/11/03	SRU-1 Furnace	Sulfur Recovery Tail Gas Thermal Oxidizer		39.3	390.2	4.2	12.2	2.4					Malfunction
3/11/03	SRU-1 Furnace	South Flare		39.3	186.4	2.0	0.2	0.0					Malfunction
3/11/03	SRU-1 furnace	SRU Fugitives		39.3	1,379.5	1,900.2							Malfunction
3/11/03	SRU-1 furnace	North Flare		39.3	280.9	3.1	8.8	1.7					Malfunction
3/2/03	T4 Line	Sulfolane Unit Fugitives		1.0						13.5			Malfunction
2/28/03	Refinery Crude Units	Flare		63.0	5,626.0			50.0					Malfunction
2/27/03	Sulfolane Unit T4 Recovery Tower Inlet Line	Sulfolane Unit & Fugitives		5.0						29.1			Malfunction
2/8/03	SSMP	DHT 1, 2 & C-2000	35	336.0	10,000.0	150.0	30.0	11.0	30.0				Startup
2/8/03	DHT 1 & 2	DHT 1 & 2	35	336.0	900.0	10.0	140.0	22.0	100.0				Shutdown
2/8/03	DH1 & DH2	Distillate Hydroheater No. 1, No.2 & C-200	35	336.0	450,000.0	7,000.0	11,000.0	1,480.0	900.0				Maintenance
2/5/03	Alkylation Unit A1 Contactor	A. Contactor		10.5			27.0	3.8	420.2				Maintenance
TOTALS				7,234.9	5,012,808.1	95,983.3	43,322.9	16,808.2	24,600.0	442.7	0.0		

BASF FINA NAFTA REGION OLEFINS COMPLEX • Port Arthur, Jefferson County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO2	H2S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/29/04	Deethanizer Tower	Ground Flare		0.5					425.0				Malfunction
1/29/04	Deethanized Tower	Flare		3.0			717.0	100.0	381.0				Malfunction
1/23/04	C4 Complex	Flare		24.0			171.0	23.0					Startup
1/23/04	Deprop T-6301	Flare		240.0			94,000.0	13,650.0	120,400.0				Startup
1/22/04	Cogen	Flare		23.0				316.0					Startup
1/5/04	Furnace	Decoking Drum	50	0.7									Opacity
12/22/03	Ethylene Compressor	Ground Flare		8.6					2,968.0		1.0		Malfunction
12/22/03	Ethylene Compressor	Ground Flare		0.5					172.0				Malfunction
12/22/03	Ethylene Compressor	Flare		1.5					3,712.0				Malfunction
12/21/03	Ethylene Compressor	Ground Flare		2.4					2,530.0				Malfunction
12/21/03	Ethylene Compressor	Ground Flare		11.2			14,323.0	1,983.0					Malfunction
12/21/03	Hydrotreater	HP Flare		73.0	1,776.0		246.0	34.0					Startup
12/8/03	Debutanizer	HP Flare		1.0			600.0	83.0					Startup
12/8/03	Debutanizer Tower	HP Flare		1.0					817.1		3.0		Startup
12/8/03	Polyreactor	HP Flare		0.0			1.0	2.0					Startup
12/5/03	C4 Complex	Reactor Feed Heater		336.0									Startup
12/1/03	Ethylene Absorber	Flare		3.0			9.0	1.1					Startup
10/20/03	Acetylene Converter	Flare		11.4			236.0	33.0	245.0				Maintenance
9/19/03	Cooling Tower	Leak		1,311.0					936.0	276.0	476.0		Malfunction
9/18/03	Propylene Fractionator	Flare		1.8					719.0				Malfunction
9/17/03	Quench Tower	Leak		989.0					57.0	57.0			Malfunction
9/17/03	Quench Tower	Quench Tower Exchanger		125.0						73.0			Malfunction
9/13/03	Change Gas Comp.	Ground Flare		121.6					25,934.0				Startup
9/12/03	Change Gas Comp.	Ground Flare		2.3					28.0				Startup

BASF Fina Nafta Region Olefins Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO2	H2S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
9/12/03	Change Gas Comp.	Ground Flare		146.6			220,318.0	30,503.0					Startup
9/12/03	Change Gas Comp.	Ground Flare		86.8					150,497.0	19,304.0	10,069.0		Startup
9/12/03	Change Gas Comp.	Ground Flare		6.0					5,750.0				Startup
9/12/03	Change Gas Comp.	Ground Flare		9.3					8,556.0				Startup
9/12/03	Change Gas Comp.	Ground Flare		18.3					61.0				Startup
9/12/03	Change Gas Comp.	Ground Flare		3.1					1,156.0				Startup
9/12/03	Change Gas Comp.	Ground Flare		0.7					281.0				Startup
9/12/03	Change Gas Comp.	Ground Flare		2.0					80,165.0	254.0	6,431.0		Startup
9/12/03	Change Gas Comp.	Ground Flare		11.5					11,007.0				Startup
9/12/03	Change Gas Comp.	Ground Flare		6.8					8,227.0		4.0		Startup
9/6/03	Cogen	Leak		9.0				75.8					Maintenance
8/29/03	Transformer	Cogen		219.0				79.6					Maintenance
8/29/03	Transformer	Cogen		44.0				242.8					Maintenance
8/26/03	Charge Gas Compressor	Ground Flare		0.0									Maintenance
8/26/03	Charge Gas Compressor	Ground Flare		70.3					97.0				Maintenance
8/26/03	Charge Gas Compressor	Ground Flare		2.0					2,352.0	38.0	259.0		Maintenance
8/26/03	Charge Gas Compressor	Ground Flare		389.0			44,519.0	6,165.0					Maintenance
8/26/03	Charge Gas Compressor	Ground Flare		3.3					59.0				Maintenance
8/26/03	Charge Gas Compressor	Ground Flare		49.8					55,507.0	7,122.0	3,715.0		Maintenance
8/26/03	Change Gas Comp.	Ground Flare		2.0					2,229.0				Maintenance
8/26/03	Change Gas Comp.	Ground Flare		49.0					9,394.0				Maintenance
8/24/03	Charge Gas Compressor	Ground Flare		24.3			61,850.0	8,563.0	99,921.0	12,817.0	6,685.0		Malfunction

BASF Fina Nafta Region Olefins Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
8/24/03	Charge Gas Compressor	Ground Flare		0.3					121.0				Malfunction
8/24/03	Charge Gas Compressor	Ground Flare		5.3					2,174.0				Malfunction
8/24/03	Charge Gas Compressor	Ground Flare		6.2					9.0				Malfunction
7/4/03	Prop. Refrig. Compressor	Flare		31.3					138,467.0	2,241.0	15,175.0		Malfunction
7/4/03	Prop. Refrig. Compressor	Ground Flare		12.0					22.0				Malfunction
7/4/03	Prop. Refrig. Compressor	Ground Flare		6.3					3,868.0				Malfunction
7/4/03	Prop. Refrig. Compressor	Ground Flare		5.3					3,818.0				Malfunction
7/4/03	Prop. Refrig. Compressor	Ground Flare		26.8					189.0				Malfunction
7/4/03	Prop. Refrig. Compressor	Ground Flare		21.3					3,374.0		1.0		Malfunction
7/4/03	Prop. Refrig. Compressor	Ground Flare		3.3					1,625.0				Malfunction
7/4/03	Prop. Refrig. Compressor	Ground Flare		1.5					1,500.0				Malfunction
7/4/03	Prop. Refrig. Compressor	Ground Flare		51.0			133,799.0	18,525.0					Malfunction
5/28/03	MAPD Reactor	Ground Flare		0.0				14.0	132.0				Malfunction
5/18/03	Quench Water Reboiler	Ground Flare		1.2				396.0	1,963.0				Malfunction
5/14/03	Acetylene Converter	Ground Flare		2.9					205.0				Malfunction
5/4/03	Charge Gas Compressor	Flare		0.2				100.0	912.0	15.0	101.0		Malfunction
5/4/03	Charge Gas Compressor	Flare		1.5				185.0	1,317.0				Malfunction
4/26/03	Quench Tower	Fugitive		79.9					291,142.0	18,981.0	13,782.0		Malfunction
4/25/03	Deethanizer	Ground Flare		1.2				8.0	76.0				Malfunction
4/25/03	Cogeneration Unit 1	Ground Flare		11.1				2,600.0	17,523.0	1,281.0	668.0		Malfunction
4/17/03	Deethanizer	Ground Flare		1.7				23.0	214.0				Malfunction
4/6/03	Propylene Refrigeration Compressor Sys.	Ground Flare		6.0				1,139.0	10,674.0				Malfunction

BASF Fina Nafta Region Olefins Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
3/28/03	Plant Wide	Flare		1.4				216.0	2,568.0	324.0	169.0		Malfunction
3/28/03	DCS Cabinet Power Supply	Ground Flare		123.2				32,061.0	319,349.0	27,933.0	22,651.0		Startup
3/25/03	Charge Gas Compressor	Ground Flare		0.2				56.0	694.0	92.0	48.0		Malfunction
3/20/03	Prop. Compressor	Ground Flare		55.5				16,937.0	127,336.0	466.0	3,153.0		Malfunction
2/8/03	Depropanizer	Depropanizer Reflux Drum		0.2					128.0				Malfunction
TOTALS				4,900.2	1,776.0	0.0	570,789.0	134,114.3	1,523,983.1	91,274.0	83,391.0		

BLALOCK BOOSTER STATION • Garden City, Glasscork County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/2/04	engine	blowdown vent		10.3					29,518.6				Malfunction
1/2/04	engine	blowdown vent		10.3					29,518.6				Malfunction
1/2/04	engine	blowdown vent		10.3					29,518.6				Malfunction
1/2/04	engine	blowdown vent		10.3					29,518.6				Malfunction
10/14/03	booster	blowdown vent		8.0					10,834.0				Malfunction
10/6/03	pipe	engine blowdown		1,104.0					106,623.5				Malfunction
10/5/03	engine	upset vent		3.5					11,305.0				Malfunction
8/29/03	engine	blowdown vent		11.0					58,435.3				Malfunction
8/17/03	stabilizer	blowdown vent		6.5					22,256.8				Malfunction
8/2/03	booster engine	blowdown vent		5.3					66,113.1				Malfunction
8/1/03	engine	blowdown vent		4.5					22,673.1				Malfunction
7/30/03	engine	blowdown vent		3.7					14,737.5				Malfunction
6/12/03	field launch ball	blowdown vent		7.5					54,132.1				Malfunction
6/18/03	field launch ball	blowdown vent		1.7					7,510.3				Malfunction
5/26/03	plant down	blowdown vent		2.5					37,410.7				Malfunction
5/26/03	engine	blowdown vent		4.5					23,863.5				Malfunction
5/24/03	turbine	blowdown vent		4.5					101,263.8				Malfunction
4/29/03	regen heater	blowdown vent		888.5					168,716.4				Malfunction
4/16/03	pipeline replacement	blowdown vent		13.1					191,507.8				Malfunction
2/24/03	engine	blowdown vent		2.2					13,290.3				Malfunction
2/23/03	booster	blowdown vent		16.6					201,727.7				Malfunction
TOTALS				2,128.8	0.0	0.0	0.0	0.0	1,230,475.4	0.0	0.0		

BOYD COMPRESSOR STATION SAN ANGELO • Reagan County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
9/14/03	Engine/Compressor	Vent 1		13.5					1,666,664.58	218.02			Malfunction
9/7/03	STK bypass valve	Vent 1		5.0					27,844.85	36.42			Malfunction
8/24/03	STK-13	Vent 1		4.0					55,709.35	72.87			Malfunction due to poor maintenance
8/23/03	Compressor	Vent 1		17.0					24,119.30	31.55			Malfunction
8/19/03	STK-C14	Vent 1		4.0					27,247.41	35.64			Malfunction
8/7/03	STK-C13&14	Vent 1		2.0					32,663.25	42.73			Malfunction
7/6/03	STK-C13	Vent 1		2.0					8,877.51	11.61			Malfunction
7/3/03	STK-C13	Vent 1		2.0					18,161.98	23.76			Malfunction
7/2/03	Inlet Piping	Vent 1		1.0					16,810.18	21.99			Malfunction
7/1/03	STK-C15	Vent 1		4.0					69,102.01	90.38			Maintenance
6/28/03	STK-C13&14	Vent 1		9.0					44,760.39	58.53			Malfunction
6/25/03	STK-C13&14	Vent 1		5.0					24,052.97	31.46			Shutdown causing a malfunction
6/25/03	ESD system	Vent 1		24.0					316,118.60	413.52			Malfunction
6/24/03	Pressure Control Valve	Vent 1		5.7					28,718.76	37.57			Malfunction
6/22/03	STK-C13	Vent 1		2.3					24,787.37	32.42			Malfunction
6/21/03	C-13 compressor	Vent 1		1.0					16,735.25	21.89			Malfunction
6/20/03	STK-14	Vent 1		2.0					35,830.47	46.84			Malfunction
6/13/03	Inlet Pressure Control Valve	Vent 1		13.5					42,869.86	56.08			Malfunction
6/12/03	STK-C14	Vent 1		7.0					30,682.71	40.14			Shutdown for Maintenance
6/12/03	STK-C14	Vent 1		8.0					78,444.55	102.61			Maintenance
6/11/03	STK-C13&14	Vent 1		5.0					30,764.80	40.24			Malfunction
6/9/03	STK-C13	Vent 1		4.0					13,904.00	18.19			Malfunction
6/9/03	STK-C13&14	Vent 1		4.3					43,851.65	57.36			Malfunction
6/7/03	ESD systerm	Vent 1		9.3					135,976.39	177.87			Malfunction
6/6/03	STK-C13&14	Vent 1		3.0					39,960.20	52.27			Malfunction
6/3/03	STK-C14	Vent 1		1.0					9,239.06	12.09			Malfunction
6/3/03	STK-C14	Vent 1		1.5					12,599.34	16.48			Malfunction
6/2/03	STK-C14	Vent 1		1.8					24,521.03	32.08			Malfunction

Boyd Compressor Station San Angelo , continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
6/1/03	Boyd #14	Vent 1		2.3					31,727.12	41.50			Malfunction
5/30/03	9mile unit	Vent 1		2.0					12,424.68	16.25			Malfunction
5/28/03	STK-C15	Vent 1		24.0					295,177.92	386.13			Shutdown for repairs accompanied by a malfunction
5/25/03	STK-14&15	Vent 1		3.0					11,012.16	14.41			Malfunction
5/24/03	STK-13, 14&15	Vent 1		4.0					47,075.47	61.58			Malfunction
4/30/03	STK-13, 14&15	Vent 1		4.0					12,172.21	15.92			Malfunction
4/30/03	STK-15	Vent 1		7.0					21,301.39	27.86			Shutdown for Maintenance
4/27/03	STK-C13&15	Vent 1		4.5					29,337.91	38.38			Malfunction
4/27/03	Inlet PSI	Vent 1		1.5					19,948.65	26.10			Malfunction
4/16/03	Stk-C13	Vent 1		8.0					7,766.74	10.16			Malfunction
4/12/03	Boyd units	Vent 1		4.0					43,662.52	98.99			Malfunction
3/13/03	Inlet ESD	Vent 1		22.0					46,329.70	60.60			Malfunction
2/25/03	STK-C15	Vent 1		4.0					7,550.04	17.12			Malfunction
2/24/03	Compressor Engine	Vent 1		4.0					63,517.21	144.01			Malfunction
TOTALS				255.9	0.0	0.0	0.0	0.0	3,550,021.54	2,791.62	0.0		

BP PRODUCTS NORTH AMERICA • Texas City, Galveston County TX
Emissions Data: 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/26/04	FCCU 2	Electrostatic Precipitator Stack	46	0.1								alumina silica catalyst fines: 3	Malfunction
1/16/04	Portable air compressors	Short-loop atmospheric vent		24.0					17.1	17			Malfunction
1/13/04	#8 Transformer	Electrostatic Precipitator	32	0.2								alumina silica catalyst fines: 34	Malfunction
1/10/04	E-15C Firebox	E-15C Firebox		288.0	106.0								Malfunction
1/8/04	K1A air blower	SRU Incinerator Stack	25	0.2	385.0								Malfunction
1/8/04	FCCU2	Waste Heat Bioler	80	12.0									Malfunction
1/7/04	400# Air Liquide	Hyd. Flare		1.6			390.9	32.8					Malfunction
1/5/04	Overhead Condenser	Hot Well		0.8		254.0	60.0		868.8	5.0			Malfunction
1/5/04	alkylation unit 3	flare 6		120.0			6,474.0	5,631.0					Shutdown
1/4/04	HRU Unit	Flare #3		4.3	0.2		391.6	49.8					Malfunction
1/3/04	P4444 vent	P4444 vent		24.0					2.0	2.0			Shutdown
1/3/04	FCCU3	FCCU3	55%	11.5								alumina silica catalyst fines: 320	Shutdown
1/1/04	Selective Hydrogenation Unit	Flare 3		70.9	0.2		461.0	62.0					Shutdown
12/24/03	157F-EP drum	Ultracracker Fugitive		3.0					991.0				
12/23/03	157F-EP Drum	Flare #3		5.6					2,737.0				Malfunction
12/23/03	157F-EP Drum	Flare #1		5.6					387.0				Malfunction
12/23/03	157F-EP drum	Flare #1		3.2				25.6					Malfunction
12/23/03	157F-EP drum	Ultracracker Fugitive		3.2					140.0				
12/23/03	157F-EP drum	Flare #3		3.0				205.0	145.0				Malfunction
12/20/03	Dock 54A	Dock 54 Fugitives		3.0					2,006.0	1,551			Malfunction
12/15/03	Bypass Valve on P-444A	UU4-P444A Vent		24.0					13.0	13			Malfunction
12/13/03	401E Overhead Tower	Relief Valve		0.0					13.0	13			Malfunction
12/9/03	FCCU1	ESP	23.5	1.1								Alumina Silica Catalyst Fine: 45.4	Maintenance
12/8/03	A& B educators	A& B educators		14.7		57.0							Maintenance

BP Products North America, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
12/4/03	CRPII Flare	CRPII Flare		0.9			70.2	9.3					Malfunction
12/2/03	100-J Compressor	ULC Flare		1.3	225.9								Malfunction
12/2/03	Loss of ammonia	ESP Stack	32	0.6								alumina silica catalyst fines: 34	Malfunction
11/16/03	Hydrogen #1	Hydrogen Flare		12.2			3,621.0	270.0					Startup
11/14/03	Incinerator Stack	Incinerator Stack		24.0			161.0						
11/14/03	Incinerator Stack	ABCDE Educators		24.0			412.0						
11/9/03	J-475	Flare 2		0.3	829.0		39.0	3.4					Malfunction
11/7/03	Hydrogen 1	Hydrogen Flare		0.7				132.2					Startup
11/4/03	139-C	Ultracracker		15.0					22,185.0				Malfunction
10/30/03	FCCU1	ESP	35	0.2								alumina silica catalyst fines: 7	Malfunction
10/30/03	The FV-2077 Valve	Flare 4		1.3			20.0	2.2					Malfunction
10/30/03	J-4 Lift Air Blower	Electrostatic Precipitator	35	0.2								Silica: 7	Malfunction
10/29/03	D Incinerator	A& B educators		384.0			2,836.0						Maintenance
10/28/03	Hydrogen 1	Hydrogen Flare		5.8			2,914.7	102.4					Startup
10/27/03	Power Station 4 Substation	Desalter Relief Valve 17 & 18		3.0			93.0		6,837.0	7.0			Malfunction
10/27/03	138kV	Flare 2		7.0	8975.49		358.4	33.5					Malfunction
10/27/03	138kV	Flare 1		10.2			284.3	37.8					Malfunction
10/27/03	FCCU 3	408 F Low pres/ high temp. sep. relief valve		0.2			2.0		52.0			0.08 - Ammonia	Malfunction
10/27/03	FCCU 3	CRPII Flare		12.0	1,066.0		134.0	12.0	1,000.0				Malfunction
10/27/03	FCCU 3	Electrostatic Precipitator	45	1.0								20.0 - Alumina Silica Catalyst Fines	Malfunction
10/27/03	FCCU 3	Electrostatic Precipitator	90	1.0								20.0 - Alumina Silica Catalyst Fines	Malfunction
10/27/03	FCCU 3	Electrostatic Precipitator	76	1.0								28.0 - Alumina Silica Catalyst Fines	Malfunction
10/27/03	FCCU 3	DDU Flare		0.9			124.0	17.1					Malfunction
10/27/03	FCCU 3	Flare 4		10.5			740.3	69.5	449.8				Malfunction
10/27/03	FCCU 3	Flare 3		10.4			1314.9	175.0					Malfunction

BP Products North America, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
10/27/03	Light Ultraformate Line #726	Line #726		4.0					2.4	2.4			Malfunction
10/26/03	J-475 Wet Gas Compressor	Flare 2		0.2	451.0		18.0	2.2					Malfunction
10/15/03	Regenerator	Electrostatic Precipitator Stack	54	0.5									Malfunction
10/14/03	101-J Recycle Gas Compressor	ULC 101-J recycle compressor		0.7	603.1	6.5	163.0	14.2	47.6				Malfunction
10/14/03	101-J Recycle Gas Compressor	DDU Flare		2.0	500			110	2000				Malfunction
10/8/03	FCCU2	Flare 2		1.8	221.0		24.0	3.4	103.1				Startup
10/8/03	FCCU2	ESP	31	0.1								alumina silica catalyst fine:3	Startup
10/7/03	FCCU2	Electrostatic Precipitator Stack	53	360.0								4.0 - Silica	Malfunction
10/7/03	Hydrogen 1	Hydrogen Flare		1.0			7,947.0	431.0	5.0				Startup
10/5/03	606 E-Recovery Tower	610 F-Underground Sump		12.0					10.0	10.0			Shutdown
10/5/03	606 E-Recovery Tower	ARU flare		24.0					17.0	17.0			Shutdown
9/24/03	CFHU	CRPII Flare		11.0	101.0	1.0	134.0	17.0	18.0				Startup
9/19/03	Portable Propane Burner	Portable Propane Burner		7.6			59.0	20.0	105.0				Maintenance
9/12/03	RDU	Flare 3		72.0	25.0		6.0	1.0	17.0				Startup
9/8/03	C-418 Recycle Gas Exchanger	UU4 Cooling Tower		696.0					71,397.0	4,624.0	310.0		Malfunction
9/6/03	Vacuum Tower	CRPII flare		48.0			31.0	4.5	2.0				Shutdown
9/3/03	CFHU	Flare 1		24.0			96.0	9.0	89.0				Shutdown
9/1/03	PS3B hotwell	Sewer		0.1		471.0							Malfunction
8/28/03	Coker A C101CB overhead cooler exchanger	Cooling Tower		223.0					7,608.0				Malfunction
8/25/03	FCU 1	Electrostatic Precipitator Stack		12.0			15,000.0						Maintenance
8/25/03	Universal Control Module	Electrostatic Precipitator Stack	99%	1.0								catalyst fines	Shutdown
8/23/03	K1301/2	PX2 Refrigeration Compressor		504.5				31.0	733.0				Malfunction
8/22/03	Hydrogen 2	Hydrogen Flare		29.2			9,674.0	668.0					Startup

BP Products North America, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
8/21/03	609E Benzene Tower	ARU Flare		24.0					20.0	20.0			Startup
8/18/03	FCCU2	EA-301 B & D exchanger bundles	80%	96.0	4,000.0			135.0	1,200.0				Maintenance
8/18/03	FCCU2	flare 2		3.0	4,000.0			135.0	1,200.0				Shutdown
8/16/03	100-J Compressor	ULC Flare		6.8	589.0		253.0	24.0	152.0				Startup
8/12/03	Ultracracker	ULC Flare		96.0	1,379.0		1,714.0	161.0	581.0				Startup
8/11/03	3/4" nipple on fuel gas line	Fuel Gas Line		9.3		2.0			1,969.0				Malfunction
8/11/03	RHU 500	CRPII flare		24.0				115.0					Startup
8/8/03	EA301-B or EA301-D	FCCU2 Cooling Tower		247.0					14,260.0				Malfunction
8/6/03	ARU A	609E Benzene tower		24.0					21.0	21.0			Shutdown
8/4/03	609 E Benzene tower	609 E Benzene Tower		24.0					107.0	107.0			Malfunction
8/4/03	ARU 609EA Benzene tower	ARU 609EA Benzene tower		24.0					20.0	20.0			Startup
7/30/03	FCCU 2	FCCU 2	80%	4.0			15,000.0						Shutdown
7/24/03	609 EA Benzene tower	609 EA Benzene Tower		21.0					55.0	55.0			Malfunction
7/22/03	Reactor	Electrostatic Precipitator Stack	42	0.2								alumina silica catalyst fine: 6	Malfunction
7/18/03	116F drum	Blowdown Stack		0.2		100.0			10.0	10.0			Malfunction
7/15/03	FCCU2	Electrostatic Precipitator Stack	42	0.5								alumina silica catalyst fine: 14	Malfunction
7/14/03	Sulfur Trains	SRU	25%	0.5	769.0								Malfunction
7/6/03	Regenerator Standpipe	ESP	75	0.1								Alumina Silica catalyst fine: 5	Malfunction
6/29/03	J-426 Gas Compressor	Flare 1		2.2	1,655.0		53.0	6.0	67.6				Malfunction
6/29/03	Cooling Chiller System	Chiller System Relief Valve		0.3								R-134A Refrigerant	Malfunction
6/25/03	FCCU 3	ESP	34	6.0								Alumina Silica Catalyst Fine: 108	Startup
6/24/03	FCCU3	Flare 3		25.9	1,826.0		351.0	33.0	866.0				Startup
6/24/03	FCU3	Electrostatic Precipitator Stack	42%	16.8			4,234.0						Maintenance
6/24/03	FCU 3	Flare 3		16.8			13,169.0	1,337.0	2,630.0				Maintenance

BP Products North America, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
6/24/03	FCCU 3	Electrostatic Precipitator Stack	31%	1.3									Shutdown
6/23/03	FCCU3	Flare 3		1.3	2,961.0			48.0	602.0				Shutdown
6/19/03	Equipment clearing	Flare 3		4.7				37.0	700.0				Maintenance
6/13/03	2/3 Gas Compressor	Electrostatic Precipitator Stack	47	0.2								alumina silica catalyst fine: 22	Malfunction
6/13/03	FCCU1	Flare 4		3.0			52.0	18.0	1,522.0				Startup
6/6/03	FCCU3	OMCC	51	0.2								alumina silica catalyst fine: 33	Malfunction
6/6/03	321-F depropanizer reflux drum	Flare 1		0.6	522.9		13.9	1.2	17.7				Malfunction
6/4/03	100-J Wet Gas Compressor	ULC 100-J Make Gas Compressor		21.2	223.0		1,310.0	242.0	1,702.0				Malfunction
6/4/03	100-J Wet Gas Compressor	ULC 100-J Make Gas Compressor		9.4	1,750.0		1,492.0	144.0	7,622.0				Malfunction
6/4/03	Ultracracker	ULC Flare		9.4	1,162.0	13.0	295.0	29.0	111.0				Startup
5/23/03	100 Series Butane Splitter	E102A and E102C		2,976.0					41,681.0				Maintenance
5/22/03	Coker/RDU	475-J Wet Gas Compressor		6.3	7,100.0								Startup
5/20/03	RGP line	ARU Flare		0.9			67.0	5.6	98.5				Malfunction
5/20/03	Coker Complex	Flare 2		3.0	187.0			1.1	6.0				Shutdown
5/19/03	Rich Amine	Inicinerator		8.0	2,965.0								Malfunction
5/18/03	Refinery Fuel Gas System	Refinery Furnaces		16.3	627.0								Malfunction
5/16/03	Refinery	Power Station 2		0.1		582.0			140.0				Malfunction
5/16/03	Refinery	ULC Flare		3.8	1,115.0		130.0	18.0	102.0				Malfunction
5/15/03	Airblower	Furnace		0.2	120.0								Malfunction
5/6/03	FCCU 1	Electrostatic Precipitator Stack	51	0.2								silica: 13	Malfunction
5/5/03	Sulfuric Acid Plant	Scrubber Stack		0.4	631.0								Malfunction
4/23/03	Blanking Plates	Tail Gas Scrubber	40	5.0								Sodium Hydroxide: 108	Malfunction
4/17/03	Refinery Fuel Gas System	Flare 3		3.0			191.0	18.0	215.0				Malfunction
4/16/03	FCCU1	ESP	80	5.0			50,000.0					alumina silica catalyst fine: 100	Startup
4/16/03	FCCU1	Flare 4		5.0	2,500.0			250.0	2,500.0				Startup

BP Products North America, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
4/16/03	FCCU1	Flare 4		2.9	422.0			3.3	15.0				Startup
4/15/03	Coker/RDU Wet Gas Turbine	Flare 2		0.6	1,194.0		31.0	4.0	44.0				Malfunction
4/15/03	Coker/RDU Wet Gas Turbine	Power 4		0.6	1,000.0			100.0	500.0				Malfunction
4/15/03	FCCU1	Flare 4		16.9	5,187.0			32.0					Malfunction
4/15/03	FCCU1	Power 4		16.9	1,000.0			16.5	500.0				Malfunction
4/14/03	FCCU2	Flare 2		168.0	100.0		23.0	2.2	55.0				Startup
4/11/03	Sulfuric Acid Plant	Tail Gas Scrubber Stack	60	48.0									Startup
4/11/03	Sulfuric Acid Plant	Tail Gas Scrubber	60	48.0									Startup
4/10/03	West inlet hopper	FCCU2	31%	3.0									Maintenance
4/9/03	504E vapor recovery tower	Flare 4		2.5	954.0								Malfunction
4/9/03	Sulfuric Acid Plant	Tail Gas Scrubber Stack	60	0.0									Shutdown
4/7/03	sulfur trains	Incinerator Stack		4.4	1,743.0								Malfunction
4/4/03	Heavy Straight Run Gasoline Exchanger	Blowdown stack		0.6					0.3	0.3			Maintenance
4/2/03	Hydrogen Unit #2	Hydrogen Flare		8.2			10,964.0	263.0					Startup
4/1/03	FCU 3 reactor/regenerator	ESP	63	0.3								alumina silica catalyst fine:45	Malfunction
4/1/03	Hydrogen Unit #2	Hydrogen Flare		1.2			375.0	19.0					Shutdown
3/31/03	Depropanizer Charge Pumps	Blowdown Stack		14.0		56.0			2,589.0	28.0			Malfunction
3/30/03	Alkylation Unit 2	Flare 3		5.5				65.0	1,000.0				Maintenance
3/26/03	FCCU2	Electrostatic Precipitator	55	0.2								silica: 7	Shutdown
3/26/03	FCCU2	ESP	51	440.0			5,131.0					Silica: 14	Startup
3/25/03	Sulfuric Acid Plant	tail gas scrubber stack	10%	1.0									Shutdown
3/24/03	Ultracracker	ULC Flare		14.6	538.0	6.0	199.0	228.0	4,327.0	11.0			Startup
3/24/03	Sulfuric Acid Plant	Tail Gas Scrubber Stack	60	9.5									Startup
3/24/03	Ultracracker	Flare 1		0.0				350.0	1,360.0				Startup
3/22/03	FCCU2	ESP	80	96.0			300,000.0					Silica: 300	Startup
3/22/03	FCCU2	Flare 2		23.0	970.0		9,162.0	3,175.0	29,391.0				Startup

BP Products North America, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
3/21/03	Hydrogen 2	Hydrogen Flare		11.9			5,817.0	340.0					Startup
3/18/03	Feed Valves	Electrostatic Precipitator	32	0.6								Particulate Matter: 19	Malfunction
3/18/03	E-504 Sour Water Vapor Recovery Tower	Tank-161		7.0		6.0			5,035.4	0.4			Malfunction
3/18/03	Sour Water Tank #159	tank #159		27.0		500.0							Malfunction
3/17/03	Hydrogen Unit #2	Hydrogen Flare		0.3			165.0	11.1					Shutdown
3/16/03	100J Compressor	Flare 3		2.0	500.0			32.0	223.2				Malfunction
3/16/03	100J Compressor	Flare 1		19.0	500.0		181.0	24.0	172.2				Malfunction
3/16/03	ARU B Extraction	ARU Flare		24.4					44.0	27.0			Startup
3/15/03	FCCU 2	Tank 223		0.5		0.6			523.7	0.2			Maintenance
3/13/03	Alkylation Unit 2	Alkylation Unit 2		97.7	35.0		1,497.0	141.0	4,837.0				Startup
3/12/03	Splitter Overhead Tower	ULC Flare		0.0				110.0	710.0	10.0			Malfunction
3/12/03	FCCU2	Flare 2		48.0	26.0		461.0	61.0	376.0				Shutdown
3/12/03	FCCU 2	Electrostatic Precipitator Stack	58%	2.0									Shutdown
3/11/03	FCCU 1	Splitter Tower Relief Valve		0.0					1,073.0	20.0			Startup
3/10/03	Combustion Air Blower	Electrostatic Precipitator	81	0.1								Silica: 7	Malfunction
3/10/03	FCCU1	Flare 4		Unknown				814.0					Startup
3/10/03	FCCU2	ESP	31	3.0								Alumina Silica Catalyst Fine: 7	Startup
3/8/03	Ultracracker	ULC Flare		3.1	682.0	7.0	544.0	51.0	18,079.0				Startup
3/8/03	Hydrogen 1	HU Flare		0.0			4,855.0	313.0					Startup
3/7/03	FCCU1	ESP	80	5.0			14,841.0					Alumina Silica Catalyst Fine: 25	Startup
3/5/03	Sulfuric Acid Plant	Sulfuric Acid Plant	80	6.0									Startup
2/28/03	FCCU2	ESP	30	0.0								Alumina Silica Catalyst Fine: 300	Startup
2/28/03	FCCU2	Flare 2		48.0	403.0		49.0	4.5	73.0				Startup
2/26/03	FCCU2	ESP	77	75.0								Alumina Silica Catalyst Fine: 172	Startup
2/26/03	FCCU2	Flare 2		3.0	2,500.0			220.0	150.0				Startup
2/24/03	FCCU2	FCCU2	45	48.0								alumina silcate: 140	Shutdown

BP Products North America, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
2/24/03	HRU	HRU		0.0			39.0	3.4	48.9				Shutdown
2/24/03	HRU	HRU		0.0			44.0	6.0	46.1				Shutdown
2/12/03	Blowdown Stack MOV	Coker C		0.3		188.0	4.0		689.0				Malfunction
2/12/03	Refinery Fuel Gas	Distillate Desulfurization Unit		3.8	474.0	5.0		14.0	96.2				Normal Operation
2/11/03	Refinery Fuel Gas System	Power Station No. 2		8.1	1,914.0								Regular Operations
2/10/03	ESP	FCCU ₃	30%	0.5									Maintenance
2/9/03	ARU-B	Aromatics Recovery Unit		0.5					51.5	8.0			Shutdown
2/8/03	CRPI/ CRPII Flares	Sulfur Recovery Unit		0.9	46,520.0		62.0	8.0					Malfunction
2/8/03	CRPI/ CRPII Flares	Sulfur Recovery Unit		10.6	3,794.0								Malfunction
2/8/03	CRPI/CRPII Flares	Sulfur Recovery Unit		11.8	90,779.0		121.0	16.0				ammonia: 101	Malfunction
2/8/03	401J Air Blower	Fluid Catalytic Cracking Unit 3	63	2.1								Silica: 200	Malfunction
2/8/03	FCCU ₃	Flare 3		1.9	1,739.0		2,242.0	210.0	7,120.0				Startup
2/8/03	FCCU ₃	Flare 2		1.5	464.0		11.0	1.1	19.2				Startup
2/8/03	FCCU ₃	Flare 1		1.5			972.0	91.0	3,185.0				Startup
2/8/03	401J Air Blower & Wet Gas Compressor	Fluid Catalytic Cracking Unit 3		1.1	2,216.0		1,213.0	114.0	4,815.0				Malfunction
2/8/03	401J Air Blower & Wet Gas Compressor	Fluid Catalytic Cracking Unit 3		0.8	446.0		229.0	58.0	828.2				Malfunction
2/8/03	401J Air Blower & Wet Gas Compressor	Flare 2		5.8	1,871.0		119.0	11.2	667.0				Malfunction
2/8/03	503E Stripper Tower	FCCU ₃		3.2	734.0		229.0	78.0	439.0				Startup
2/8/03	FCCU ₃	FCCU ₃	76	0.5								Silica: 115	Startup
2/6/03	Ultracracker	ARU		0.1					5.0	1.0			Shutdown
2/6/03	Ultracracker	Flare 3		7.5				187.0					Shutdown
2/6/03	Ultracracker	Flare 1		7.5				187.0					Shutdown
2/6/03	Ultracracker	ULC Flare		96.0		400.0		600.0	700.0	50.0			Shutdown
2/4/03	FCCU ₃	Pipestill 3A Unit		0.5	1,581.0		14.0	1.4	20.8				Malfunction

BP Products North America, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
2/4/03	FCCU3	refinery		2.5			486.0	46.0	1,119.0		3.0		Malfunction
		Rod Tower RV 12P		0.1		562.0			3,103.0				
TOTALS				8,469.4	219,856.7	6,721.1	498,955.2	18,951.5	294,206.2	6,650.4	313.0		

BP TEXAS CITY CHEMICAL PLANT B • Texas City, Galveston County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/30/04	PCU	PCU		0.3					19.8	19.3			Malfunction
1/30/04	PCU	PX2, MX, PCU		0.5	0.0		1,155.4	108.46					Malfunction
1/25/04	T201	polybutane flare		2.2				18.55					Malfunction
1/23/04	T201 overhead	T201		2.2					624.3				Malfunction
1/9/04	Styrene Unit	Styrene Flare		24.0				146	469.0	263.0			Shutdown
10/31/03	PX2	PX2 flare		12.0					567.0	10.0			Startup
10/28/03	Heat Exchanger	PX1 flare		21.3				150					Malfunction
10/27/03	PCU	polybutane flare		4.0				35	2,187.0				Malfunction
10/22/03	Exchanger TT-206	glycol tank vent		90.0					13.0				Malfunction
10/16/03	Cogen	PX1 styrene flare		2.0				1.351	10.3				Malfunction
10/6/03	TR-5 transformer			12.0				79.8	1,972.0	1,972.0			Malfunction
10/6/03	Ultra Former	Atmospheric vent		0.0								Continuous Release - benzene	Maintenance
9/19/03	PX2	Tank 1113		48.0					4,296.0			xylene	Shutdown
9/15/03	PX2	PX2 flare		48.0				180	3,210.0	10.0			Shutdown
8/6/03	Paraxylene Unit	flare		2.0				74	2,301.0	1.0			Malfunction
7/30/03	FCCU no 2	flare 2		4.0	6,000.0			135	1,600.0				Startup
7/25/03	ARU Benzene Tower	ARU flare		12.0					16.0	16.0			Shutdown
7/15/03	Crystallizer	Flare & Venting		12.0					195.3			xylene	Maintenance
6/30/03	Styrene	styrene		8.0					320.0	20.0			Maintenance
6/24/03	MC105	flare		72.0				2.46	69.0	69.0			Shutdown
6/20/03	Block Valve	olefins #1 flare		1.0			10.4	1.4	30.0		30.0		Malfunction
6/16/03	PX2	Px2		7.0				20	600.0				Malfunction
6/12/03	Floating Roof Tank	Floating roof tank		24.0					119.8				Malfunction
5/20/03	Styrene Unit Condensor & Reboiler	Styrene Unit		216.0				100	10,000.0	10,000.0		nitrogen 2200	Maintenance
5/20/03	Storage Tank	mixed xylene storage tank		132.0					15,362.0	2,833.0		xylene	Maintenance
5/13/03	Flange	styrene		0.5					10.0	10.0			Malfunction
5/13/03	Styrene Unit	Styrene Unit Flange		0.5					10.0	10.0			Malfunction
4/29/03	PX1	FU-351		17.0					107.0	17.0		xylene	Maintenance

BP Texas City Chemical Plant B, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
3/5/03	Refrigerant Compressor	Flare		0.0				10	5,100.0				Malfunction
3/5/03	Compressor	flare		196.1				39.11	751.7				Malfunction
2/27/03	T-201	Flare		8.0				10	100.0				Malfunction
2/23/03	Paraxylene Unit No. 3	crystallizer		4.0					138.4				Maintenance
TOTALS				982.5	6,000.0	0.0	1,165.8	1,111.1	50,198.6	15,250.3	30.0		

CITGO CORPUS CHRISTI REFINERY EAST PLANT • Corpus Christi, Nueces County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/30/04	ESP Stack	Flour Flare		24.0	170.7		4,070.2	563.6	11,675.5				Startup
1/29/04	#2 FCCU	#2 FCCU ESP Stack	66	7.5									Malfunction
1/17/04	Tank 2	Tank 2 Water Draw		3.3						6.6			Malfunction
1/17/04	#2FCCU	#2 FCCU ESP Stack	43	0.2									Shutdown
1/15/04	Unibon, SRU B Train, SRU Scot Unit	SRU Incinerator		192.0	8,293.0								Maintenance
1/15/04	Regenerator	#2 FCCU ESP Stack	43	0.2									Malfunction
1/11/04	Regenerator	#2 FCCU ESP Stack	45	0.1									Malfunction
1/9/04	Unibon Unit	Flour Flare		50.0	721.0	8.0	224.7	44.1	158.0				Shutdown
1/8/04	SMSS	Cumene Flare		25.0			40.0	5.6	32.0	15.0			Shutdown
1/5/04	SRU Incinerator	SRU Incinerator Stack		0.9	2,388.0								Malfunction
1/3/04	Regenerator	#2 FCCU ESP Stack	44	0.2									Malfunction
12/27/03	Auxiliary Amine Treating System	Acid Gas Flare		73.1	7,174.0	78.0							Malfunction
12/26/03	Calpine	Flour Flare		2.4	132.5	1.1	876.9	122.7	2,488.6				Malfunction
12/25/03	CO Boiler	CO Boiler Stack	35	0.4		43.5	1,356.0		128.6				Malfunction
12/25/03	Calpine power outage	Cumene Flare		1.9			186.2	36.6	21.0				Malfunction
12/25/03	Calpine	Flour Flare		8.0	127.3	1.4	161.8	22.4	191.3				Malfunction
12/25/03	East Plant Units and Javelina	Flour Flare		1.3	266.6	2.9	257.2	50.5	96.5				Malfunction
12/25/03	OH Compressor	Flour Flare		0.2	16.8	0.2	1.4	0.2	2.1				Malfunction
12/25/03	EP SRU	SRU		3.2	323.0								Malfunction
12/25/03	Calpine	Flour Flare		7.8	121.1	1.3	117.5	16.4	259.1				Malfunction
12/18/03	Benzene cooler 18-E-70	Cooling Tower 10		13.4					7,496.0	7,496.0			Malfunction
12/12/03	CO Boiler	CO Boiler Stack	100	5.4		3.7	150.0		6.3				Malfunction
12/12/03	Calpine shutdown	Flour Flare		2.1	572.6	6.2	49.0	6.8	69.8				Malfunction
12/12/03	Calpine shutdown	SRU Incinerator		4.2	2,246.0								Malfunction
12/12/03	Calpine shutdown	Flour Flare		0.8	0.3		26.6	4.9					Malfunction

Citgo Corpus Christi Refinery East Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
12/12/03	Calpine	Fluor Flare		8.0	135.5	1.5	172.1		189.0				Malfunction
12/11/03	SRU SCOT Unit	SRU Incinerator		3.4	3,126.0								Malfunction
12/8/03	Alkyl Low RVP Stabilizer Overhead Condenser	Cooling Tower #7		5.0					6,234.0				Malfunction
11/18/03	Vacuum Unit Heater	Vacuum Heater Stack	100	0.4	337.0								Malfunction
10/29/03	Main Column Flaring	Flour Flare		4.9	2,796.2	28.5	4,601.0	637.0	12,902.5				Malfunction
10/28/03	Regenerator Slide Valve	FCCU ESP Stack	100	0.3	79.0		29,198.0					Sweet gas oil: 143,386	Malfunction
10/28/03	Regenerator Slide Valve	Fluor Flare		0.8	164.6	1.8	128.0	17.7	341.8				Malfunction
10/11/03	Crude unit shutdown	Fluor Flare		3.9			254.0	49.8	103.8				Malfunction
10/4/03	Vacuum Hot Well	Fluor Flare		0.3	401.0	4.4		1.6					Malfunction
9/23/03	CO Boiler	CO Boiler Stack	100	6.7	40.0		4,708.0						Malfunction
9/23/03	CO Boiler	Fluor Flare	100	6.2	645.0		56.0	10.5					Malfunction
9/12/03	A and "B" Train Waste Heat Boilers	Incinerator Stack		5.6	7,495.0								Malfunction
9/12/03	Main Amine Regenerator	Acid Gas Flare		0.1	21.8	0.2							Malfunction
9/12/03	Sour Water Stripper	Sour Water Gas Flare		0.4	114.6	1.3						31.3 Ammonia	Malfunction
9/12/03	Hydrogen System Upset	Cumene Flare Stack		7.5				164.0					Malfunction
9/12/03	CCC Box	Flour Flare	100	0.3									Malfunction
9/2/03	CO Boiler	#1 FCCU Boiler Stack	86	1.3			3,568.0						Malfunction
8/13/03	#1 Clark Compressor	Fluor Flare		0.1	5.0								Malfunction
8/12/03	Flow meter	Slop oil line in tank		7.7					390.0	390.0			Malfunction
8/7/03	#1 FCCU Boiler Stack	#1 FCCU Boiler Stack	64	1.9									Malfunction
8/7/03	#1 FCCU Boiler Stack	#1 FCCU Boiler Stack	39	0.0									Malfunction
7/20/03	CO Boiler Stack	#1 FCCU Boiler Stack	59	0.8									Malfunction

Citgo Corpus Christi Refinery East Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
7/13/03	CO Boiler	FCCU CO Boiler Stack	55	14.3			43,471.0						Malfunction
6/13/03	CO Boiler	#1 FCC CO Boiler Stack	83	0.8			1,644.0						Malfunction
6/12/03	CO Boiler	#1 FCCU CO Boiler Stack	80	0.4			898.0						Malfunction
5/28/03	SRU Trains	SRU Incinerator		8.4	2,383.0								Malfunction
5/26/03	SCOT Unit	SRU Incinerator		6.5	2,265.0								Malfunction
5/13/03	SRU Claus Train	SRU Incinerator		2.5	22,444.0								Malfunction
5/13/03	Unibon Unit	Fluor Flare		0.8	895.0								Malfunction
5/1/03	Compressor	Compressor C5 Stack		185.0			2,758.0	1,641.0					Malfunction
4/14/03	SCOT Heater	EP SRU Incinerator		2.9	1,648.0								Malfunction
4/12/03	Compressor Suction Scrubber	Fluor Flare		2.8	494.0								Malfunction
3/29/03	Steam Generator	CO Boiler Stack	99	120.4			366,930.0						Malfunction
3/1/03	Regenerator	CO Boiler Stack	81	3.2									Malfunction
2/28/03	Absorber Tower Bottoms	Sulfur Recovery Unit		1.2	1,071.0								Malfunction
2/18/03	Main Regeneration Level	Sour Water Gas Flare		0.5	816.1	8.9							Malfunction
2/12/03	Fractionator	Flour Flare		2.3				159.0	143.7	12.5			Malfunction
2/7/03	Regenerator	CO Boiler Stack	52	1.6									Malfunction
2/18/03	Main Regeneration Level	Acid Gas Flare		0.4	3,322.0	36.7							Malfunction
0.0													
TOTALS				846.7	73,251.7	229.6	465,903.6	3,554.4	42,929.6	7,920.1	0.0		

DOW TEXAS OPERATIONS FREEPORT • Freeport, Brazoria County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/20/04	R-44 Acetylene Reactor Beds	Elevated & Ground Flares		22.8			9,149.5	1,438.1	8,642.5	17.1	7.0		Maintenance
1/15/04	Header System from Exchanger	Relief, header system		0.1					210.0	210.0			Malfunction
12/31/03	Prop. Dryer BED.	Flare		72.0			191.0	38.0	260.0				Maintenance
12/22/03	Plant Process Adjustment	FS1000 -Ground Flare		24.0	0.05		160.0	31.0	116.0				Malfunction
12/19/03	Power Failure	FS1000		48.0	0.56		1,263.0	248.0	581.0				Malfunction
12/18/03	Ethylene Compressor	C-141-3		2.7					279.0				Malfunction
12/14/03	MB Line	Portable Flare		148.0					220.0				Maintenance
12/12/03	Well DW11	Portable Flare		14.0			325.7	163.0	600.0				Maintenance
12/11/03	Reactor R-402	Flare		24.0			45.0	9.0	67.0				Startup
11/24/03	Pipe	Fugitive		0.8								617 biphenyl; 1924 biphenyl oxide	Malfunction
11/17/03	Cyclone	Flare		48.0	0.00		170.0	34.0	242.0				Startup
11/10/03	Liquefaction Plant Compressor	Tailgas Line		1.9								87.2 Chlorine	Malfunction
10/25/03	Reactor Hydraulic Pump	Reactor		0.0					576.0				Malfunction
10/25/03	R-401 Reactor	Y 702 Drying Bed Flare		96.0	0.20		687.0	135.0	595.0				Malfunction
10/24/03	Refrig. Sys.	Leak		24.0								HCFC 2300 lbs	Malfunction
10/23/03	Reactor Ground Flare	Flare		25.3					28,385.0	24.1	10.0		Malfunction
10/23/03	R-45	Elevated Flare		25.3			3,533.8	504.5	4,583.7	3.9	1.6		Malfunction
10/23/03	R-45	Ground Flare		25.3			21,882.9	3,124.5					Malfunction
10/9/03	Reactor	Flare		120.0			1,345.0	263.0	1,375.0				Malfunction
10/8/03	R-60A	Flare		1.0					103.5	0.5	0.1		Malfunction
10/7/03	Prop. Dryer Bed	Flare		24.0	0.15		297.0	58.0	98.0				Maintenance
10/4/03	Extruder	Flare		24.0	0.52		1,275.0	250.0	698.0				Malfunction
10/3/03	Well BW-37	Portable Flare		9.0					450.0				Maintenance
10/2/03	Polyethylene #4 Plant Compressor	Vent		0.0					1,900.0				Malfunction
9/29/03	Ethylene Drying Bed	Vent		10.0					133.0				Malfunction

Dow Texas Operations Freeport, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
9/26/03	Extruder	Flare		24.0	0.02		172.0	34.0	220.0				Malfunction
9/15/03	R-401 Reactor	Flare		24.0	0.98		358.0	70.0	310.0				Malfunction
9/12/03	Hydrogen Drying System Temperature Transmitter	Flare		3.8			1,046.9	145.0	1,473.1				Malfunction
9/10/03	Prop Drying Bed	Flare		72.0	0.32		779.0	153.0	428.0				Malfunction
9/2/03	C-201 Compressor	Leak		0.0				22.8	1,900.0				Malfunction
8/19/03	Prop. Bed	Flare		96.0	0.33		878.0	172.0					Maintenance
8/19/03	Propane Bed	Flare		102.0					533.0				Maintenance
8/18/03	Compressors C-301 A/B	Flare		14.0	0.60		152.0	30.0	82.0				Startup
8/16/03	Quench Pump	Fugitive Area No. 2		0.3					274.0			Vinyl chloride 372.7	Malfunction
8/11/03	Lt. Hydro-Carbon	Flare FS-1000		24.0	0.05		185.0	36.0	150.0				Malfunction
8/11/03	Ethylene Recovery System	Ground Flare		1.1			150.2	20.8					Malfunction
8/4/03	Reactor	Fugitive		52.0					52.2	52.2			Maintenance
8/3/03	Y-702 B&D Regen	Ground Flare		72.0	0.17		483.9	95.0					Malfunction
8/3/03	Y-702 Regen.	Flare		24.0					528.0				Malfunction
8/1/03	R-402	Flare		24.0	0.03		328.0	64.0	419.0				Maintenance
7/31/03	C-20 (lightening)	Vent		0.1					1,100.0				Malfunction
7/23/03	Flare	Flare		0.9			0.4		24.9	0.1	0.4		Malfunction
7/13/03	Plant Wide	Flare		192.0	0.60		2,204.0	433.0	1,928.5				Maintenance
7/10/03	AR-1 Pressure Transmitter	Fugitives		0.3					99.2	99.2			Malfunction
7/10/03	T-100 Overhead	Leak		4.3								Epichlorohydrin 750	Malfunction
7/7/03	Oil Sep. Line	Leak		74.8								5950 Freon	Malfunction
7/6/03	Filter	Flare		24.0	0.01		318.9	62.6	453.1				Malfunction
6/21/03	C-501 Replacement	Flare		336.0	3.02		7,180.0	1,409.0					Startup
6/13/03	Reactor Rupture Disks	Fugitive		0.1					17,331.0			Acrylic Acid 454	Malfunction
6/11/03	Refrig Unit	Fugitive		100.0								957 R-134 A Refrig	Malfunction
6/9/03	Power Out	Flare		48.0	0.01		176.0	36.0	126.0				Malfunction
6/7/03	Exchanger Inlet Expansion Joint	Fugitive		0.0					138.3			Vinyl Chloride .052	Malfunction

Dow Texas Operations Freeport, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
6/7/03	R-216 Reactor	Vent		0.1					441.0				Malfunction
5/30/03	Huntsman Plant Upset	Leak		24.0	0.00		0.9	52.6	0.8				Malfunction
5/19/03	Reactor	Flare		240.0	0.19		1,630.6	320.0					Malfunction
5/18/03	C145B Suction Valve	C-145B Suction Valve		0.2					1,070.0				Malfunction
5/16/03	HPS	Vent		0.0					2,353.0				Malfunction
5/14/03	Hyper-Comp. C-101	Vent		0.0					1,500.0				Malfunction
5/3/03	Throx (upset at Hunstman)	Chloropyridine		1.0	0.00		0.5	22.8	0.3				Malfunction
4/21/03	Plant Wide	Flare		216.0			1,887.0	370.0	1,583.0				Maintenance
4/20/03	Reactor	Flare		0.0					400.0				Malfunction
4/19/03	Gas Pipe	Leak		2.0					540.5				Malfunction
4/7/03	High Pressure Separator	Vent		34.0									Malfunction
4/6/03	Reactor	Vent Stack		0.0					1,900.0				Malfunction
4/3/03	Valve	Leak		0.0					1,202.0				Malfunction
4/2/03	Catalyst Complex Spill	Catalyst Complex Recycle Pump		0.1					31.5	31.5			Malfunction
3/31/03	Plant	Process Vent	5%	0.8									Startup
3/30/03	C-10 Compressor	Flare		5.1					4,745.5	94.9	115.0		Malfunction
3/20/03	Furnace	Elevated & Ground Flares		3.6			3,175.9	439.7	4,467.1				Malfunction
3/18/03	AD-4122	Scrubber		9.5					37.3	37.3			Malfunction
3/17/03	R-101	Valve		0.3					63.0				Malfunction
3/13/03	C-10 Compressor	Elevated & Ground Flares		15.0			68,047.6	11,015.5	67,542.7	1,813.8	1,280.6		Malfunction
3/12/03	BG400 Reactor	Vent		1.8					5,795.0				Malfunction
3/8/03	Leaking Line	Leak		1.7					345.0	15.0	8.0		Malfunction
3/5/03	Steam Shortage	Flare		28.5			40,064.5	5,604.7	35,749.2	161.7	307.5		
2/24/03	Compressor	Flare	21%	0.8			1,690.8	282.0					Malfunction
2/24/03	LHC Facility	Flare		528.0			5,306.0	1,041.2	6,952.0				Startup
2/17/03	Plant	Flare	5%	1.7									Startup
2/13/03	C-20	Elevated Flare	15%	127.7		3.4	42,480.9	7,081.1	272,944.3	2,204.7	1,621.9	Biphenyl: 1111.9; H: 2164.5	Malfunction
2/9/03	C-10 Compressor			10.9			6,537.5	905.0	5,897.0	180.3	218.4		Malfunction

Dow Texas Operations Freeport, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
2/1/03	R-203A	Vent		0.4								Epichlorohydrin 250	Malfunction
Unknown	C-20	Ground Flare	15%	0.0		9.0	83,476.9	16,516.5	85,351.8	6,226.8	4,538.4	Biphenyl: 3201.1; H: 7384.7	Malfunction
TOTALS				3,357.0	7.81	12.4	309,036.3	52,730.4	781,596.9	11,172.9	8,108.9		

EQUISTAR CHEMICALS CHANNEL VIEW COMPLEX • Cannelview, Harris County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/20/04	decoking motor	F3415 MOV		0.2						1	2.0		malfunction
1/19/04	quench exchanger	F4415		0.9					11.0	4	7.0		malfunction
12/24/03	tank 4455	tank 4455		4.8					557.0	6			malfunction
12/20/03	compressor			1.8								275 freon	malfunction
12/17/03	hydrogen valve	OP2 Flare		0.3			1,600.0	231.0	1,900.0				malfunction
12/14/03	MAPD converter	OP1 flare		2.3			1,800.0	232.0	2,630.0			liquid ethylene: 7	malfunction
12/11/03	lube oil turbine	flare		4.8			8,500.0	1,160.0	11,803.0	1,000	590.0		malfunction
12/11/03	pipeline	OP2 flare		0.1			150.0	29.5					malfunction
12/8/03	propane bullet	OP2 flare		2.3			1,400.0	210.0	2,100.0				malfunction
11/24/03	OPI startup	OP1 flare		216.5					6,800.0				startup
11/13/03	pressure valve	OP1 flare		113.8			750.0	145.0					malfunction
11/12/03	OPI startup	OP1 flare	25%	216.5			8,000.0	1,160.0	7,562.0	10.0	30.0	Hydrogen: 700	startup
11/8/03	pipeline repair	OP2 flare		6.9			200.0	2,320.0				Hydrogen: 6600	maintenance
10/22/03	tank	east plant flare		11.0				50.0	1,428.0		7.0		malfunction
10/18/03	refrigerant system	olefins flare		0.5			340.0	50.0	480.0				malfunction
10/13/03	tank	relief valve		70.0					7,980.0		80.0		malfunction
10/12/03	OPI unit	OP2 flare		22.1			1,600.0	450.0				Hydrogen: 500	shutdown
10/11/03	feed line	OP1 flare		8.0				50.0	300.0	100			malfunction
10/6/03	OPI turnaround	paiting activity fugatives		1,048.0					3,050.0	400.0		Particulate Matter: 150;	shutdown
10/6/03	OP1 unit	TK-3455		312.0				42.0	15.0				maintenance
10/2/03	heat exchanger	OP1 cooling tower		10.8					4,326.0				malfunction
10/2/03	recovery tower	recovery tower		1.5					7,154.0	43			malfunction
10/1/03	OPI flare tip	OP2 flare		912.0			175.0	26.0	116.0	50.0			maintenance
9/30/03	acetylene converter	OP2 flare		0.1			172.0	24.0	194.0				malfunction
9/30/03	compressor	compressor c-3202		0.8								360 freon	malfunction
9/30/03	C4 recovery	East plant flare		20.0			21.0	3.0	60.0		60.0		shutdown
9/30/03	OPI deinventory	OP1 flare	25%	340.0			5,800.0	810.0	4,801.0	1.0	10.0		shutdown
9/28/03	OPI-decoking	D-3422		125.0			15,000.0					Particulate Matter: 500	shutdown
9/20/03	charge gas compressor	OP2 flare		48.0			400.0	75.0	42.0	1.0	4.0		

Equistar Chemicals Channel View Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
9/14/03	C-4 tower	east plant flare		69.8			360.0	50.0	1,075.0		455.0	acetonitrile: 180	shutdown
9/1/03	tank 3	PSV-08145		0.1					6,986.0		1,511.0		malfunction
8/28/03	F-4405 heater	F-4405 heater	15	0.3									malfunction
8/25/03	pressure valve	OP1 flare		24.0				60.0	840.0				malfunction
8/19/03	tank 3912	tank 3912		181.0			85.0	20.0	630.0	200	3.0	Liquid Ethylene: 6; Hydrogen: 55	malfunction
8/12/03	cooling tower leak	OP1 colling tower		1,536.0					22,480.0	4,650	150.0	chloroform: 800	malfunction
8/8/03	instrument loss	OP2 flare		50.4			5,555.0	792.0	7,970.0	688	526.0	Hydrogen:247	malfunction
7/22/03	MAPD converter	OP1 flare		0.3			260.0	37.0	380.0				malfunction
7/20/03	valve	misc. fugitive sources		0.3					120.0		20.0		malfunction
7/18/03	tank 3912	tank3912		13.5					110.0	50			malfunction
7/15/03	a-train	OP2 flare		0.1				30.0	300.0		35.0		startup
7/11/03	loading rack	Tk-401 caustic wash		0.4					641.0			186 sulfuric acid	malfunction
7/10/03	3701 reactor	R-3701		0.1					82.8	0.2			malfunction
7/5/03	relief valve	OP1 flare		2.0			130.0	30.0	400.0				malfunction
6/28/03	c-4 tower	East plant flare		8.3			12.0	3.0	35.0		35.0		startup
6/23/03	vent compressor	East plant flare		107.0			7,835.0	1,540.0	22,320.0		11,420.0		malfunction
6/23/03	flex-c train	OP1 flare		18.0			592.0	82.0	859.0				malfunction
6/18/03	heat exchanger	East plant cooling tower		9.0					4.0		4.0	acetonitrile: 2000	malfunction
6/18/03	flex unit dimer loop	OP2 flare		24.0				20.0	408.0				shutdown
6/1/03	refrigerant copmressor	East plant flare		15.0			60.8	7.8	126.0				malfunction
5/28/03	OPI Flare	OP1 flare		2.6					242.0	55	10.0		malfunction
5/26/03	heat exchanger	OP2 cooling tower		52.5					3,070.0				malfunction
5/23/03	feed pump	flare		1.2			1,000.0	150.0	1,480.0				malfunction
5/17/03	heat exchanger	OP2 cooling tower		5.0					3,000.0				malfunction
5/16/03	OPI flare pilot	OP1 flare		4.0					214.0	50	8.0		malfunction
5/7/03	temp. indicator	OP2 flare		2.5			900.0	125.0	1,300.0				malfunction
5/5/03	MAPD converter	OP1 flare		0.1			100.0	15.0	145.0				malfunction
5/5/03	pump P-4350	OP2 flare		2.0			500.0	64.0	720.0				malfunction
5/2/03	OP2 piping	Op2 flare		1.3			4,000.0	600.0	5,000.0				malfunction
5/1/03	CH startup	East plant flare		72.0			40.0	10.0	55.0		45.0		maintenance

Equistar Chemicals Channel View Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
4/28/03	OP2 compressor	olefins flare		0.1			345.0	50.0	425.0	70	40.0	liquid ethylene: 140	malfunction
4/19/03	exchanger	OP2 flare		1.3			460.0	90.0	850.0				malfunction
4/10/03	OP2 turnaround	OP2 flare		470.0			40,000.0	5,000.0	69,000.0		1,000.0		malfunction
4/10/03	OP2 Unit	4.80E+02	4%	480.0			30,000.0	4,000.0	24,600.0	600.0	300.0		startup
4/6/03	distillation tower	East plant flare		0.1				22.0	325.0		130.0		malfunction
3/24/03	equistar tank-3910	OP1 flare		2.2			13.0	3.0	39.0		19.0		malfunction
3/19/03	reboiler inlet	benezene		0.7					238.0	68		C9 aromatics: 19; C9+: 47	malfunction
3/19/03	PSV-40112	olefins 1 flare		16.0				11.0	234.0	54		C9 aromatics: 1	malfunction
3/15/03	tank-3910	olefins 1 unit		9.3			78.0	15.0	233.0		97.0		malfunction
3/13/03	painting through plant	painting through plant		1,152.0					1,600.0	200.0		particulate matter: 100;	maintenance
3/11/03	c-5 recovery unit	C5 recovery unit		169.3			270.0	60.0	775.0				startup
3/10/03	olefins unit 2	olefins unit 2		120.0								mercury: 1.6	malfunction
3/10/03	alky flare	flare		0.0				2.0	25.0				malfunction
3/7/03	OP2 unit	tank 48104		12.0					10.0				maintenance
3/6/03	methanol unit	OP1 flare		8.0			2,018.0	163.0					startup
3/3/03	tank 3911	tank 3911		14.1					10.0	2.0			malfunction
3/1/03	C4-C5 recovery unit	C4-C5 recovery unit		1,080.0						5,000.0			shutdown
2/16/03	OP2 turnaround	OP2 flare		353.0			17,200.0	3,400.0	25,008.0	890.0	225.0		shutdown
2/15/03	Op2 unit	OP2 unit		1,176.0			15,000.0					Particulate Matter: 500	shutdown
2/15/03	OP2 hydroblast	hydroblasting and vessel opening		312.0					2,000.0				maintenance
2/15/03	tank 4455	TK-4455		533.0				35.0	315.0	40.0			maintenance
2/15/03	c-4 west train	C4 recovery unit	21%	74.8			345.0	50.0	1,055.0		840.0		shutdown
2/14/03	hydrogen stream	OP1/OP2		1.8			20.0	65.0					malfunction
2/12/03	hydrogen stream	OP1/OP2		1.9			30.0	85.0					malfunction
2/3/03	A train	OP2 flex unit		6.0				50.0	500.0				startup
TOTALS				11,696.8	0.0	0.0	173,116.8	23,804.3	271,543.8	14,233.2	17,663.0		

EQUISTAR CHEMICALS CHOCOLATE BAYOU COMPLEX • Alvin, Brazoria County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/30/04	Olefins	Main Flare		0.3			218.0	31.0	257.0				Malfunction
01/06/04	Boiler	Main Flare		0.4			86.0	12.2	121.0	7	16.0		Malfunction
12/09/03	Boiler	Main Flare		7.5			134.0	50.0	192.0	22	24.0	Hydrogen: 123	Malfunction
12/09/03	Boiler	Hydrocarbons Flare		17.5			221.0	55.0	651.0		106.0	Hydrogen: 99	Malfunction
11/24/03	391H1-1	olefins flare		9.7			1,516.0	210.0	2,080.0	66	142.0		Malfunction
11/24/03	Boiler	hydrocarbons flare		77.7			312.0	43.2	167.0		75.0		Malfunction
11/02/03	Olefins	Main Flare		0.8			87.0	12.0	120.0		8.0	Hydrogen: 1	Malfunction
10/06/03	Exchangers 95E7 1&2	Olefins Flare		269.5			1,728.0	239.0	2,160.0		160.0		Malfunction
10/4/03	Hydrogen System	Main Flare		0.3			199.5	27.6	289.0				Malfunction
10/02/03	Boiler	Main Flare		30.4			40,560.7	5,615.8	55,823.0	2,652	6,702.0		Malfunction
10/02/03	Boiler	Hydro Flare		44.4			1,043.6	144.5					Malfunction
09/29/03	93A2	Main Flare		48.2			28.0	4.3	1.0			Hydrogen: .5	Startup
08/20/03	Ethylene Compressor	Olefin Flare		35.9			16,617.0	2,301.0	21,692.0	438	857.0		Malfunction
08/18/03	PSV	Hydrocarbons Flare		2.3			16.3	2.3	47.0		19.0		Malfunction
7/15/03	Boiler	Hydro Flare		39.8			661.0	92.0					Malfunction
07/15/03	Boiler	Main Flare		74.6			10,171.0	1,409.0	13,680.0	711	868.0		Malfunction
07/02/03	Ethylene Reactor	Olefins Flare		1.0			884.0	124.0	1,043.0				Malfunction
05/21/03	80D16	Hydrocarbons Flare		0.5			38.0	6.0	140.0		140.0		Malfunction
04/24/03	Olefins	Main Flare		120.0			20,608.0	2,853.0	25,288.0	105	305.0		Startup
4/14/03	Hydrocarbons & Olefins	Hydrocarbons Flare		248.1					786.0	252	108.0		Malfunction
4/14/03	Hydrocarbons & Olefins	Olefins Flare		0.0			6,157.0	853.0	8,197.0	182	576.0		Malfunction
03/23/03	Steam Gen. Facility	Steam Gen. Facility		0.2								Halon: 300	Maintenance
TOTALS				1,277.2	0.0	0.0	101,286.1	14,084.9	132,734.0	4,435.0	10,106.0		

EQUISTAR CHEMICALS LA PORTE COMPLEX • Deer Park, Harris County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
12/28/03	AB3	AB3 Flare		10.0					0.2				Malfunction
12/13/03	Olefins	QE1 process vents to main flare		60.0					8,149.8	0		Hydrogen: .3; C3s:.1	Startup
12/13/03	Olefins	QE1 Elevated Flare		0.0			11,365.0	2,186.0					Startup
12/13/03	Olefins	ARU Flare 3050B		0.0			446.0	85.4					Startup
12/13/03	Olefins	Acetylene Recovery Unit Vents		0.0					705.3				Startup
12/11/03	PGC	Elevated Flare		27.0			10,492.0	1,995.0	226.0				Malfunction
12/11/03	PGC	QE1 Unit		0.0					7,088.1	152	184.0	C3s - 131	Malfunction
12/11/03	PGC	Acetylene Recovery Unit Vents		27.0					226.0				Malfunction
12/11/03	PGC	ARU Flare		0.0			119.0	22.7					Malfunction
12/9/03	Q1 Unit	HS Flare		48.2			271.0	47.7	509.1			Hydrogen: 1	Startup
12/6/03	ABIII	AB3 Unit		0.0					461.0				Shutdown
11/29/03	ABIII	AB3 Unit		0.0					934.0				Malfunction
11/24/03	ABIII	AB3 Unit		0.0					934.0				Malfunction
11/21/03	Olefins depropanizer	QE1 Elevated Flare		14.5			3,501.0	674.0					Malfunction
11/21/03	Olefins Depropanizer	QE1 Unit Process Vents		0.0					3,294.0			Misc. C3: 73	Malfunction
11/18/03	RV3025	UT Ethylene Meter Station Fugitives		0.0					533.0				Malfunction
11/9/03	Pv-5303	UT Ethylene Meter Station Fugitives		0.1					8,648.0				Malfunction
11/9/03	Secondary Compressor	AB3 Unit Vents		0.0					892.0			VTMOS: 19	Malfunction
11/6/03	Secondary Compressor	AB3 Unit		0.0					892.0			VTMOS: 19	Malfunction
11/4/03	ARU Recycle Blower	ARU Vent		3.0					93.2				Maintenance
11/4/03	ARU Recycle Blower	ARU Flare 3050B		0.0			63.0	11.1					Maintenance
10/28/03	AB3	AB3 Unit		14.0					1,016.5				Malfunction
10/8/03	Reactor	Q1 Flare		2.6			117.1	20.6					Malfunction
10/8/03	Reactor	HS Flare		18.5					298.0			Hydrogen: 1	Malfunction
9/30/03	RV3025	UT Ethylene Meter Station Fugitives		0.1					3,504.0				Malfunction

Equistar Chemicals La Porte Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
9/15/03	Q1	HS Flare		19.2			95.0	17.0					Startup
9/15/03	Q1	HS Flare		19.2					233.0			Hydrogen: 1	Startup
9/6/03	Q1	Q1 Process Flare		48.0					405.0				Startup
9/5/03	Q1	Q1 Flare		67.6			155.1	27.4					Startup
9/1/03	6403-RV1	Relief Valve		2.5					1,280.0		599.0		Malfunction
9/1/03	6403-RV1	Elevated Flare		2.7			342.5	60.3					Malfunction
8/29/03	Q1	Q1 Flare		27.7					641.0			Hydrogen: 3	Startup
8/29/03	Q1	Q1 Flare		0.0			305.0	54.0					Startup
8/14/03	Olefins	Main Flare		245.0					5,402.0	8	20.0	Hydrogen: 352	Startup
8/14/03	Olefins	ARU		0.0					773.0				Startup
8/14/03	Olefins	ARU Flare 3050B		0.0			572.0	101.0					Startup
8/14/03	Olefins	QE1 Elevated Flare		0.0			8,796.0	1,692.0					Startup
7/16/03	Q1 Gas Phase Reactor	Q1 Process		0.1					6,911.0			Hydrogen: 24	Malfunction
7/11/03	Reactor	HS Flare		23.2					227.0				Malfunction
6/27/03	AB3 Reactor	AB3 Unit		0.0					1,316.0			Particulate Matter: 163	Malfunction
6/18/03	Olefins	Acetylene Recovery Unit Vents		7.9					577.0				Maintenance
6/18/03	Olefins Cooling Tower	Chlorine cylinder		0.2								Chlorine: .21	Malfunction
6/7/03	Olefins Unit	ARU Flare 3050B		968.0			324.0	57.0					Shutdown
6/7/03	Olefins Unit	Acetylene Recovery Unit Vents		0.0					372.0				Shutdown
6/7/03	Olefins Unit	QE1 Elevated Flare		0.0			14,703.0	2,827.0					Shutdown
6/7/03	Olefins Unit	QE1 Process Vents to Main Flare		0.0					12,964.0	71	114.0		Shutdown
5/15/03	Secondary Compressor	AB3 Flare		0.3					3.5				Malfunction
5/9/03	Olefins Furnaces	QE1 Elevated Flare		3.5			244.0	47.0	229.0		9.0		Malfunction
5/5/03	Q1	Flare		20.1			114.1	20.1	297.0				Shutdown
4/24/03	Secondary Compressor	AB3 Unit		0.2					721.0			Particulate Matter: 88	Malfunction
4/24/03	Secondary Compressor	AB3 Unit		0.0					809.0				Malfunction
4/13/03	RV 3030	UT Ethylene Meter Station Fugitives		19.5					20,272.0				Malfunction

Equistar Chemicals La Porte Complex, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
2/12/03	AB3	AB3 Flare		6.0			59.0	11.0	107.0				Maintenance
2/9/03	Q1	Q1 Polyethylene		48.0			559.1	98.4	1,000.0				Startup
TOTALS				1,753.8	0.0	0.0	52,642.9	10,054.7	97,943.7	231.3	926.0		

EXXON MOBIL BAYTOWN FACILITY • Baytown, Harris County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/21/04	control valve	flare 11		4.7	2.0		110.0	21.0	35.0				malfunction
1/21/04	control valve	flare 14		0.0	2.0		110.0	21.0	35.0				malfunction
1/17/04	cold feed unit	flare 3		1.0	515.0	6.0	72.0	15.0	141.0				malfunction
1/17/04	cold feed unit	flare 4		0.0	515.0	6.0	72.0	15.0	141.0				malfunction
1/17/04	cold feed unit	flare 5		0.0	515.0	6.0	72.0	15.0	141.0				malfunction
1/17/04	cold feed unit	flare 6		0.0	515.0	6.0	72.0	15.0	141.0				malfunction
1/12/04	compressor C-74	safety CLO-369		0.2					747.0				malfunction
1/2/04	hydroformer	flare 26		1,329.0	5,479.0	2.0	86,196.0	2,268.0				total sulfur: 105	maintenance
12/30/03	metering station 60	metering station 60		3.0					1.0				malfunction
12/29/03	Baytown olefins plant steam system	flare 26		175.7	3,930.0	1.0	61,827.0	1,626.0				total sulfur: 75	malfunction
12/29/03	Baytown olefins plant steam system	flare 3		0.0	5.4	0.1	262.0	46.0	424.0				malfunction
12/29/03	Baytown olefins plant steam system	flare 4		0.0	5.4	0.1	262.0	46.0	424.0				malfunction
12/29/03	Baytown olefins plant steam system	flare 5		0.0	5.4	0.1	262.0	46.0	424.0				malfunction
12/29/03	Baytown olefins plant steam system	flare 6		0.0	5.4	0.1	262.0	46.0	424.0				malfunction
12/26/03	D-801 vent	D-801 vent		5.3			522.0		5,111.0				malfunction
12/25/03	flare gas compressor C-2	C-2 atmospheric vent		0.1			3.0		709.0				malfunction
12/25/03	gas recovery compressor C-2	flare 15	100	1,014.0	4,616.0	50.0	8,709.0	1,559.0	21,589.0				maintenance
12/25/03	gas recovery compressor C-2	flare 16	100	0.0	4,616.0	50.0	8,709.0	1,559.0	21,589.0				maintenance
12/20/03	flare 20 pilot	flare 20		0.8					98.0				malfunction
12/9/03	hydrogen compressor drum	flare 17		0.2	0.1		161.0	30.0	3.0				malfunction
12/9/03	hydrogen compressor drum	flare 20		0.0	0.1		161.0	30.0	3.0				
11/26/03	gas compressor recovery C-001	flare 17		672.4	0.8		10,393.0	1,910.0	14,368.0				maintenance

Exxon Mobil Baytown Facility, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
11/26/03	gas compressor recovery C-001	flare 20		0.0	0.8		10,393.0	1,910.0	14,368.0				maintenance
11/25/03	C boiler shell	FCCU ₃ C Boiler shell		303.5	1,290.0			291.0				PM: 392; SO ₃ : 22	malfunction
11/19/03	pilot gas flow	flare 17		0.5		0.0			1,927.0				malfunction
11/18/03	flare gas recovery compressor	flare 17		44.3			1,446.0	266.0	1,999.0				malfunction
11/18/03	flare gas recovery compressor	flare 20		0.0			1,446.0	266.0	1,999.0				
11/15/03	pipe still 8	flare 26		160.0	2,422.0	1.0	38,095.0	1,002.0				sulfur: 46	maintenance
11/10/03	CLEU ₂ twr T-7	flare 3	100%	34.5	5,930.0	64.0	827.0	151.0	1,625.0				malfunction
11/10/03	CLEU ₂ twr T-7	flare 4	100%	0.0	5,930.0	64.0	827.0	151.0	1,625.0				malfunction
11/10/03	CLEU ₂ twr T-7	flare 5	100%	0.0	5,930.0	64.0	827.0	151.0	1,625.0				malfunction
11/10/03	CLEU ₂ twr T-7	flare 6	100%	0.0	5,930.0	64.0	827.0	151.0	1,625.0				malfunction
10/24/03	compressor	flare 17		6.8	2.0		696.0	128.0	962.0				malfunction
10/24/03	compressor	flare 20		0.0	2.0		696.0	128.0	962.0				malfunction
10/18/03	pump seal	J4A pump seal		0.3					346.0				malfunction
10/16/03	flexicoker	flare 26		637.0	18,857.0	7.0	296,643.0	7,801.0				sulfur: 360	maintenance
10/13/03	flexicor unit	flare 25		134.1	59,348.0	643.0	6,065.0	1,115.0	8,021.0				malfunction
10/13/03	flexicor unit	flare 26\		0.0	48,727.0	528.0	6,366.0	1,171.0	17.0				malfunction
10/13/03	flexicor unit	WHB 301 bypass stack		0.0	1.0		101.0	553.0	29.0				malfunction
10/7/03	pipe still 8	flare 17		0.2	78.0	2.0	105.0	19.0	261.0				malfunction
10/7/03	pipe still 8	flare 20		0.0	78.0	2.0	105.0	19.0	261.0				malfunction
10/1/03	compressor C-74	atmospheric safety valve CI 0352		4.3					7,589.0				malfunction
10/1/03	compressor C-74	atmospheric safety valve CI 0369		0.0					411.0				malfunction
10/1/03	compressor C-74	flare 17		0.0	127.0	2.6	870.0	160.0	1,203.0				malfunction
10/1/03	compressor C-74	flare 20		0.0	127.0	2.6	870.0	160.0	1,203.0				malfunction
10/1/03	compressor C-74	flare 3		0.0	1,766.0	19.0	628.0	116.0	1,500.0				malfunction
10/1/03	compressor C-74	flare 4		0.0	1,766.0	19.0	628.0	116.0	1,500.0				malfunction
10/1/03	compressor C-74	flare 5		0.0	1,766.0	19.0	628.0	116.0	1,500.0				malfunction
10/1/03	compressor C-74	flare 6		0.0	1,766.0	19.0	628.0	116.0	1,500.0				malfunction
9/18/03	fluid catalytic cracking unit 2	FCCU ₂ wet gaas scrubber bypass		6.6	1.0		1,156.0	1.1	4.0			PM: 31	malfunction

Exxon Mobil Baytown Facility, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
9/18/03	fluid catalytic cracking unit 2	flare 3	100%	0.0	582.0	6.0	154.0	28.0	342.0				malfunction
9/18/03	fluid catalytic cracking unit 2	flare 4	100%	0.0	582.0	6.0	154.0	28.0	342.0				malfunction
9/18/03	fluid catalytic cracking unit 2	flare 5	100%	0.0	582.0	6.0	154.0	28.0	342.0				malfunction
9/18/03	fluid catalytic cracking unit 2	flare 6	100%	0.0	582.0	6.0	154.0	28.0	342.0				malfunction
9/15/03	pipe still 8	flare 20	100	3.6	6.0		0.5		0.3				malfunction
9/15/03	pipe still 8	flare 17	100	0.0	6.0		0.5		0.3				malfunction
9/15/03	pipe still 8	flare 3	100	0.0	800.0	34.0	207.0	38.0	461.0				malfunction
9/15/03	pipe still 8	flare 4	100	0.0	800.0	34.0	207.0	38.0	461.0				malfunction
9/15/03	pipe still 8	flare 5	100	0.0	800.0	34.0	207.0	38.0	461.0				malfunction
9/15/03	pipe still 8	flare 6	100	0.0	800.0	34.0	207.0	38.0	461.0				malfunction
9/3/03	coke handling	flare stack 25	100%	24.0	9,250.0	100.0	666.0	132.0	250.0				malfunction
9/3/03	coke handling	flare stack 26		0.0	24,903.0	270.0	3,195.0	587.0					malfunction
9/3/03	refinery	flare 25	100	336.0	4,625.0	50.0	333.0	61.0	125.0				maintenance
9/3/03	refinery	flare 26	100	0.0	4,625.0	50.0	333.0	61.0	125.0				maintenance
8/29/03	wet gas compressor	flare stack 27		4.1	40,798.0	438.0	1,408.0	259.0	2,097.0				malfunction
8/14/03	waste heat boiler	GTG 301 bypass stack		535.0	41.0	0.5	4,227.0	27,873.0					maintenance
8/8/03	sour gas compressor	flare 25	10%	0.7	2,581.0	28.0	208.0	38.0	204.0				malfunction
8/8/03	gas turbine generator	WHB71		0.8	4.0		9.0	151.0	0.3				malfunction
8/8/03	gas turbine generator	WHB72		0.0	4.0		9.0	69.0	0.3				malfunction
8/8/03	gas turbine generator	WHB74		0.0	4.0		7.0	154.0	0.3				malfunction
7/27/03	gasket	dock line 17 flange		1.0					150.0	150			malfunction
7/21/03	gas compressor	flare stack 15		1.4	874.0	9.0	28.0	6.0	112.0				malfunction
7/15/03	compressor	flare 17		14.7	203.0	2.0	72.0	14.0	184.0				malfunction
7/15/03	compressor	flare 20		0.0	203.0	2.0	72.0	14.0	184.0				malfunction
7/12/03	crude unit	flare stack 27		51.3	86,406.0	937.0	1,634.0	130.0	2,602.0				malfunction
7/11/03	tower T-501	flare 3	100%	0.2	365.0	4.0	8.0	1.5	21.0				malfunction
7/11/03	tower T-501	flare 4	100%	0.0	365.0	4.0	8.0	1.5	21.0				malfunction

Exxon Mobil Baytown Facility, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
7/11/03	tower T-501	flare 5	100%	0.0	365.0	4.0	8.0	1.5	21.0				malfunction
7/11/03	tower T-501	flare 6	100%	0.0	365.0	4.0	8.0	1.5	21.0				malfunction
7/11/03	compressor	tank vent		2.5	2.0				1,959.0				malfunction
6/26/03	dc rude unit	flare 27		87.0	106,217.0	1,152.0	2,295.0	212.0	3,198.0				maintenance
6/18/03	compressor C-30	CLO522		0.0		7.0	65.0		3,246.0				malfunction
6/6/03	sulfur conversion unit	incinerator F529		6.8			69.0	13.0	25.0				maintenance
5/23/03	booster & feed pump	flare 15	100	0.1									malfunction
5/23/03	booster & feed pump	flare 16	100	0.0									malfunction
5/7/03	compressor C-30	flare 11		16.1	9,161.0	100.0	1,372.0	250.0	3,008.0	9	12.0		malfunction
5/7/03	compressor C-30	flare 14		0.0	9,161.0	100.0	1,372.0	250.0	3,008.0	9	12.0		malfunction
5/7/03	compressor C-30	flare 3		0.0	654.0	7.0	5,172.0	361.0	3,208.0		23.0		malfunction
5/7/03	compressor C-30	flare 4		0.0	654.0	7.0	5,172.0	361.0	3,208.0		23.0		malfunction
5/7/03	compressor C-30	flare 5		0.0	654.0	7.0	5,172.0	361.0	3,208.0		23.0		malfunction
5/7/03	compressor C-30	flare 6		0.0	654.0	7.0	5,172.0	361.0	3,208.0		23.0		malfunction
4/1/03	steam condensate system	tank 1443 vent		21.0					17.0	17		naptha: 155	malfunction
4/1/03	steam condensate system			0.0					17.0	17		naptha: 155	malfunction
3/26/03	CLO-369	CLO-369		5.0					24,954.0		195.0		malfunction
3/3/03	compressor C-74	CLEU 3		0.0					1,818.0				malfunction
2/27/03	flare seal	flare 17		1.0					155.0				malfunction
2/27/03	flare seal	flare 18		0.0					155.0				malfunction
2/17/03	gas turbine generator 44	gas turbine generator 44		1.0				117.0					malfunction
2/15/03	gas line	flare 15		42.0	53,373.0	579.0	1,447.0	80.0	2,043.0				malfunction
2/15/03	gas line	flare 27		0.0	53,373.0	579.0	1,447.0	80.0	2,043.0				malfunction
2/15/03	jet vent gas line	hole in jet vent		42.0		34.0	1.0		119				malfunction
2/12/03	MEA unit	flare 19		5.8	320.0	3.0	60.0	11.0					malfunction
2/12/03	MEA unit	flare 19		5.8	320.0	3.0	60.0	11.0					maintenance
2/9/03	refinery gas system	flare 15		7.0	120.0	1.0							malfunction
TOTALS				5,753.7	598,756.3	6,821.1	591,139	57,613.1	188,537.5	202.0	311.0		

EXXON MOBIL CHEMICAL BAYTOWN OLEFINS • Baytown, Harris County TX
Emissions Data (Lbs./Event): 1.31.03 - 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/30/04	Prism Unit	primary flare		0.8			102.0	39.0					Malfunction
1/7/04	PRU propylene refrigeration compressor	primary flare		7.2					2,914.0				Malfunction
1/7/04	PRU propylene refrigeration compressor	secondary flare		7.2					4,152.0				Malfunction
1/7/04	PRU propylene refrigeration compressor	primary flare		7.2			2,021.0	280.0					Malfunction
1/7/04	PRU propylene refrigeration compressor	secondary flare		7.2			2,881.0	399.0					Malfunction
12/29/03	PGC	primary flare		96.0			3,910.0	281.0	1,374.0				Maintenance
12/29/03	PGC	secondary flare		96.0					20.4				Maintenance
12/29/03	PGC	secondary flare		96.0			791.0	43.0					Maintenance
12/28/03	steam relief valve	primary flare		14.3					2,010.0	170.0	100.0		Malfunction
12/28/03	steam relief valve	secondary flare		14.3					777.0	86.0	50.0		Malfunction
12/28/03	steam relief valve	primary flare		14.3			1,467.0	213.0					Malfunction
12/28/03	steam relief valve	secondary flare		14.3			578.0	86.0					Malfunction
11/26/03	PGC	plant flare		3.4					854.0	108.0	63.0		Malfunction
11/9/03	BOP ethylene production unit	primary/secondary flare		86.0			4,120.0	342.0					Malfunction
10/19/03	BOP ethylene production unit	primary/secondary flare		816.0			13,600.0	1,900.0	615.0				Startup
8/27/03	PGC	flare		4.0			2,392.0	464.0	460.0		22.0		Malfunction
8/21/03	BOP ethylene production unit	primary/secondary flare		768.0			13,200.0	274.0	2,872.0	16.0	19.0		Shutdown
7/21/03	butadiene unit compressor	plant flare 1		5.8					1,706.0		1,618.0		Malfunction
7/21/03	butadiene unit compressor	plant flare 2		5.8					1,014.0		961.0		Malfunction
7/21/03	butadiene unit compressor	plant flare 1		5.8			579.0	80.0					Malfunction
7/21/03	butadiene unit compressor	plant flare 2		5.8			344.0	48.0					Malfunction
7/16/03	RSD-o6	RSP-o6		8.0							21.2		Maintenance
5/31/03	De-Nox steam injection	heat recovery steam generator		2.4				89.2					Malfunction

Exxon Mobil Chemical Baytown Olefins, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
5/21/03	extractive distillation tower	plant flare 1	19%	4.4				50.0	1,075.0		1,020.0		Malfunction
5/21/03	extractive distillation tower	plant flare 2		4.4			26.0	3.5	76.0		72.0		Malfunction
2/5/03	PRU compressor	base plant cold ends		1.0			1,604.0	222.0	2,161.0				Malfunction
TOTALS				2,095.2	0.0	0.0	47,615.0	4,813.7	22,080.4	380.0	3,946.2		

EXXONMOBIL CHEMICAL BAYTOWN CHEMICAL PLANT • Baytown, Harris County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compound	Butadiene	Other Emissions	Type of Event
1/11/04	valve	flare 28		1.0	8,572.0	88.0	137.0	18.0	2.0			COS: 6	Malfunction
12/5/03	compressor	flare stack 23		24.0			111.0	15.5	162.0				Malfunction
12/5/03	compressor	flare stack 24					111.0	15.3	162.0				Malfunction
12/5/03	compressor	flare stack 9					111.0	15.3	161.0				Malfunction
12/4/03	reactor	flare 9		6.1			78.0	10.8	106.0				Malfunction
12/4/03	reactor	flare stack 23					78.0	10.9	106.0				Malfunction
12/4/03	reactor	flare stack 24					79.0	10.9	107.0				Malfunction
11/18/03	heat exchanger	cooling tower 18		32.0					300.0				Malfunction
11/7/03	R 8712	flare stack 23,24,9		8.5			505.0	70.0	720.0				Malfunction
11/1/03	D-4122	flare stack 23		1.8			122.0	16.9	177.0				Malfunction
11/1/03	D-4122	flare stack 24					122.0	16.9	177.0				Malfunction
11/1/03	D-4122	flare stack 9					122.0	16.9	177.0				Malfunction
10/14/03	safety valve	flare stake 23		22.8			411.0	57.0	606.0				Malfunction
10/10/03	compressor	Flare 24,23, 9		120.8			213.0	30.0	359.0				Malfunction
9/14/03	flare	flare stack 28		0.4	2,918.7	29.9	41.0	5.4	0.4			HCN: .13; COS: 2.1; CH ₃ OH: .02	Malfunction
9/12/03	atmospheric safety valve	vent stack 17							238.0				Malfunction
9/11/03	valve	flare 23		65.0			357.0	49.0	691.0		4.0	organics: 308	Malfunction
9/11/03	equipment	flare stack 24		28.0			81.0	11.0	238.9		1.2		Malfunction
9/11/03	equipment	flare stack 9					81.0	11.0	238.9		1.2		Malfunction
9/11/03	equipment	flare 23					81.0	11.0	238.9		1.2		Malfunction
8/26/03	propylene storage drum	flare stack 24		0.4			244.0	34.0	355.0				Malfunction
8/20/03	compressor 65145	flare stack 23/24		5.1			470.0	65.0	684.0				Malfunction
8/18/03	polymers unit shutdown	flare 12		1,376.0			121.0	24.0	1,139.0				Maintenance
8/18/03	polymers unit shutdown	flare 23					225.0	31.0	326.0			HCl: 3926	Malfunction
8/18/03	polymers unit shutdown	flare 24					225.0	31.0	326.0			CH ₃ Cl: 111;	Malfunction
8/18/03	polymers unit shutdown	flare 9					225.0	31.0	326.0				Malfunction
8/11/03	conversion unit	flare 28		0.3	1,413.7	41.3	22.8	9.0	0.6			COS: 2.9; HCN: .2	Malfunction
8/8/03	R 8712	flare stack 23/24		12.0			585.0	81.0	855.0				Malfunction

ExxonMobil Chemical Baytown Chemical Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compound	Butadiene	Other Emissions	Type of Event
7/28/03	undersized pump	flare stack 12		12.0			20.7	4.1	312.0				Malfunction
7/28/03	pipe	Plant		2.3					18.0			CH ₂ Cl: 312	Malfunction
7/28/03	pipe	N/A							18.0			CH ₃ Cl: 312	Malfunction
7/27/03	rotary feeder	flare stack 24		18.0			147.9	20.5	215.0				Malfunction
7/15/03	safety valve	R6102 Vent							675.0				Malfunction
7/8/03	tower T520	flare stack 12		1.0			3.0	1.0	13.0			HCN: 416; CH ₃ Cl: 12	Malfunction
7/6/03	flange	butylpolymer		2.0			0.3	0.1	500.0				Malfunction
6/11/03	safety valve	chiller C-8710		14.0								freon 22: 400	Malfunction
6/4/03	SGU	SGU		3.0	25,679.0	263.0	329.0	43.0	3.0			hydrogen cyanide: 1.4	Malfunction
5/19/03	BHU	BHU		2.0					11.3	8		COS:18; HCN:1.4; CH ₃ OH: .3	Malfunction
5/8/03	high pressure seperator plug	flare stack 24		0.7			168.9	23.4	246.0				Malfunction
5/8/03	air product	flare		3.0	2,510.7	25.7	1,461.6	38.1				COS: 1.8	Malfunction
4/28/03	heat exchanger	cooling tower 70		33.0					825.0				Malfunction
4/23/03	safety valve	BPB		37.9			348.8	48.3	475.9				Malfunction
4/23/03	safety valve	flare stack 23					348.8	48.3	475.9				Malfunction
2/21/03	polypropylene line IV	Flare		6.0			22.8	3.2	30.8				Startup
2/21/03	polypropylene line IV	Flare					110.3	15.3	150.0				Startup
2/10/03	Line IV	Flare		23.0			78.7	10.9	106.5				Shutdown
2/1/03	polypropylene line IV	Flare		8.0			204.5	28.3	278.0				Shutdown
TOTALS				1,869.8	41,094.1	447.9	8,204.1	982.3	13,333.1	8.2	7.6		

EXXONMOBIL OIL CORPORATION BEAUMONT REFINERY • Beaumont, Jefferson County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/21/04	PTR-4 Reformer Heater	LP Flare		1.3	6,111.0	66.3	477.5	66.1	114.0				Malfunction
1/12/04	PtR-3 Offgas Compressor	HP Flare		2.1	2,676.0	29.0	666.0	131.0	180.0				Malfunction
12/31/03	FCC Wet Gas Compressor	FCC Flare		3.6	1,667.0	18.2	117.5	16.3	287.5				Malfunction
12/22/03	FCC	FCC Flare		3.5	757.0	8.5	53.0						Malfunction
12/22/03	FCC	FCC Flares		3.8	17,812.1	193.3	1,220.0	161.1					Startup
12/10/03	Hot Blowdown drum	High Pressure Flare		0.7	941.0								Malfunction
12/10/03	Hot Blowdown drum	High Pressure Flare		1.3	941.0	10.2	31.4	6.2	12.7				Malfunction
12/7/03	24	Flare 10		2.7				14.4					Malfunction
11/17/03	C-307 Recip H2 Compressor	HP Flare		0.5	765.0			29.0					Malfunction
11/11/03	FCC	FCC Flare		3.9	6,467.0	67.0	533.0	74.0					Malfunction
10/8/03	No. 2 Debut Tower	No. 2 Debutanizer RV		2.9				89.6	327,540.9				Malfunction
10/8/03	#2 DeEthanizer	#7 Flare		10.5				216.4					Malfunction
10/8/03	FCC	FCC Flare		0.1	646.0								Human Error
10/7/03	CUB, HDC, PtR-3, and Coker	HP, LP, EPN		13.6	34,909.0	379.0	3,081.0	514.0					Power Outage
9/28/03	Hydrocracker	HP Flare		24.0			5,495.4						Malfunction
9/28/03	Hydrocracker	HP Flare		79.5				2,423.9					Malfunction
9/23/03	Mole Seal valve	Flare		2.4		1,113.4							Malfunction
9/13/03	FCCU	FCC Flare		12.0	11,922.0	129.0			835.0				Startup
9/10/03	PTR-3	High Pressure Flare		6.5	2,589.0		5,603.0	1,100.0					Malfunction
9/9/03	Reactor	FCC Flare		0.5	4,391.0				577.0				Shutdown
9/4/03	C-364	CHD-1 Flare		1.5	3,901.0			16.4					Malfunction
9/2/03	FCC	FCC Reactor Plenum		172.8		1,012.4			14,343.8				Malfunction
7/28/03	CO Boiler	CO Boiler Stack	99%	23.7			678,000.0					6076- Ammonia	Malfunction
6/29/03	Flare Gas Recovery Compressor	FCC Flare		Unknown	21,000.0	221.0		100.0					Startup
6/17/03	PTR-4	LP Flare		2.0	2,733.0								Malfunction

Exxonmobil Oil Corporation Beaumont Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
6/16/03	Flare Gas Recovery Compressor	Low Pressure Flare		77.0	59,885.0	663.0		270.0					Maintenance
6/15/03	Flare Gas Recovery Compressor	Gas Compressor Plant 3		7.0	2,178.0	24.0		90.0					Shutdown
6/1/03	E-5 exchanger	CHD-1 Flare		0.5	651.1								Malfunction
5/12/03	De C3	#10 Flare		3.6	563.0			49.3					Malfunction
4/30/03	North Fuel Gas Drum	FCC and High Pressure Flares		0.7	5,185.0			138.6					Malfunction
4/23/03	South Treat Gas Compressor	Low Pressure Flare		3.9				123.0					Malfunction
4/3/03	Cold box	HP & LP Flare		2.2				31.8					Startup
3/18/03	PTR-3	FGRU		6.0	33,368.0			536.9					Malfunction
3/7/03	Debutanizer	FCC Debut Tower		43.3				133.6					Maintenance
3/4/03	5 West Stripper Water Draw Pot	Tank 2203		1.1					552.0				Malfunction
3/2/03	FC-018	FCC Flare		0.3	588.0			12.0					Malfunction
2/28/03	Compressor	FGRC		0.5	5,234.0								Malfunction
2/26/03	Crude Unit B	Low Pressure Compressor		0.3	902.0								Malfunction
2/20/03	Wet Gas Compressor	Coker		0.9	4,470.0			23.5					Shutdown
2/17/03	Tank 594 Benzene Recovery Unit Feed Tank	Tank 594		4.5					157.0	16.0			Malfunction
2/17/03	Reformer	LP Flare		3.6	3,306.0			115.0					Startup
2/16/03	PTR-4 Reformer heater	LP Flare		27.6	9,562.0			361.0					Malfunction
2/14/03	High Suction drum	FGRC		13.9				9.6					Malfunction
2/8/03	Hydrotreater Reactor	Hydrotreater Reactor		Unknown					1,723.0		19.0		Maintenance
2/3/03	De C3	Depropanizer PSV #G 6107		0.2	727.0								Malfunction
Unknown		LP Flare		0.0	986.0	10.7	60.0	8.3	200.0				Malfunction
Unknown		HP Flare		0.0	13.2	0.1	7.2	2.0	17.7				Malfunction
TOTALS				572.2	247,846.4	3,945.1	695,345.1	6,862.9	346,540.6	16.0	19.0		

FLINT HILLS RESOURCES CORPUS CHRISTI WEST PLANT • Corpus Christi, Nueces County TX
Emissions Data (lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
12/20/03	Amine Separator	Stage Flare		12	16,395.1	178.2	144.6	17.7	96.1				Malfunction
12/20/03	Amine Separator	SRU Incinerator		0	2,341.5								Malfunction
12/17/03	West FCCU	FCCU Bypass Stack	10	37	1,546.0		126,441.0	447.2					Startup
12/16/03	West FCCU	West FCCU Bypass Stack		4			126,441.0						Malfunction
12/5/03	West FCCU	1st Stage Flare	8	15	317.4		182.5	7.0		0.8			Shutdown
11/29/03	West FCCU	1st Stage Flare	45	18	639.7		475.8	238.3					Malfunction
11/29/03	West FCCU	FCCU Bypass Stack	45	0	2,107.0		5,249.0	679.1	5,945.0				Malfunction
11/29/03	SRU #1	#1 SRU Tail Gas Incinerator		10	1,765.9	4.4							Malfunction
11/6/03	Tank 11FB405	Tank 11FB405		8					403.2			xylene, methypentane	Malfunction
10/7/03	Mid Plant Utilities (power loss)	1st Stage Flare	15	0									Malfunction
9/29/03	External Floating Roof Tank o8FB11oR	Drain Hose Hole		56					666.8	149.8		xylene	Malfunction
9/11/03	Udex Piping	Piping leak		5					1,590.0	82.8			Malfunction
8/30/03	Coker Unit	1st Stage Flare		4	1,612.6			79.9					Malfunction
8/29/03	Coker VRU	1st Stage Flare		6	382.7			87.0					Maintenance
8/28/03	Coker Unit	1st Stage Flare		9	245.4	2,746.9	143.8	37.9	27,477.8	128.0			Malfunction
8/28/03	Coker Unit	2nd Stage Flare		5	1,386.6	15.1	804.0	111.3	977.1	2.0			Malfunction
8/1/03	Alkylation Unit	1st Stage Flare		2	1,665.0	18.1	634.4	12.0					Malfunction
7/18/03	#1 SRU	#1 SRU Incinerator		17	1,339.5	4.5							Shutdown
7/17/03	#1 SRU	#1 SRU Incinerator		17	1,339.5								Startup
7/15/03	#SRP	#1 SRU Incinerator		85	5,872.0								Malfunction
5/15/03	SRU #1	#1 Tail Gas Incinerator		4	846.6								Malfunction
3/10/03	#2 SRU	#2 SRU Incinerator		336	20,000.0								Startup
2/28/03	#2 SRU	#2 SRU Incinerator		192	25,000.0								Shutdown
TOTALS				840	84,802.5	2,967.2	260,516.1	1,717.4	37,156.1	363.5	0.0		

FLINT HILLS RESOURCES EAST REFINERY • Corpus Christi, Nueces County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/25/04	East FCCU II	Main plant flare		39.0			95.0	19.0	1.0	1.0			startup
1/15/04	East FCCU II	Main plant flare		128.7	145.0		1,136.0	68.0	203.0	3.0	3.0		maintenance
12/27/03	East FCCU II	Main plant flare		2.7			536.0	98.0					startup
12/27/03	East FCCU II	FCCU II scrubber		76.7	82.0		546.0	2,919.0					startup
12/12/03	E. FCCU II	Main plant flare		34.5	954.0		3,744.0	296.0	8.0		8.0		malfunction
11/14/03	East FCCU II	Main plant flare		66.8			2,751.0	444.0	8.0		8.0		startup
11/12/03	East FCCU II	FCCU II scrubber		127.0	411.0		1,967.0	2,580.0					startup
11/5/03	East #1 SRU	SRU #1 tail gas incinerator		28.0	7,248.0								startup
10/17/03	East No 1 SRP	SRU #1 tail gas incinerator		145.0	15,455.0								maintenance
10/16/03	East No 1 SRP	Main plant flare		144.0	928.0		5.0	1.0					maintenance
10/6/03	East FCCU II	Main plant flare		102.0	569.1			377.1	10.7		10.7		maintenance
9/12/03	East No 1 SRP	ESRU tail gas incinerator		17.0	1,192.4								malfunction
9/3/03	SRP claus unit thermal reactor	Acid gas flare		0.4	1,059.0			0.3					malfunction
9/3/03	E. #2 SRP claus unit thermal reactor	TGI incinerator		16.4	163.4								malfunction
8/31/03	SRU #2	TGI incinerator		96.0	2,227.8								maintenance
7/6/03	DIH Overhead Cooler	DIH fugitives		6.1					2,369.6	0.6		hexane, pentane	malfunction
7/4/03	tank E18T1400	Tank E18T1401		4.0					1,200.0				maintenance
7/1/03	Amine Regeneration Unit (ARU)	Main flare		5.9	5,280.5			1.4					malfunction
7/1/03	ARU	ESRU tail gas incinerator		13.0	779.4								malfunction
TOTALS				1,053.1	36,494.6	0.0	10,780.0	6,803.8	3,800.3	4.6	29.7		

GOLDSMITH GAS PLANT • Goldsmith, Ector County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/30/04	compressor engine	upset vent		3.7		581.1			10,603.2			Nitrogen (N) 729.11	Malfunction
1/20/04	A turbine	50# flare		5.5	23,773.6	258.1	6,112.8	1,534.9	3,339.5			N:16957	Maintenance
1/20/04	B turbine	50# flare		1.8	7,924.5	86.0	2,037.6	511.6	1,113.2			N:5652.3	Maintenance
1/13/04	compressor engine	upset vent		3.7		581.1			10,603.2			N:729.11	Malfunction
11/26/03	A turbine	50# flare		2.0	6,778	73.6	1,741.1	437.2	1,104.8			N:4512.31	Malfunction
11/22/03	sulfur boiler	acid gas flare		3.8	43,576	473.1	99.6	25.0	9.18			N:17.74	Malfunction
11/18/03	compressor	upset vent		1.3		372.4			13,588.7			N:467.2	Malfunction
11/18/03	compressor	upset vent		1.2		372.4			13,458.3			N:487.2	Malfunction
11/18/03	compressor	upset vent		1.2		372.4			13,828.4			N:467.2	Malfunction
11/17/03	A turbine	50# flare		4.8	20,830	226.2	5,350.7	1,343.5	3,395.2			N:13867.3	Malfunction
10/31/03	compressor engine	upset vent		5.3		404.5			7,379.7			N:507.45	Malfunction
10/28/03	A turbine	50# flare		2.3	8,460	91.9	2,173.1	545.6	1,378.9			N:5631.97	Malfunction
10/27/03	CPU	sweet flare		0.7				161.3	355.7			N:1602.61	Malfunction
10/25/03	SRU	acid gas flare		1.2	13,345	144.9	32.6	8.2	5.4			N:9.68	Malfunction
10/22/03	compressor engine	upset vent		14.8		3,711.3			67,716.5			N:4656.44	Malfunction
10/21/03	A turbine	50# flare		1.6	5,415	58.8	1,390.9	349.3	774.1			N:3604.86	Malfunction
10/20/03	A turbine	50# flare		2.3	6,441	69.9	1,654.5	415.4	1,049.8			N:4287.93	Malfunction
10/19/03	coupling	50# flare		2.2	5,962	64.7	1,531.4	384.5	1,012.3			N:3968.89	Malfunction
10/14/03	B turbine	50# flare		70.0	7,847.5	85.2	1,952.0	490.1	2,318.1			N:5055.2	Maintenance
10/13/03	gas compressor	upset vent		1.1		251.3			9,169.3			N:315.26	Malfunction
10/10/03	compresor	upset vent		4.7		486.0			17,733.6			N:609.71	Malfunction
10/5/03	A turbine	50# flare		8.2	12,983.4	141.0	3,229.5	1,958.2	1,917.6			N:8363.6	Malfunction
10/4/03	SRU	acid gas flare		0.3	10,401	112.9	42.2	10.6	7.6			N:1.4	Malfunction
9/26/03	compressor engine	#5 compressor		12.0		539.8			9,139.9			N:677.31	Malfunction
9/25/03	pipeline	acid gas flare		3.1	10,597	115.1	25.9	6.5	4.3			N:7.69	Malfunction
9/25/03	pipeline	turbine flare		3.4	14,957	162.4	3,720.4	934.2	2,209.1			N:9634.98	Malfunction
9/15/03	compressor engine	upset vent		2.7		338.4			6,174.0			N:424.6	Malfunction
9/14/03	compressor engine	upset vent		40.1		7,968.7			145,394.9			N:9997.9	Malfunction

Goldsmith Gas Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
9/13/03	A/B turbine	turbine flare		54.0	54,178	588.2	13,476.3	3,383.8	8,002.0			N:34900.1	Malfunction
9/12/03	compressor engine	upset vent		3.5		381.4			6,959.6			N:478.57	Malfunction
9/10/03	compressor engine	upset vent		2.2		826.8			14,931.0			N:1185.1	Malfunction
8/31/03	turbine combuster	turbine flare		215.8	55,011	597.2	13,683.4	3,435.8	8,125.0			N:35436.6	Malfunction
8/27/03	compressor engine	upset vent		7.5		1,294.9			23,626.1			N:1624.62	Malfunction
8/17/03	SRU	acid gas flare		161.8	2,515,903.8	27,315.4	6,146.7	1,543.4	1,012.3			N:1825.21	Maintenance
8/11/03	A turbine	turbine flare		1.8	4,458	48.4	1,108.8	278.4	658.4			N:2871.5	Malfunction
8/11/03	compressor engine	upset vent		6.1		940.5			17,159.5			N:1179.95	Malfunction
8/9/03	engine	upset vent		16.1		3,246.6			59,236.2			N:4073.3	Malfunction
8/5/03	compressor engine	upset vent		23.5		2,398.2			43,757.1			N:3008.9	Malfunction
7/31/03	suction header line	upset vent		25.9		2,217.5			40,460.8			N:2782.2	Malfunction
7/25/03	compressor engine	upset vent		2.1		266.9			5,598.8			N:334.9	Malfunction
7/22/03	B turbine	turbine flare		69.0	86,295	936.9	21,465.1	5,389.7	12,745.6			N:55589.2	Malfunction
7/21/03	amine circulation pump	residue compressor flare		1.5			869.5	218.3	6.2			N:4239.4	Malfunction
7/16/03	compressor engine	upset vent		1.2		312.2			5,696.5			N:391.7	Malfunction
7/10/03	SRU	acid gas flare		1.8	42,835	465.1	173.8	45.8	42.7			N:5.77	Malfunction
6/23/03	A turbine	50# flare		4.4	20,543	223.0	4,675.7	1,174.0	3,033.0			N:11347.8	Malfunction
6/15/03	fuse	acid gas flare		10.1	115,883	2,163.5	5,338.5	1,340.4	19,917.6			N:14310.2	Malfunction
6/9/03	A/B turbine	sweet flare		6.4			7,264.3	1,824.0	4,022.8			N:18122.6	Malfunction
6/9/03	A/B turbine	acid gas flare		1.9	5,041	54.7	12.3	3.1	2.0			N:3.7	Malfunction
6/5/03	A/B turbine	residue compressor flare		7.7			13,471.3	3,382.5	96.7			N:65682.6	Malfunction
6/2/03	compressor engine	upset vent		11.3		330.7			6,413.8			N:6952.2	Malfunction
5/25/03	B turbine	50# flare		2.0	6,389	69.4	1,822.2	457.5	1,176.6			N:4443.5	Malfunction
5/23/03	compressor engine	upset vent		2.5		225.8			366,835.4			N:413.96	Malfunction
5/20/03	fuel gas suction header	upset vent		0.3		876.5			17,374.7			N:1279.6	Malfunction
5/19/03	compressor engine	upset vent		10.0		1,019.7			40,425.1			N:1488.6	Maintenance

Goldsmith Gas Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
5/18/03	compressor engine	upset vent		2.6		901.2			17,592.0			N:1651.9	Malfunction
5/4/03	B turbine	turbine flare		4.9	18,134	196.9	5,171.7	1,298.6	3,339.3			N:12611.4	Malfunction
4/29/03	B turbine	turbine flare		3.7	18,620	202.2	4,661.8	1,170.6	5,778.3			N:10978.9	Malfunction
4/21/03	compressor engine	upset vent		129.5		5,372.7			1,959,237.1			N:8934.6	Maintenance
4/14/03	B turbine	turbine flare		7.9	29,557	320.9	7,400.0	1,858.1	12,340.9			N:17427.6	Malfunction
4/4/03	#5 inlet receiver	upset vent		8.4		1,185.1			49,554.8			N:1970.8	Malfunction
4/1/03	A/B turbine	50# flare		292.7	83,138.5	902.6	22,492.1	5,647.6	23,974.9			N:59836.6	Maintenance
3/17/03	compressor engine	upset vent		128.5		3,737.4			153,361.7			N:5191	Maintenance
3/8/03	compressor engine	#5 vent		53.7		2,090.0			85,472.9			N:3362.8	Malfunction
3/5/03	amine treater pump	residue compressor flare		4.3	unknown	unknown	3,832.4	962.3	82.5			N:18685.6	Malfunction
2/24/03	B turbine	turbine flare		1.1	2,014	21.9	544.9	144.2	580.8			N:1449.6	Malfunction
2/24/03	SRU	acid gas flare		0.7	5,111	55.5	12.5	3.1	4.1			N:3.71	Malfunction
TOTALS				1,493.0	3,262,401.9	79,928.9	164,717.6	42,677.5	3,363,410.2	0.0	0.0		

HUNTSMAN PETROCHEMICAL PLANT • Odessa, Ector County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
11/30/03	Ethylene Column System	Flare and PSV		3.8				166.4	14,424.2				Malfunction
11/9/03	1E-1301	Open Process Sewer		2.0					910.6				Malfunction
11/2/03	W-72	Crack		10.5					25.9	13.5	12.4		Malfunction
10/17/03	Olefin	Air and Steam Assit Flares		40.3	0.1		15,555.2	5,349.9	214,011.2	3,539.5	2,326.5	Vinyl Acetate: 1722.2	Malfunction
9/15/03	Axi-Loop System	Air Assist Flare		0.3				1.8	13.0				Malfunction
8/28/03	GE-70	Steam Assist Flare		5.0				218.0	32,736.2				Malfunction
7/30/03	Overhead Condenser	PSV		0.2					6,810.4				Malfunction
7/11/03	Olefin Water Stripper	Cooling Towers		57.0					320.9	192.2			Malfunction
6/16/03	Butane Storage Tank no. 17	Manway		1.3					6,305.7	3.7			Malfunction
5/25/03	Feed Fractionation, Propylene Refrigeration and the Product Treating Systems	Flare System		15.2				418.9					Malfunction
5/13/03	Process Heat Exchanger 1E-1302	LLDPE Cooling Tower		12.5					25,916.2			8984.4- Isopropyl alcohol	Malfunction
5/1/03	GE70 Propylene Refrigeration Compressor	Flare System		1.4					26,174.0				Malfunction
4/19/03	Pre-DeC1	Flare		5.8				536.9	63.1	32.8	30.3		Malfunction
3/14/03	FBM	PSV Air Assist Flare		0.5			119.7	59.9	26,246.2				Malfunction
2/26/03	LLDPE	cooling tower		78.1					3,709.8	14.8			Malfunction
2/7/03	LLDPE	Silo Vents		13.7					1,066.5				Malfunction
TOTALS				247.3	0.1	0.0	15,674.9	6,751.8	358,734.0	3,796.5	2,369.2		

HUNTSMAN PORT NECHES REFINERY • Port Neches, Jefferson County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/15/04	F6 Regenerator	F6 Regenerator Vent		2.3					411.0				Malfunction
1/15/04	Condensers	North/South Flares		1.0					38.9		25.0		Malfunction
1/11/04	PO/MTBE Facility	Perox Fugitives		4.8					15.0				Malfunction
1/3/04	Boiler No. 1	North/South Flare		9.6					93.3		7.3		Malfunction
1/1/04	Regenerator	Regenerator tower vent		4.8					468.0				Malfunction
12/21/03	Tank 109	Tank 109		48.0					8,000.0				Malfunction
12/13/03	Incinerator	Regenerator Vent		0.8					100.0				Malfunction
12/10/03	F6 Incinerator	F6 Argon/ Reabsorber/ Regenerator		1.1					304.0				Malfunction
12/10/03	Flare Line	South Flare Header		0.1					530.0		270.6		Malfunction
12/6/03	Tank TO-168	Tank TO-168		2.2					22.4				Malfunction
11/26/03	Finished Butadiene Tank	North/South Flares		0.3					11.3		11.3		Malfunction
11/26/03	Finished Butadiene Tank	Tank 12 Water Boot PRV		0.3					353.0		352.0		Malfunction
11/25/03	EO Scrubber	EO Scrubber		0.2					15.0		15.0		Malfunction
11/24/03	F6 Incinerator	F6 Temporary Flare 1		720.0	9.6		3,073.0	358.0					Maintenance
11/24/03	F6 Incinerator	F6 Temp Flare		40.0	9.6		3,073.0	358.0					Maintenance
11/22/03	F6 Unit Incinerator	Regenerator Flash Drum Vent		6.0			31,146.0		639.0				Malfunction
11/14/03	F6/G6 Facility power loss	GFS PRV		5.0					6,634.0				Malfunction
11/14/03	F6/G6 Facility power loss	OMS Vent		5.0					10,550.0				Malfunction
11/14/03	F6/G6 Facility power loss	Tank T-G6-1 A&B		5.0					1,592.0				Malfunction
11/14/03	F6/G6 Facility power loss	EO Scrubber		5.0					305.0				Malfunction
11/14/03	F6/G6 Facility power loss	Contactore Vent		5.0					763.6				Malfunction
11/10/03	F5 Emergency Fire Water Station Chlorine Cylinder	F5 Fugitives		2.0								10lbs chlorine	Malfunction

Huntsman Port Neches Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
11/6/03	F4 Unit Leaking Exchanger	Cooling Tower #2/#3		240.0					25,761.0				Malfunction
11/5/03	Tank 109	109 Finished Line		23.0					76.3		76.3		Malfunction
11/5/03	Tank 109	North/South Flares		23.0					53.3		53.1		Malfunction
10/30/03	South 4 Group Transfer Line	South 4 Group Transfer Line		0.3					88.0	0.0	47.0		Malfunction
10/30/03	Butadiene Charge Pump	South Flare		2.6					36.4		36.3		Malfunction
10/25/03	S2C2 Compressor System	North/South Flares		0.9					25.4		23.8		Malfunction
10/25/03	E4 Console	Relief Valve on Ammonia Absorber		0.2								2514lbs ammonia	Malfunction
10/20/03	PO/MTBE Plant - MTBE Drying Column Overhead Line	PO/MTBE Flare		64.4			316.4	43.8	266.4				Shutdown
10/14/03	S2CIA Recovery Vent Compressor	North/South Flares		0.9					52.4		13.7		Malfunction
10/5/03	Incinerator Combustion Air Blower	F6 Regenerator Vent		3.0					169.0				Malfunction
9/29/03	Flue Gas Recovery Compressor	PO/MTBE Flare		76.0			1,146.9	158.8	2,290.7				Maintenance
9/25/03	Ethylene Oxide Charge Pump	R&S Fugitives		0.0					51.4				Startup
9/24/03	PO/MTBE Unit	PO/MTBE Flare		22.9			587.4	77.0	873.2				Malfunction
9/23/03	Ammonia Cooler	Ammonia Cooler E-E7-81		0.8								129lbs ammonia	Malfunction
9/21/03	Catalyst Feed Line	PO/MTBE Flare		21.7			2,094.7	286.4	3,360.9				Malfunction
9/16/03	Overhead Condensor Line	MTBE Drying Column Overhead Line		58.0					8,631.6				Malfunction
9/6/03	Steam Meter FC610	Argon Vent		0.3					108.0				Malfunction
9/6/03	Recovery Vent Compressor S2CIA	C4 Flares		0.6					69.4		18.1		Malfunction
9/4/03	Methanol Extractor Level Indicator	PO Flare		11.1			448.7	57.9	649.3				Malfunction
9/3/03	S2CI-A Recovery Vent Compressor	North/South Flares		11.9			91.9	12.7	252.6		66.0		Malfunction

Huntsman Port Neches Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
8/26/03	Steam Boiler No. 2	North/South Flares		147.5			8,645.5	1,197.0	18,199.5		4,787.5		Malfunction
8/25/03	Tank F-P-137	F-P-137 EO Rundown		0.2					67.0				Malfunction
8/23/03	PO/MTBE Plant Transformer	Reabsorber Vent		1.6					226.0				Malfunction
8/23/03	Stress Cone - power outage	PO/MTBE Flare		137.1			9,626.6	1,332.8	21,709.3				Malfunction
8/23/03	MO/MTBE Plant	A3 High Pressure Flare		0.9			11.9	1.7	8.0				Malfunction
8/22/03	Vent Gas Compressor Relief Valve	North/South Flares		10.3			41.0	5.7	112.5		29.4		Malfunction
8/20/03	Tank 77	Tank 77		0.2					10.5		9.2		Malfunction
8/18/03	F6 incinerator Burners	F6 Incinerator		0.8					108.0				Malfunction
8/17/03	Cogen Unit	PO Flare		13.8			2,103.2	291.2	4,289.9				Malfunction
7/22/03	"B" Vent Compressor	North/South Flares		0.2					70.4		18.4		Malfunction
7/11/03	N501 Filter	North Flare		0.5			18.6	2.6	52.4				Malfunction
7/7/03	F-E7-54 Ammonia Removal Tower Leak	F-E7-54 Ammonia		0.3								8lbs ammonia	Malfunction
7/7/03	G6 3rd Leak	G6 Fugitive		28.0					40.0				Malfunction
7/6/03	Cycle Water Tank Leak	G6 Unit Fugitives		28.0					801.2				Malfunction
6/29/03	S2CI-A Recovery Vent System Compressor	North Flare		0.3					56.5		14.8		Malfunction
6/14/03	Pot F F6 112 Water Seal	Vent from F F6 112		0.3					194.0			3 lbs. vinyl chloride	Malfunction
6/13/03	S2CI-C	North/South Flares		2.0			75.3	10.4	207.0		54.1		Malfunction
6/12/03	A3 Unit RPG Process	UERO37 High Pressure Flare		201.1			160.3	22.2	108.6				Shutdown
6/8/03	C-FS-008 Compressor	PO Flare		8.8					181.6				Malfunction
6/7/03	Epoxy Unit Compressor	PO Flare		1.6					199.7				Malfunction
6/5/03	F6 Incinerator	F6 Temporary Flare 1	15%	144.0									Maintenance

Huntsman Port Neches Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
6/5/03	F6 Incinerator	F6 Temp Flare 2	15%	144.2									Maintenance
6/4/03	N5DI Butadiene Wash Water Tower	North/South Flares		27.6					200.5		200.0		Malfunction
6/2/03	MTBE Storage Tanks	Temporary Thermal Oxidizer		537.0			1,515.5	209.8	9,985.0				Maintenance
5/27/03	Exchanger E-F5-002	PO Flare		9.8			209.6	29.0	590.9				Maintenance
5/15/03	Pressure Controller PC-o8o5	North/South Flares		12.0			36.2	5.0	77.1		20.7		Malfunction
5/15/03	Propylene Recovery Column Overhead Consensor	PO/MTBE Flare		154.4			363.7	45.6	437.6				Malfunction
5/13/03	Recovery Vent Compressor System	North/South Flares		0.2			3.3	0.5	9.1		2.4		Malfunction
5/13/03	Substation air conditioner	PO/MTBE Flare		5.0			134.1	16.6	188.9				Malfunction
5/12/03	F4 Unit	F4 Fugitives		9.0					136.2				Shutdown
5/12/03	F4 Unit	F4 Waste Water Fugitives		12.0					47.9				Shutdown
4/28/03	Unknown	North/South Flares		10.0			100.6	13.9	276.4		72.2		Malfunction
4/11/03	Propylene Recovery Tower Overhead Consenser	PO/MTBE Flare		19.6			464.7	62.6	618.7				Malfunction
4/10/03	Absorber E-E4-74	E-E4-7B Flange		3.0								21lbs ammonia	Malfunction
4/6/03	Ammonia Pump	P-E7-100B		0.7								50lbs ammonia	Malfunction
4/6/03	S4D16C Reactor	North/South Flares		93.8			638.8	88.4	86.0	0.1	0.6		Malfunction
4/3/03	Cooling Tower	Cooling Tower		1,320.3					257,578.0				Malfunction
3/30/03	Tank 77 Hatch	Fugitive		33.2					15,736.3	558.2	888.2	10632.29 vinyl chlorohexane	Malfunction
3/25/03	Vent Compressor Accumulator Pressure Transmitter	North/South Flares		1.8			61.1	8.5	130.2		35.0		Malfunction
3/23/03	Refinery Grade Propylene Section	High Pressure Flare		67.0			635.0	87.9	430.4				Startup
3/19/03	Butane & Butylene Feed Line	North/South Flares		1.6			75.8	10.5	206.9		0.3		Malfunction

Huntsman Port Neches Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
3/16/03	UPS Switch	North/South Flares		7.8			45.5	6.3	105.1		32.7		Malfunction
3/15/03	UPS Switch	North/South Flares		9.0			596.1	82.5	1,375.2		428.1		Malfunction
3/15/03	UPS Switch	Tank 77 Hatch		0.3					515.0	18.3	29.1		Malfunction
3/13/03	Regenerator Vent	Regenerator Vent		0.9					199.0			4lbs vinyl chloride	Malfunction
3/10/03	MTBE T & I	South Flare Header		339.0					2,353.0		1,141.0		Maintenance
3/2/03	FC1034 Combustion Air Flow	Reabsorber Vent		3.0			8,235.0		196.0		15.4		Malfunction
2/22/03	Tank TO-137	Tank TO-137		60.0					384.0				Malfunction
2/21/03	PRV-6RV-516	Butadiene Unit		0.3					11.3		6.2		Maintenance
2/20/03	Product Recovery Compressor	Butadiene Unit		0.3			21.4	3.0	58.8				Malfunction
2/17/03	Combustion Air Blower	Regenerator Vent		0.8					243.0			4lbs vinyl chloride	Malfunction
2/15/03	MTBE unit Groundbed & Water Knockout Vessel Leak	W3D4 Guardbed & Water KO Vesel		0.6					345.5		0.7		Malfunction
2/12/03	Compressor Suction Line Bleeder Valve	Butadiene Unit		24.0					1,963.9		429.7		Malfunction
2/3/03	N 5DI Tower	C4 Plant		0.1			19.6	2.7	55.5		55.3		Malfunction
1/7/03	PO/MTBE Unit	PO Flare		360.0			16,220.0	2,245.8	37,476.0				Maintenance
TOTALS				5,424.9	19.2	0.0	92,036.3	7,134.7	452,320.2	576.6	9,286.3		

MOTIVA PORT ARTHUR REFINERY • Port Arthur, Jefferson County
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/9/04	SHU Charge Pump	Alky Emergency Flare		0.5				168	910				Malfunction
1/9/04	Alkylation	FCCU Emergency Flare		0.0			551	186	1,756		1		Malfunction
1/9/04	Alkylation	Alky Emergency Flare		0.5			551	186	1,756		1		Malfunction
12/20/03	DCU	Process Fugitives		77.0				6,443					Maintenance
12/6/03	VPS4	VPS Emergency Flare		5.3	2,951	33	57	8	86			7.5- Hydrogen	Malfunction
10/27/03	FCCU	FCCU Flare		0.2	5,266	57	722	100	1,175				Malfunction
10/27/03	HCU	HCU Emergency Flare		0.3	1,162	13	79	15	11				Malfunction
10/15/03	SRU 2,3,4	ARU Emergency Flare		0.9	7,819	42	1	0					Malfunction
10/15/03	SRU 2,3,4	DCU Emergency Flare		0.0	7,819	42	1	0					Malfunction
10/14/03	TGTU2	TGTU2 Incinerator	30	24.0	15	1	1	0					Malfunction
10/14/03	VPS4	VPS4 Emergency Flare	30	0.0	6	0	69	10	127			0.08- Hydrogen	Malfunction
10/14/03	DCU	DCU Emergency Flare	30	0.0	24,012	260	256	50	3,278				Malfunction
10/14/03	HTU4	HTU4 Emergency Flare	30	0.0	74	1	65	13	0				Malfunction
10/14/03	CRU4	CRU Emergency Flare	30	0.0			729	147	856			Hydrogen: 224.2	Malfunction
10/14/03	HCU	HCU Emergency Flare	30	0.0	2,751	30	210	41	44				Malfunction
10/14/03	FCCU1&2	Emergency Flares	30	0.0	7,465	81	1,474	203	4,026		2		Malfunction
10/14/03	FCCU3	CO Boiler/ Scrubber Stk & Bypass	0 over/ 30	0.6									Malfunction
9/25/03	FCCU3	Emergency Flare		24.0	80	1	50	7	87				Startup
9/22/03	FCCU3	Emergency Flare		120.0	6	0	787	109	188		0		Shutdown
9/15/03	FCCU	Alky Emerg Flare		22.3	1,030	11	423	17	1,070				Malfunction
9/15/03	HCU	HCU Emergency Flare		1.0	2,063	22	194	38	73				Malfunction
9/15/03	FCCU	FCCU3 Emergency Flare		22.5	1,030	11	423	59	1,070				Malfunction

Motiva Port Arthur Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
9/13/03	Tank 1475	PH 27 Process Fugitives		12.0					123,603				Malfunction
9/12/03	HCU	HCU-HTU1-HTU2 Flare		0.1	1,293	14	117	23	46				Malfunction
9/9/03	4VPS	Flare		296.1	3,787	43	75	10	113				Maintenance
7/23/03	H ₂ S Absorber	FCCU ₃ Emergency Flare		0.6			110	16	296				Malfunction
6/23/03	Booster Blower Aftercooler	TGTU ₁		24.5	1,376								Malfunction
6/20/03	No. 2 Debutanizer Tower	3FCCU Process Fugitives		0.0					495		2		Malfunction
6/20/03	A-3 drum	FCCU ₃ Emergency Flare		0.4	8		138	19	217				Malfunction
6/20/03	A-3 drum	Alky Emergency Flare		0.0	8		138	19	218				Malfunction
6/13/03	HCU	HCU Emergency Flare		7.0	2,339	25	239	47	57				Malfunction
4/29/03	ASTU	N. API Separator		24.0					7,506	15			Maintenance
4/25/03	LOU	Boiler		23.5				4,280					Malfunction
4/19/03	Combustion Air Blower & FCCU ₃	Alky Emergency Flare		5.0	413	4	163	22	445		1		Malfunction & Startup
4/19/03	FCCU ₃	FCCU Emergency Flare		5.0	413	4	163	22	445		1		Malfunction & Startup
4/19/03	3FCCU	Process Fugitives		5.0		7			2,309		8		Malfunction
4/19/03	FCCU ₃	Fixed Site Inland		2.0				28	10		10		Malfunction
4/15/03	Wet Gas Compressor	FCCU Process Fugitives		3.9		27			1,963		2		Malfunction
4/15/03	Wet Gas Compressor	Alky Emergency Flare		0.0	805	9	140	19	345		1		Malfunction
4/15/03	Wet Gas Compressor	FCCU ₃ Emergency Flare		0.0	805		140	19	255		1		Malfunction
4/15/03	FCCU ₃	By-Pass Stack		2.0								17800- PM	Startup
4/14/03	Power Station No. 2	TGTU No. 2 Incinerator	15	8.4	189		1	10					Malfunction
4/14/03	Power Station No. 2	TGTU No. 1 Incinerator	15	18.5	189		1	10					Malfunction
4/14/03	Alky	Emergency Flare		24.0	1,248	14	302	53	113				Malfunction
4/14/03	FCCU ₃	Emergency Flare		24.0	1,248	14		53	113				Malfunction
4/14/03	FCCU ₃	Process Fugitives		0.3		1,829	713		232,950		424		Malfunction

Motiva Port Arthur Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
4/14/03	VPS4	Emergency Flare	15	3.3	255	3	192	27	537			o.6- Hydrogen	Malfunction
4/14/03	CRU4	Emergency Flare	15	1.3	290	3		5					Malfunction
4/14/03	HTU	Emergency Flare		13.7	4,290	47	535	62	215			168- Hydrogen	Malfunction
4/14/03	DCU	Emergency Flare		4.3	5,218	35	203	89	418				Malfunction
4/14/03	Fixed Site Inland			0.7								?	Shutdown
4/7/03	HCU	HTU Emergency Flare		0.5	2,042	22	170	33	37				Malfunction
2/13/03	CO Boiler	FCCU	45	6.5									Shutdown
2/10/03	Hydrogen Sulfide Stripper Tower	FCCU ₃ Flare		0.6	343	3	19	2	53				Malfunction
2/9/03	Vacuum Pipe Still No. 4	HCU Emergency Flare		8.0	1,735	24	179	24	685				Malfunction
2/8/03	Vacuum Pipe Still No. 4	HCU ₁		13.2	2,950	32	305	42	898				Malfunction
2/4/03	CDHDS tower	FCCU ₃ Flare Stack & Alky 4		0.1	842								Malfunction
2/4/03	FCCU	Plant Fuel Gas		19.5	1,665								Malfunction
1/31/03	FCCU ₃	Power Stack		20.0	570								Malfunction
TOTALS				876.7	97,871	2,764	10,688	12,735	390,852	15	453		

PHILLIPS 66 REFINERY • Borger, Hutchinson County TX
Emissions Data (Lbs./Event): 1.31.03 - 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/30/04	Flare	Refinery West HC Flare, 66FL2	100%	5.8	8.0	0.1	5.0	1.0	5.5	0.2			Maintenance
1/17/04	Reactor Product Condensor	#4 Refinery Cooling Tower, F-54-C8		8.0					20,287.0	654.3			Malfunction
1/12/04	Unit 19.3 Distillate HDS	U19.3 Charge & Fractioner Furnace, 19B2/19H4		60.0	5.0		434.0						Maintenance
1/10/04	Unit 19.3 Distillate HDS	Refinery East HC Flare, 66FL1		46.0	508.0	6.0		1.4	29.0				Maintenance
1/8/04	Unit 40 CO Boiler Tube Leak	U40 CO Boiler, 85B2	60%	0.5									Maintenance
12/12/03	Unit 44 Amine Still Air Fins	ARDS Emergency Sulfur Flare, 66FL13		0.4	3,780.0	41.0		1.1					Malfunction
12/11/03	Unit 40 CO Boiler	Unit 40 CO Boiler, 85B1	34%	0.0									Maintenance
12/9/03	Unit 41 Reformer Furnace	SCOT Unit Incinerator, 4311		48.3	78,473.0	43.0							Malfunction
12/5/03	Unit 41 Reformer Furnace	ARDS Emergency Sulfur Flare, 66FL13		14.9	1,301.0	14.0		465.0					Malfunction
12/5/03	Unit 41 Reformer Furnace	H ₂ S Emergency Flare, 66FL6		0.0	1,172.0	12.0		0.0					Malfunction
12/5/03	Unit 41 Reformer Furnace	SCOT Unit Incinerator, 4311		0.0	9,162.0	5.0							Malfunction
12/5/03	Unit 41 Reformer Furnace	SRU Incinerator, 3411		0.0	62.0	0.7							Malfunction
11/25/03	Unit 43 "A" Train	Unit 43 Incinerator, 4311		19.8	693.0	8.0							Malfunction
11/23/03	Unit 42 Amine Contractor	ARDS Emergency Sulfur Flare, 66FL13		13.0	1,350.0	13.8						3.6lbs ammonia	Malfunction
11/23/03	Unit 42 Amine Contractor	SCOT Unit Incinerator, 4311		0.0	9,056.0	98.0							Malfunction
11/18/03	Unit 29 CO boiler	U29 CO Boiler Stack, 85B1	63%	0.3									Maintenance
11/13/03	Y1 Precipitator	NGL Corrosive Flare, 66FL5	100%	0.5	0.1		102.0	20.0	151.1	2.6			Malfunction
11/10/03	Unit 43 "A" Claus Train	SCOT Unit Incinerator, 4311		2.7	2,459.0	28.0							Malfunction

Phillips 66 Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
11/6/03	Unit 34 Tail Gas Treat Unit	H ₂ S Emergency Flare, 66FL6		4.0	2,024.0	20.7		0.0					Malfunction
11/6/03	Unit 34 Tail Gas Treat Unit	SRU Incinerator, 34I1		4.9	314.0	3.4							Malfunction
10/30/03	North Off Gas Compressor	ARDS HC Flare, 66FL12		4.0	2,120.0	23.0		3.0					Maintenance
10/20/03	Unit 43 SRU	SCOT Unit Incinerator, 43I1		60.0	2,359.0	26.0							Startup
10/14/03	Unit 29 Main Air Blower	Refinery CAT Flare, 66FL3		6.1	107.0	1.0	41.0	8.0	98.0				Malfunction
10/14/03	Unit 29 Main Air Blower	U29 CO Boiler Stack, 85B1	55%	5.9			83,838.0					356lbs ammonia	Malfunction
10/3/03	Unit 20 CO Boiler	U29 CO Boiler Stack, 85B1	65%	0.7									Maintenance
10/2/03	Unit 44	ARDS Emergency Sulfur Flare, 66FL13		648.0	65,348.0	710.0	479.0	45,620.0				174lbs ammonia	Shutdown
10/2/03	Unit 43 SRU	SCOT Unit Incinerator, 43I1		72.0	1,683.0	18.0							Shutdown
9/26/03	Unit 45	ARDS HC Flare, 66FL12		132.0	3,000.0	35.0						Methyl mercaptan	Shutdown
9/26/03	Unit 45	SCOT Unit Incinerator, 43I1		0.0	18.0	0.2							Shutdown
9/24/03	Air Conditioner Failure	U29 CO Boiler Stack, 85B1	60%	9.1			24,000.0					525lbs ammonia	Malfunction
9/24/03	Air Conditioner Failure	Refinery CAT Flare, 66FL3		9.5	2,300.0	25.0	875.0	171.0	2,075.0			525lbs ammonia	Malfunction
9/24/03	Air Conditioner Failure	U29 CO Boiler Stack, 85B1	60%	8.0			24,000.0					525lbs ammonia	Malfunction
9/17/03	Low Pressure Cold Light Fractionator Feed Exchanger	ARDS HC Flare, 66FL12		15.0			859.0	168.0					Malfunction
9/5/03	Unit 34 SRU & TGTU	SRU Incinerator, 34I1		18.1	61.0	0.7							Startup
8/29/03	Unit 29 CO Boiler Stack	U29 CO Boiler Stack, 85B1	100%	1.0									Maintenance
8/29/03	Unit 34 SRU & TGTU	SRU Incinerator, 34I1		155.6	968.0	10.5							Shutdown
8/9/03	Acid Gas Compressor	NGL Non-Corrosive Flare		1.7	1,242.0	12.7		0.2					Malfunction
8/9/03	Unit 34 SRU & TGTU	SRU Incinerator, 34I1		1.7	40.0	0.4							Malfunction

Phillips 66 Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
8/8/03	ARDS Derrick Flare Signal Pressure Gauge	ARDS Emergency Sulfur Flare, 66FL13	100%	3.0	2,118.0	22.8		0.5					Maintenance
7/24/03	Column 43	NGL Non-Corrosive Flare, 66FL4	100%	6.3			1,000.0	139.0	3,958.9	22.4			Malfunction
7/22/03	Unit 11	NGL Non-Corrosive Flare, 66FL4		2.0	58.5		190.0	26.3	687.6	4.3			Shutdown
7/20/03	Column 19 Accumulator	NGL Non-Corrosive Flare, 66FL4	100%	0.3	0.1		38.0	5.0	323.3	0.9			Malfunction
7/5/03	Tank R29	Unit 2 Fugitive, F-2		0.6					566.0			Toluene	Malfunction
7/4/03	Unit 34A Sulfur Train	ARDS Emergency Sulfur Flare, 66FL13	100%	32.0	371.0	4.0						1lb ammonia	Malfunction
7/4/03	Unit 43A Sulfur Train	SCOT Unit Incinerator, 43I1	100%	0.5	1,205.0	13.0							Malfunction
7/2/03	Unit 11 Power Failure	SRU Incinerator, 34I1	100%	2.3	29.0	0.3							Malfunction
7/2/03	Unit 11 Power Failure	Non-Corrosive Flare, 66FL4	100%	0.0	13,277.0	144.0	184.0	25.0	1,560.2	4.1			Malfunction
6/27/03	CO Boiler	U29 CO Boiler Stack, 85B1		2.1			22,681.0					150lbs ammonia	Malfunction
5/31/03	Naptha Hydro-desulfurization & Reformer	Refinery East HC Flare, 66FL1		33.0	119.0	1.4	80.0	16.0	173.0				Shutdown
5/30/03	Unit 34 SRU & TGTU	NGL Non-Corrosive Flare, 66FL4	100%	1.4	2,987.0	14.3							Malfunction
5/30/03	Unit 34 SRU & TGTU	SRU Incinerator, 34I1		0.0	50.0	1.0							Malfunction
5/28/03	Tank 5505	Tank Storage, 5505		151.0					17,200.0				Maintenance
5/18/03	Unit 34 SRU & TGTU	SRU Incinerator, 34I1		24.5	4.0								Startup
5/16/03	Interstage Accumulator	Refinery CAT Flare, 66FL3	100%	5.1	6,386.0	69.0	2,429.0	476.0	5,761.0				Malfunction
5/14/03	Unit 34 Turnaround	NGL Non-Corrosive Flare, 66FL4	100%	0.7	3,823.0	39.0		0.1					Maintenance
5/2/03	Unit 34 SRU & TGTU	H ₂ S Emergency Flare, 66FL6	100%	25.1	6,642.0	67.8		0.1					Shutdown

Phillips 66 Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
4/26/03	Butamer Unit	NGL Non-Corrosive Flare, 66FL4	100%	1.4	0.3		92.0	12.0	741.8	2.0			Malfunction
4/26/03	South Off Gas	ARDS HC Flare, 66FL12		0.8	1,000.0	20.0							Malfunction
4/24/03	Unit 40 Valve	U40 CO Boiler Stack, 85B2	50%	0.1									Malfunction
4/14/03	Tank 4030	Tank Storage, 4030		168.0					10,244.0	784.0			Maintenance
4/8/03	Unit 34 SRU	H ₂ S Emergency Flare, 66FL6	100%	4.6	939.0	9.6							Malfunction
4/8/03	Unit 34 SRU	SRU Incinerator, 34I1	100%	4.5	109.0	1.2							Malfunction
3/26/03	Unit 34A Sulfur Train	SCOT Unit Incinerator, 43I1	100%	1.3	19.5	0.2							Malfunction
3/26/03	Unit 44 Sour Water Stripper Feed Surge Drum	ARDS Emergency Sulfur Flare, 66FL13	100%	1.3	227.5	2.5							Malfunction
3/14/03	Pentane Stabilizer Overhead	NGL Non-Corrosive Flare, 66FL4	100%	1.2	2.0	0.1	630.0	83.0	5,068.8	13.0			Malfunction
3/12/03	NGL Column 134 Cyclo-hexane	NGL Non-Corrosive Flare, 66FL4	100%	8.0			1,199.0	166.0	10,159.0				Malfunction
3/11/03	Unit 82 Rich Amine Flash Tank	H ₂ S Emergency Flare, 66FL6	100%	0.8	209.0	8.0	2.0		5.0				Malfunction
2/28/03	Unit 34	SRU Incinerator, 34I1		3.0	88.0	1.0							Startup
2/17/03	Unit 34 SRU & TGRU	H ₂ S Emergency Flare, 66FL6		3.5	490.0	5.0		2.0					Malfunction
2/17/03	Unit 34 SRU & TGRU	SRU Incinerator, 34I1		0.0	102.0	1.0		2.0					Malfunction
2/15/03	Unit 40 Wet Gas Compressor	Refinery CAT Flare, 66FL3		16.1	1,168.0	13.0	7,141.0	87.0	914.0				Malfunction
2/15/03	U29 CO Boiler Stack, 85B1		15%	0.0									Maintenance
2/13/03	Unit 34 Amine Still	SRU Incinerator, 34I1		29.1	258.0	3.0		2.0					Shutdown
2/11/03	Unit 40 CO Boiler	U40 CO Boiler Stack, 85B2	45%	2.8			82,000.0					210lbs ammonia	Malfunction
2/7/03	Unit 34 Incinerator Stack (power loss across street)	NGL Non-Corrosive Flare, 66FL4	100%	4.7	1.0		28.0	4.0	141.0				Malfunction

Phillips 66 Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
2/7/03	Unit 34 Incinerator Stack (power loss across street)	SRU Incinerator, 34I1		0.0	316.0	3.0							Malfunction
2/7/03	Unit 11 Propane Compressor	NGL Non-Corrosive Flare, 66FL4	100%	0.3			18.0	3.0	339.0				Malfunction
2/5/03	Unit 29	Unit 29 COB and ESP, 85B1	70%	2.5									Maintenance
2/4/03	Unit 41 Reformer Furnace	SCOT Unit Incinerator, 43I1		5.0	89.0	1.0							Malfunction
2/4/03	Unit 34 SRU	Unit 34 SRU, 34I1	100%	8.4	4,996.0	54.0		2.0					Malfunction
2/4/03	Unit 41 Reformer Furnace	ARDS Emergency Sulfur Flare, 66FL13	100%	5.0	2,006.0	21.0		3.0				5lbs ammonia	Malfunction
2/3/03	Unit 36	HDS Unit Charge Heater, 36H1	100%	72.0									Maintenance
2/1/03	Unit 29 CO boiler	U29 CO Boiler Stack, 85B1	63%	0.2									Maintenance
2/1/03	Unit 36	Refinery East HC Flare, 66FL1		290.0	2,460.0	28.0	56.0	11.0	29.0				Shutdown
1/24/03	Unit 44 Refinery Stripper	ARDS Emergency Sulfur Flare, 66FL13		48.0	2,593.0	53.0						25lbs ammonia	Maintenance
TOTALS				2,486.1	243,756.0	1,757.4	252,401.0	47,523.7	80,517.2	1,487.8			

PREMCOR REFINING PORT ARTHUR REFINERY • Port Arthur, Jefferson County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO2	H2S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/25/04	SRU 544	flare 5		0.6	28,083.5		38.4	5.3					malfunction
1/25/04	SRU 544	flare 5		0.6		305.2							malfunction
1/23/04	CRU	flare 18		12.0			45.7	6.3	108.4				startup
1/21/04	Sulfur Train Shutdown	flare 5		0.2	4,897.0		6.7	0.9					malfunction
1/18/04	Incinerator	incinerator		4.3	1,532.2								malfunction
1/18/04	Incinerator	SCOT		4.3	1,532.2								malfunction
1/18/04	SRU 544	flare 5		24.0	363.0								startup
1/8/04	SRU	flare 5		0.1	631.7		0.9	0.1					malfunction
1/7/04	AVU	flare 19		0.3	2,951.7		8.7	1.2					malfunction
1/6/04	AVU 146	flare 19		0.4	992.3		6.2	0.9					malfunction
1/6/04	SRU	flare 5		0.2	4,332.7		5.9	0.8					malfunction
1/6/04	LHSU-6341	twr 6341		0.2					30,029.2				malfunction
1/5/04	AVU 146	flare 19		0.7	9,022.1	98.0	56.8	7.9	204.4				malfunction
1/5/04	Valve	F-o2 flare		6.0			32.8	4.6	238.8				malfunction
1/5/04	Valve	flare 23		6.0					169.7				maintenance
12/30/03	SRU 544	flare 5		48.0		51.8							maintenance
12/30/03	CRU	flare 18		48.0	13.1	0.1	125.8	17.4	292.2				maintenance
12/29/03	GFU 244	flare 2		12.0		13.6			24.1				shutdown
12/29/03	GFU 244	flare 2		24.0	1,256.4		24.1	2.9					shutdown
12/20/03	HCU 942	flare 23		17.0			395.3	54.7					malfunction
12/20/03	HCU 942	HCU 942		15.0		251.9			435.1				malfunction
12/15/03	SRU 545	flare 5		4.3	39,971.7		54.6	7.6					malfunction
12/15/03	SRU 545	SRU 544		4.3		434.4			1.1				malfunction
12/8/03	Dump Valve	flare 23		0.5	811.0	8.8	4.0	1.0	35.5				malfunction
12/5/03	Compressor	flare 19		3.6	2,842.8	30.9	558.6	69.7	1,042.0				malfunction
12/5/03	Compressor	flare b103		3.6	3,593.9	39.1	706.2	88.0	1,665.0				malfunction
11/23/03	Compressor	flare b103		0.7		19.7			774.7				malfunction
11/23/03	Compressor	22 flare	50%	4.0	69,207.0		1,256.0	96.0					malfunction
11/23/03	Compressor	FCC-1241		4.0		750.0			375.2				malfunction
11/7/03	SGRU 1242	cooling twr		168.0					1,744.8				malfunction
11/6/03	SRU 545	incinerator	50%	5.7	271.7		104.1	13.1					malfunction

Premcor Refining Port Arthur Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO2	H2S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
11/6/03	SRU 545	flare 5	20%	0.5	15,467.4	168.1	21.1	2.7	0.4				malfunction
10/29/03	SRU 545	F-545H2S		0.9	616.0	353.6	21.6						malfunction
10/29/03	SRU 543	SRU 543		5.1	1,460.0	48.0							malfunction
10/29/03	SRU 544	SRU 544		0.0	10,086.3	109.6	13.7	2.0					malfunction
10/29/03	Recycle Hydrogen Compressor	E-23 flare		2.5		240.8			173.7				malfunction
10/29/03	Recycle Hydrogen Compressor	E-23 flare	30%	0.9	22,155.0		525.9	72.8					malfunction
10/27/03	Combustion Air Blower	SRU 545	30%	0.0	2,000.0								startup
10/22/03	SRU 545	scot III	30%	2.3	1,280.3	1.0	83.5	7.0					malfunction
10/16/03	42 boiler	boiler house		168.0			5,470.0	5,859.9	51.3			PM: 183.06	maintenance
10/14/03	Power Outage	E-01-942	25%	1.6									malfunction
10/14/03	Power Outage	E-01 SCOT		0.0	77.8	90.0							malfunction
10/14/03	Power Outage	E-03 SCOT		0.0	2,900.5	90.0	223.2	358.5					malfunction
10/14/03	Power Outage	E-23 flare	30%	0.0	75,994.8	825.8	182.3	263.9	2,479.6				malfunction
10/14/03	Power Outage	Flare 22	50%	0.0	2,061.6	1.5	605.0	83.5	67.9				malfunction
10/13/03	43 boiler	boiler house		96.0			3,125.7	3,348.4	29.3			PM: 104.6	maintenance
10/3/03	Docks	marine combuster	100%	1.1			20.2	20.2	68.9			PM 7.6;	malfunction
9/12/03	SRU 544	SRU 544		9.0	388.1								shutdown
9/12/03	SRU	SRU 544		9.0	388.0								startup
9/9/03	SRU 545	E-02 Scot		2.0	912.5								malfunction
9/9/03	SRU 544	E-01Scot		2.0	474.3								malfunction
9/9/03	SRU 544	E-05-Flare		2.0	28,353.6	308.0	38.7	7.1	0.7				malfunction
9/4/03	Debutanizer	SGRU 1242		25.0					361.3				malfunction
8/3/03	SRU	SRU 543		37.0	1,516.0								startup
8/1/03	RTO	RTO		1.1					118.4	37.1			malfunction
7/24/03	SRU 544	E-05 flare		0.2	12,903.8	138.9	5.2	0.7	14.9				malfunction
7/20/03	SRU 543	SRU 543		462.0		4.9							maintenance
7/20/03	SRU 543	SRU 543		65.0	6,592.9								shutdown
7/19/03	SRU	SRU 545		24.0	123.6								startup
7/19/03	SRU	sulfur recovery unit		24.0	123.6								startup
7/13/03	SRU 545	SRU 545 & SWS 8747		24.0	48.0								shutdown

Premcor Refining Port Arthur Refinery, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO2	H2S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
7/12/03	HCU 942	Hydrotreating flare		72.0			1,244.0	172.0	61.1				shutdown
6/23/03	RTO	waste H2o treating system		96.0					6,885.5	1,398.8			maintenance
6/19/03	RTO	WWTU 8742		21.3					2,450.7	630.6			malfunction
6/12/03	SRU boiler tube	Incinerator Stack		59.0	4,090.0								shutdown
6/3/03	Volt Buss	F-19 flare		1.0	295.9								malfunction
5/23/03	Compressor	F20 Flare		12.0	18,405.0			144.0	2,976.0				startup
5/23/03	Compressor	FB103 Flare		12.0	1,012.0			24.0					startup
5/18/03	Compressor	flare No. 20		127.0	18,405.0			144.0	2,976.0			nitric oxide 144	shutdown
5/18/03	Compressor	flare No. 22		127.0	506.0			12.0	135.0			nitric oxide 12	shutdown
5/12/03	High Pressure Sperator	flare E-02		0.1	5,041.6	54.7	63.0	8.7	16.0				malfunction
4/12/03	Wet Gas Service Line	F-243		12.0		0.1	0.0		10.1				malfunction
4/7/03	RTO	WWTU 8742		1.9					116.7	27.2			malfunction
4/7/03	Bracket	Spill		4.3								haz waste: 20 bbls	*****
3/13/03	Vacuum Heater Charge Pump	AVU-146		2.5					272.5				malfunction
3/4/03	Wash Water Tower	HFAV-443		0.5			14.3						malfunction
3/3/03	SRU 545	pit vent system		22.0		0.3							maintenance
2/21/03	SRU 544	product sulfur vent system		24.0		0.3							maintenance
2/9/03	Flare system	SRU 543		0.0	500.0	100.0			100.0				startup
2/3/03	Flare system	SRU 543		0.0	500.0	100.0			100.0				shutdown
1/31/03	HFAU- 433	HFAU- 433		0.0	500.0	100.0			100.0				startup
TOTALS				1,982.0	407,485.6	4,739.0	15,088.3	10,909.7	56,706.2	2,093.7	0.0		

SACROC CO₂ TREATMENT PLANT • Snyder, Scurry County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/31/04	C6, C16	GP178		10.8	605.0	7.0	480.0	88.0	693.0				Maintenance
1/29/04	C5 3rd stage cylinder	GP178		1.3	634.0		503.0	92.0					Malfunction
1/28/04	C16 Compressor	GP178		2.0	1,924.0		1,526.0	281.0					Malfunction
1/27/04	Compressor C10	CC178		3.1	1,045.0		829.0	152.0					Malfunction
1/21/04	Cynara Plant 1	GP178		6.4	1,009.0	11.0	814.0	150.0	1,164.0				Malfunction
1/19/04	C15	GP178		2.1	291.0	3.0	235.0	43.0	334.0				Malfunction
1/18/04	unknown	GP178		7.6	271.0	3.0	219.0	40.0	313.0				Malfunction
1/17/04	C15	GP178		8.1	333.0	4.0	268.0	49.0	384.0				Malfunction
1/16/04	C18	GP178		1.5	437.0	5.0	352.0	65.0	504.0				Malfunction
1/15/04	C13	GP178		7.4	937.0	10.0	756.0	139.0	1,080.0				Malfunction
1/14/04	C10	GP178		8.0	346.0	4.0	279.0	51.0	399.0				Malfunction
1/8/04	C12 Compressor Valve	GP178		9.0	2,183.0	24.0	1,760.0	323.0	2,515.0				Malfunction
1/8/04	GP178	GP178		129.0	5,962.0	65.0	4,807.0	883.0	6,868.0				Malfunction
1/7/04	GP178 Cooling Tower Pump	GP178		8.0	462.0	5.0	372.0	68.0	532.0				Malfunction
1/6/04	178 Recompression	GP178		0.6	1,185.0	13.0	956.0	176.0	1,366.0				Malfunction
1/5/04	Inlet and Recompression	GP178		3.2	291.0	3.0	235.0	43.0	334.0				Malfunction
1/5/04	Inlet and Recompression	GP178		15.2	3,283.0	36.0	2,647.0	487.0	3,783.0				Malfunction
12/29/03	C14, K600, C15, C18	GP178		17.5	3,833.0	42.0	3,090.0	568.0	4,416.0				Malfunction
12/26/03	Reinjection Compressors	GP178		6.0	866.0	9.0	698.0	128.0	998.0				Malfunction
12/24/03	C11 Compressor	GP178		2.0	257.0	3.0	207.0	38.0	296.0				Malfunction
12/23/03	Cynara Membrane	GP178		11.7	778.0	8.0	627.0	115.0	897.0				Malfunction
12/23/03	Cynara Membrane	GP178		0.0	863.0	9.0	696.0	128.0	994.0				Malfunction
12/16/03	C13, C14	GP178		4.8	509.2	5.5	609.3	153.0	453.3				Malfunction
12/14/03	C15- C18	GP178		2.5	794.4	8.6	950.6	238.7	707.1				Malfunction
11/26/03	C13 & C14 Injection Compressors	CC178		83.8	34,581.4	375.5			30,862.4			CO2: 25371489.2	Malfunction

SACROC CO₂ Treatment Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
11/25/03	GP176 Pretreatment Heater	GP178		2.0	996.1	10.8	1,127.6	283.1	834.0				Malfunction
11/23/03	Fisher Control Valve	GP178		2.0	910.6	9.9	1,030.8	258.8	762.4				Malfunction
11/22/03	Reinjection Compressors	GP178		4.0	1,883.3	20.4	2,132.0	535.3	1,576.9				Malfunction
11/21/03	Inlet Compressor	GP178		2.9	1,245.6	13.5	1,410.1	353.4	1,043.0				Malfunction
11/20/03	RTD	GP178		3.6	274.4	3.0	310.7	78.0	230.8				Malfunction
11/17/03	Compressors	IC176		12.0	7,489.0	81.3	2,035.9	511.2	6,270.3				Maintenance
11/6/03	Cynara Membrane Plant	Vent Stack 1		0.6		145.1			594.1				Shutdown
10/30/03	Inlet Scrubber V-1000	CC178		0.5		86.5			76,655.5				Malfunction
10/29/03	IC176K800	Flare 176		8.0	7,062.6	76.7	40,711.7	10,222.4	66,179.8				Malfunction
10/24/03	ONCOR	Vent Stack 1		1.5		220.4			23,628.0				Shutdown
10/22/03	ONCOR	Flare 176		48.0	23,599.4	256.2	27,317.8	8,859.3	20,866.3				Shutdown
10/22/03	ONCOR	Flare 178		0.0	8,892.5	96.5	10,293.7	2,584.7	8,051.1				Shutdown
10/22/03	All	Flare 176		4.0	9,880.6	107.3	2,871.8	2,871.8	8,945.6				Shutdown
10/22/03	All	Flare 178		0.0	9,880.6	107.3	2,871.8	2,871.8	8,945.6				Shutdown
10/20/03	Inlet and Recompression Stations	CC178 Vent		5.0		605.0			2,479.2				Malfunction
10/20/03	Inlet and Recompression Stations	Flare		5.0	6,270.4	68.1	7,258.4	1,822.5	5,677.0				Malfunction
10/20/03	Inlet and Recompression Stations	Flare		0.0	6,270.4	68.1	7,258.4	1,822.5	5,677.0				Malfunction
10/15/03	IC176K600	CC178		1.0		137.9			14,658.9				Malfunction
10/14/03	Liquid Pipeline Valve	CC176		15.0	5,814.3	63.1	6,730.5	1,689.7	5,264.2				Malfunction
10/13/03	Snyder	CC178 Vent		11.0		2,224.2			236,417.7				Shutdown
10/13/03	GP176	CC178 Vent		6.0		1,281.9			136,110.2				Malfunction
10/11/03	GP176	CC178 Vent		14.0		2,116.0			224,918.5				Malfunction
10/10/03	GP176	CC178 Vent		13.5		999.5			106,236.0				Malfunction
10/8/03	C-14 & C-16	CC178 Vent		4.0		227.7			24,182.3				Malfunction
10/7/03	C14	CC178 Vent		48.0		455.4			48,404.5				Shutdown
10/3/03	C13 compressor	CC178 Vent		5.5		390.5			39,952.4				Shutdown

SACROC CO₂ Treatment Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
10/2/03	PSV	CC178 Vent		4.0		532.7			54,502.4				Malfunction
10/1/03	Gas Processing Plant	CC178 Vent		11.0		1,282.2			131,151.6				Malfunction
9/23/03	Thermal Oxidizer	CC17 Vent		1.0		252.6			25,845.6				Malfunction
9/11/03	CC176K800	CC178 Vent		0.5		174.2			17,817.1				Malfunction
8/27/03	CC178-C17, C16	CC178 Vent		0.5		78.2			5,142.7				Malfunction
2/28/03	Incinerator	CC178		0.5	302.8			83.3					Malfunction
2/26/03	Incinerator	CC178 Compressor		1.0	629.7			173.2					Malfunction
TOTALS				607.7	155,082.1	12,845.7	137,277.0	39,519.7	1,368,913.3	0.0	0.0		

SID RICHARDSON CARBON • Borger, Hutchinson County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/26/04	unit 2 off gas fan	upset vent		1.8		630.0	18,018.0	5	340.0			PM: 17	emissions event
1/7/04	#2 off gas	upset vent		1.1		251.0	8,014.0	2	151.0			PM: 8	emissions event
9/3/03	#4 off gas	unit 3		1.9		789.0	41,466.0	6	2,874.0			PM: 21	emissions event
8/29/03	unit 1	unit 1		0.9		148.0	18,337.0	1	200.0			PM: 4	emissions event
8/29/03	#4 off gas	unit 2		0.9		83.0	4,777.0	1	115.0			PM: 2	emissions event
8/29/03	#4 off gas	unit3		1.0		404.0	21,200.0	3	1,469.0			PM: 10	emissions event
8/29/03	#2 boiler	unit4		3.3		815.0	22,633.0	5	891.0			PM: 18	emissions event
8/26/03	wet gas pellet area	unit 4		1.3		182.0	4,986.0	1	196.0			PM: 4	emissions event
8/25/03	wet gas pellet area	unit 2		1.0		366.0	21,210.0	3	515.0			PM: 10	emissions event
8/23/03	#1 off gas fan	unit 1		51.6		15,329.0	672,722.0	116	20,763.0			PM: 415	emissions event
7/24/03	#1 off gas fan	unit 2		0.7		120.0	3,757.0	1	71.0			PM: 4	emissions event
7/2/03	wet gas pellet area	unit 3		3.9		819.0	54,584.0	107	2,887.0			PM: 26	emissions event
6/24/03	#4 off gas	unit 4		72.0		13,769.0	448,336.0	98	17,651.0			PM: 353	emissions event
6/5/03	#2 boiler	unit 4		30.2		12,519.0	686,267.0	95	47,563.0			PM: 340	emissions event
6/3/03	#1 off gas fan	unit 1		44.8		14,478.0	814,052.0	109				PM: 392	emissions event
6/3/03	#1 off gas fan	unit 1		45.8		14,478.0	814,052.0	109	19,569.0			PM: 392	emissions event
5/23/03	#3 off gas	unit 3		10.5		163.0	8,844.0	1	468.0			PM: 4	emissions event
5/11/03	electric generator	unit 4		120.4		22,101.0	698,198.0	137	34,077.0			PM: 486	emissions event
5/11/03	electric generator	unit 4		144.0		32,771.0	817,754.0	174	34,508.0			PM: 621	maintenance
5/11/03	electric generator	unit 1		144.0		19,405.0	741,813.0	125	22,406.0			PM: 448	maintenance
5/11/03	electric generator	unit 2		98.5		28,658.0	847,142.0	224	15,984.0			PM: 799	maintenance
5/11/03	electric generator	unit 3		32.4		10,323.0	544,903.0		37,766.0			PM: 271	maintenance
5/7/03	#2 boiler	unit 3		2.2		22,350.0	32,248.0	4	22,350.0			PM: 16	emissions event
5/7/03	#2 boiler	unit 2		2.2		256.0	7,364.0	2	139.0			PM: 7	emissions event
5/1/03	#2 boiler	unit 1		3.0		821.0	43,169.0	6	1,038.0			PM: 21	emissions event
5/1/03	#2 boiler	unit 2		32.3		8,149.0	438,678.0	59	23,200.0			PM: 211	emissions event
5/1/03	#2 boiler	unit 1		10.5		8,149.0	438,678.0	59	23,200.0			PM: 211	emissions event
4/30/03	#2 boiler	unit 2		8.0		1,739.0	87,166.0	12	4,610.0			PM: 42	emissions event
4/30/03	#2 boiler	unit 3		2.0		1,739.0	87,166.0	12	4,610.0			PM: 42	emissions event
4/23/03	#3 off gas	unit 3		17.5		5,102.0	226,745.0	31	11,991.0			PM: 109	emissions event
4/23/03	#3 off gas	unit 1		5.5		3,306.0	3,306.0	1	102.0			PM: 2	emissions event
4/21/03	#1 boiler	unit 2		3.0		640.0	16,975.0	4	320.0			PM: 16	emissions event

Sid Richardson Carbon, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
4/21/03	#1 boiler	unit 1		3.0		981.0	38,655.0	7	1,193.0			PM: 24	emissions event
4/21/03	#1 boiler	unit2		3.0		640.0	16,975.0	4	320.0			PM: 16	emissions event
4/7/03	#1 boiler	vent 1 & 2 bag filter		0.0		66,126.0	2,909,364.0	274	106,482.0			PM: 1692	emissions event
3/21/03	#3 off gas	borger		1.3		135.0	9,214.0	1	487.0			PM: 4	maintenance
3/6/03	#4 off gas blower	borger		0.0		108.0	6,111.0	1	323.0			PM: 3	maintenance
2/24/03		upset vent 4 bag filter		0.4		149.0	8,419.0	1	445.0			PM: 4	emissions event
2/12/03	#2 boiler	upset vent		1.0		179.0	8,075.0	1	249.0			PM: 5	emissions event
TOTALS				906.5	0.0	309,170.0	11,691,373.0	1,801.4	461,523.0	0.0	0.0		

VALERO CORPUS CHRISTI REFINERY EAST PLANT • Corpus Christi, Nueces County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/21/04	Steam Assist Line to Flare	Complex 8 Flare (EP-Flare-1)	15	6.0									Opacity Event
12/17/03	Hydrocracker Pump	Hydrocracker Flare	15	29.6				64.7					Malfunction
11/24/03	Vacuum Unit	Complex 7 Flare (WP-Flare-1)		7.4	11,721.7	119.6	98.7	13.7	136.1				Maintenance
11/18/03	Vacuum jet compressor	Complex 7 Flare (WP-Flare-1)		8.6	13,622.5	139.0	114.6	15.9	158.1				Maintenance
11/05/03	Complex 6 power failure	SRU-2 Flare		173.7	22,947.5	248.8	30.6	6.0					Malfunction
11/05/03	Power failure	Hydrocracker Flare		173.7	670.8	7.3	3,265.4	640.8	57.1				Malfunction
11/05/03	Power failure	SRU-1 Incinerator		173.7	3,845.5	41.7	5.1	1.0					Malfunction
11/5/03	Complex 6 power failure	Complex 7 Flare		173.7	573.0	6.2	17.1	2.4	32.6				Malfunction
11/5/03	Complex 6 power failure	Complex 7 Flare		173.7	808.9	8.8	12.8	1.8	8.9				Malfunction
11/5/03	Complex 6 power failure	Complex 7 Flare		173.7	2,501.6	27.1	44.4	6.2	28.3				Malfunction
11/5/03	Complex 6 power failure	Complex 7 Flare		173.7	20,366.9	207.8	171.4	23.7	236.4				Malfunction
10/26/03	Overhead receiver reflux pump	Complex 7 Flare (WP-Flare-1)		0.9	1,643.0	17.8	4.8	0.9	2.1				Malfunction
10/6/03	Javelina Plant Shutdown	Complex 7 Flare (WP-Flare-1)		912.0	142.3	1.5	12,944.3	2,005.2	19,130.9				Malfunction
10/2/03	Vacuum jet compressor	WP-Flare-7		2.2	3,795.2	38.7	31.9	4.4	44.1				Malfunction
9/23/03	Vacuum jet compressor	Complex 7 Flare (WP-Flare-1)		3.8	6,555.3	66.9		7.6	76.1				Malfunction
9/17/03	SRU No. 2	SRU No. 2 Incinerator		7.0	561.0	0.6							Malfunction
9/6/03	Vacuum jet compressor	WP-Flare-1		2.8	4,865.0	49.6			56.5				Malfunction
7/24/03	Vacuum jet compressor	WP-Flare-1		72.6	101,451.6	1,035.2	853.8	118.2	1,177.7				Malfunction
7/21/03	Vacuum jet compressor	WP-Flare-1		30.4	42,481.1	433.5	357.5	49.5	493.1				Malfunction
6/9/03	Coker - change of feedstock	Complex 7 Flare (WP-Flare-1)		1.2	721.5	7.8	12.8	1.8	8.2				Malfunction
6/3/03	FCC Unit - soot blowing	FCC CO boiler stack	46	0.1									Opacity Event

Valero Corpus Christi Refinery East Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
5/26/03	Vacuum jet compressor	Complex 7 Flare (WP-Flare-1)		8.9	11,850.0	120.9	99.7	13.8	137.5				Malfunction
5/21/03	Vacuum jet compressor	WP-Flare-1		8.8	4,332.0	44.2	36.5	5.0	50.3				Malfunction
5/7/03	Storage tank 99	ship		36.0					9,603.8	75.9			Malfunction
4/9/03	Vacuum Unit Compressor	WP-Flare-1		5.3	7,448.0	76.0	62.7	8.9	86.5				Malfunction
3/4/03	CO Boiler	Boiler bypass stack		3.0			11,081.8	87.8					Malfunction
2/26/03	Vacuum jet compressor	Complex 7 Flare (WP-Flare-1)		97.5	156,900.2	1,601.2		164.5					Malfunction
2/15/03	Vacuum jet compressor	WP-Flare-1		3.7	9,179.5								Malfunction
2/7/03	Vacuum jet compressor	West plant Flare (WP-Flare-1)		35.8	22,054.7	245.9		38.0					Malfunction
2/3/03	Coker gas compressor	WP-Flare-1		0.8	4,951.0			11.0					Malfunction
TOTALS				2,500.0	455,989.6	4,546.3	29,245.9	3,293.0	31,524.1	75.9	0.0		

VALERO CORPUS CHRISTI REFINERY WEST PLANT • Corpus Christi, Nueces County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/31/04	HR unit	Ground flare		0.4			5.7	0.4	2.3				Shutdown
1/31/04	HR unit	Ground flare		63.0	9.1	0.1	6,248.6	784.9	1,738.8				Shutdown
1/31/04	HRU	CRU heater stack		8.0			0.2	19.4					Shutdown
1/23/04	BUP Turnaround	MTBE flare		35.8			68.3	9.5	197.9				Startup
1/23/04	BUP unit	MTBE flare	30	4.0									Startup (opacity)
1/23/04	BUP Turnaround	MTBE Flare		35.8			38.3	22.6	31.8				Startup
1/10/04	BUP unit	MTBE flare		1.2			41.9	5.8	99.0				Shutdown
12/18/03	Recycle compressor	Ground flare		4.0			1,823.7	540.3	1,364.5				Malfunction
12/17/03	Tank	Tank vent		24.0					144.7				Malfunction
12/16/03	HDS Unit	SMR Water Stack		3.0			1,690.2	1,458.3					Malfunction
12/14/03	HDS recycle compressor	Acid gas flare		0.6	1,305.5	14.2	2.6	0.3					Malfunction
12/14/03	HDS Recycle compressor	Main flare		3.6	9,363.6	101.5	494.5	151.8	361.6				Malfunction
12/14/03	HDS recycle	Main Flare		117.8	50,870.5	551.5	5,775.8	51.1	384.0				Malfunction
12/14/03	HDS Recycle	Main Flare		118.4	58,854.9	638.1	882.2	146.6	1,684.8				Malfunction
12/14/03	HDS Drum	Acid Gas Flare		0.4	817.4	8.9	1.6	0.2	0.1				Malfunction
12/12/03	Amine flash drum	Acid gas flare		0.4	0.1	0.0							Malfunction
12/12/03	Compressor	Ground Flare		4.0	0.9	0.0	479.5	259.1	577.3				Malfunction
12/10/03	High stage compressor	CRU heater stack		13.0				1,235.5					Malfunction
12/6/03	PSA feed valve	SMR heater stack		8.0			4.7	463.8					Malfunction
11/18/03	Glycol exchange & Javalina plant shut down	Ground flare		295.5	8.3	0.1	8,731.5	1,249.2	2,018.1				Malfunction
11/18/03	Glycol exchange & Javalina plant	CRU heater stack		295.5			61.8	4,697.8					Malfunction
10/28/03	Fin fan fan belt	Main flare		0.2	2,624.2	28.5	9.1	1.1	0.7				Malfunction
10/16/03	HDS offgas compressor	Main flare		1.4	778.0	8.4	24.6	3.8	48.7				Malfunction
10/14/03	Javalina Plant shut down	CRU heater stack		760.7			94.6	10,683.9					Malfunction
10/12/03	HSD, SMR & SWS	Ground flare		38.0	1.8	0.0	484.1	275.5	559.3				Startup
10/12/03	HDS, SMR & SWS	Main flare		38.0	9,786.5	106.1	420.8	69.1	64.5				Startup
10/12/03	HDS, SMR & SWS	Main flare		38.0	1,146.6	12.4	259.2	6.3	10.2				Startup

Valero Corpus Christi Refinery West Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
10/12/03	HDS, SMR & SWS	Main flare		38.0	2,676.1	29.0	614.2	86.4	190.0				Startup
10/12/03	HDS, SMR & SWS	Main flare		38.0	2,067.0	22.4	943.0	152.3	476.9				Startup
9/26/03	Hydrogen make up compressor	Main flare		134.0			450.1	1,101.3	93.4				Shutdown
9/26/03	HDS, SMR & HDS Amine Unit	Acid gas flare		62.0	688.3	7.5	1.4	0.2					Shutdown
9/26/03	HDS, SMR & HDS Amine Unit	Ground flare		62.0	17.0	0.2	11,174.6		5,017.6				Shutdown
9/26/03	HDS, SMR & HDS Amine Unit	Main flare		62.0	4,948.5	53.7	235.8	64.2	142.0				Shutdown
9/26/03	HDS, SMR & HDS Amine Unit	Main flare		62.0	1,355.0	14.7	110.6	1.4	10.2				Shutdown
9/26/03	HDS, SMR & HDS Amine Unit	Main flare		62.0	3,969.6	43.0	144.9	22.1	249.6				Shutdown
9/26/03	Hydrogen make-up compressor	Main flare		134.0			2,269.6	5,685.6	28.6				Shutdown
9/15/03	Coaxial cable cut	Main flare		51.3	825.6	9.0	2.9	0.3	0.2				Malfunction
9/7/03	SMR heater	SMR heater stack		18.0			342.9	336.3					Malfunction
8/30/03	(Not identified)	Flare		2,925.4				171.0					Malfunction
8/22/03	Roof on Tank	Tank 63 vent		18.0					3,924.0	45			Maintenance
8/20/03	NHT	Main flare		234.5			155.0	24.7	235.0				Malfunction
8/20/03	NHT	CRU heater stack		234.5			16.2	742.8					Malfunction
8/8/03	HDS offgas compressor	Ground flare		11.5	0.9	0.0	7,063.6	1,295.0	9,062.9				Malfunction
8/8/03	HDS offgas compressor	Main flare		11.5	2,858.1	31.0	159.5	48.4	115.2				Malfunction
8/8/03	HDS offgas compressor	Main flare		11.5	74,080.7	803.2	4,799.9	74.4	559.3				Malfunction
8/8/03	HDS offgas compressor	Main flare		11.5	23,435.1	254.1	487.7	75.5	935.8				Malfunction
8/6/03	HDS Amine Unit	Main flare		5.4	185.8	2.0	0.0	0.0					Malfunction
8/6/03	HDS Amine Unit	Acid gas flare		5.4	46,271.4	501.7	90.6	10.6	0.0				Malfunction
8/6/03	HDS Amine Unit	Main flare		5.4	13,023.6	141.2	316.6	477.5	918.4				Malfunction
8/6/03	HDS Amine Unit	Acid gas flare		5.4	38,753.8	420.2	77.9	9.1	3.6				Malfunction
8/6/03	HDS Amine Unit	Acid gas flare		5.4	13,351.2	144.8	0.4	3.1	0.3				Malfunction
8/6/03	HDS Amine Unit	Main flare		5.4	7,617.5	81.2	24.7	2.9	2.0				Malfunction
7/30/03	Power loss	Main flare		9.6	5,319.4	55.1	17.6	2.1	1.4				Malfunction

Valero Corpus Christi Refinery West Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
7/30/03	Sulften stripper - power loss	Acid gas flare		9.6	6,532.4	70.8	158.8	22.0	460.7				Maintenance
7/27/03	SMR heater	SMR heater stack		31.0	0.9	0.0	8,592.8	2,019.8	7,184.8				Malfunction
7/23/03	SRU #3	Belco stack		48.0	1,203.6								Malfunction
7/16/03	Flue gas expander	Belco		203.5	4,978.3	19.8	37,551.6	1,116.4	4,614.1				Malfunction
7/15/03	HDS feed	Main flare		52.0	3,035.8	32.6	12.0	1.4	1.5				Malfunction
7/9/03	SMR heater	SMR heater stack		11.0			164.5	177.4	5.8				Malfunction
6/27/03	Steam header	Acid gas flare		0.7	1,612.2	17.5	3.2	0.3	0.2				Malfunction
6/22/03	HDS Amine Unit	Main flare		78.0	7,807.2	47.5	9.2	1.5	0.8				Malfunction
6/17/03	Net gas compressor	Ground flare		52.0			357.8	448.0	2,662.2				Maintenance
6/10/03	SMR unit	SMR heater		40.0			442.1	410.2					Malfunction
6/2/03	Flue gas expander	Belco		9.0			5,586.3						Malfunction
5/16/03	Naptha flush drum	Main flare		11.0	2,520.9	27.3	85.9	9.2	32.7				Malfunction
5/16/03	Waste heat boiler	Halo flare		48.3	1,383.7	14.8	2,168.6	274.4	920.2				Malfunction
5/8/03	Net gas compressor	Ground flare		3.0			987.1	345.4	2,079.9				Malfunction
4/25/03	HOC unit	Main flare		4.0	4,320.1	46.8	15.0	1.7	1.2				Malfunction
4/22/03	Combustion air blower	SRU		1.1	3,990.0								Malfunction
4/8/03	SMR furnace	SMR furnace stack		12.0			21.0	245.4					Malfunction
3/25/03	Compressor motor insulation	Oleflex unit		29.4				171.6					Malfunction
3/11/03	HDS	Acid gas flare		76.4	5,071.2	55.0	0.1	1.2	0.1				Malfunction
3/11/03	HDS	EPN 158		76.4	9,679.1	104.9	803.4	151.2	666.1				Malfunction
3/11/03	HDS	Main flare		76.4	21,795.8	236.3	639.2	102.3	614.5				Malfunction
3/2/03	HDS # 12	Acid gas flare		6.7	6,441.0	69.8	0.2	1.5	0.2				Malfunction
3/2/03	HDS #12	Main flare		6.7	6,807.0	73.8	23.6	2.7	1.9				Malfunction
2/25/03	Debutanizer tower	CRU unit 49		16.0			150.0	472.0					Malfunction
2/19/03	SMR Unit	Main flare		31.0			811.8	263.0	492.6				Malfunction
2/5/03	HDS	HDS Amine unit		9.8	149,077.0	1,615.0	2,505.3	392.5	1,980.0				Malfunction
TOTALS				7,079.4	613,267.8	6,515.4	118,231.8	39,154.2	52,974.1	45.0	0.0		

WASSON CO₂ REMOVAL • Denver City, Yoakum County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/28/04	inlet compressor	flare		259.6	16,471.0	178.6	7,785.0	908.0	6,215.0				malfunction
1/27/04	field electrical feeder	flare		16.0	7,031.0	76.2	3,323.0	387.6	2,653.0				maintenance
1/16/04	inlet compressor	flare		80.5	554.0	6.0	262.0	30.5	209.0				malfunction
1/8/04	#3 inlet compressor	flare		7.6	1,485.0	16.1	702.0	81.9	561.0				malfunction
1/7/04	inlet compressor	flare		103.5	7,962.0	86.3	438.9	3,763.0	3,004.0				malfunction
1/5/04	sat F big compressor	flare		2.4	619.0	6.7	293.0	34.1	234.0				malfunction
1/5/04	#4 inlet compressor	flare		3.9	990.0	10.7	468.0	54.6	374.0				malfunction
1/4/04	#3 inlet compressor	flare		83.5	6,341.0	68.7	2,997.0	349.6	2,393.0				malfunction
1/3/04	plant fuel gas system	flare		6.9			1,398.0	163.1					malfunction
12/7/03	#2 inlet compressor	flare		2.6	606.0	6.6	281.0	32.7	224.0				malfunction
12/3/03	#1 inlet compressor	flare		3.2	735.0	8.0	348.0	40.5	277.0				malfunction
11/23/03	#2 inlet compressor	flare		22.6	3,194.0	34.6	1,510.0	176.1	1,205.0				malfunction
11/21/03	#1 inlet compressor	flare		3.2	2,149.0	23.3	1,016.0	118.4	811.0				malfunction
11/16/03	#1 inlet compressor	flare		3.2	854.0	9.3	404.0	898.7	322.0				malfunction
11/11/03	#1 inlet compressor	flare		8.0	614.0	6.7	284.0	33.2	227.0				malfunction
11/5/03	#2 inlet compressor	flare		6.9	1,188.0	12.9	562.0	65.5	448.0				maintenance
11/1/03	#1 inlet compressor	flare		3.9	753.0	8.2	356.0	41.5	284.0				malfunction
10/27/03	#2 inlet compressor	flare		4.4	1,139.0	12.4	538.0	62.7	430.0				malfunction
10/21/03	york compressor	flare		10.7	1,154.0	12.5	729.0	84.9	437.0				malfunction
10/17/03	#3 inlet compressor	flare		18.7	1,585.0	17.2	749.0	87.4	598.0				malfunction
10/14/03	#3 inlet compressor	flare		3.4	817.0	8.9	391.0	45.6	312.0				malfunction
10/11/03	inlet compressor	flare		2.3	1,089.0	11.8	629.0	73.3	419.0				malfunction

Wasson CO₂ Removal, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
10/6/03	#3 inlet compressor	flare		14.4	2,166.0	23.5	1,024.0	119.4	817.0				malfunction
10/4/03	#3 inlet compressor	flare		3.1	616.0	6.7	291.0	34.0	233.0				malfunction
10/2/03	K5A recycle compressor	flare		1.6	841.0	9.1	277.0	32.2	271.0				malfunction
9/23/03	V8-305	flare		170.1	30,882.0	334.8	14,597.0	1,702.4	11,653.0				maintenance
9/21/03	#2 york	FEI/flare		7.5			1,558.0	181.8	13.0				malfunction
9/18/03	inlet compressor	FEI/flare		5.8	815.0	8.8	385.0	44.9	307.0				maintenance
9/14/03	#3 inlet compressor	flare		3.7	631.0	6.8	345.0	40.2	239.0				malfunction
9/13/03	#4 inlet compressor	flare		5.2	1,146.0	12.4	594.0	69.3	433.0				malfunction
9/9/03	#3 inlet compressor	FEI/flare		108.5	25,394.0	275.3	12,003.0	1,399.9	9,582.0				malfunction
9/8/03	compressor	flare		13.1	2,444.0	26.5	1,155.0	134.7	922.0				malfunction
9/8/03	valve	flare		10.3	1,758.0	19.1	831.0	96.9	663.0				maintenance
8/28/03	generator	flare		23.1	4,729.0	51.3	2,235.0	260.6	1,784.0				malfunction
8/25/03	inlet compressor	FEI/flare		59.4	10,621.0	115.2	5,020.0	585.5	4,008.0				maintenance
8/24/03	#2 inlet compressor	flare		5.1	1,109.0	12.0	514.0	59.9	410.0				malfunction
8/11/03	#1 inlet compressor	FEI/flare		8.1	2,020.0	21.9	936.0	109.2	747.0				malfunction
8/9/03	#1 inlet compressor	FEI/flare		14.6	2,131.0	23.1	2,883.0	336.2	802.0				malfunction
7/31/03	power failure	flare		2.8	675.0	7.3	319.0	37.2	255.0				malfunction
7/31/03	plant shutdown	flare		201.7	83,486.0	905.1	39,461.0	4,602.3	31,503.0				maintenance
7/31/03	sattelite B	flare		72.0	5,345.0	58.0	2,064.0	240.0	1,498.0				maintenance
7/31/03	sattelite C	flare		94.0	19,714.0	214.0	7,359.0	858.0	5,691.0				maintenance
7/31/03	sattelites A,D,E,J,K	flare		72.0	788.0	9.0	746.0	86.0	227.0				maintenance
7/31/03	tank battery 1	flare		96.0	1,848.0	20.0	744.0	86.0	534.0				maintenance
7/31/03	tank battery 2	flare		96.0	2,005.0	22.0	829.0	97.0	579.0				maintenance
7/30/03	inlet 1,2; york	flare		4.6	1,411.0	15.3	667.0	77.8	533.0				malfunction
7/17/03	inlet compressor	flare		36.6	2,402.0	26.0	1,135.0	132.4	906.0				maintenance
7/11/03	#1inlet compressor	FEI/flare		6.2	1,116.0	12.1	517.0	60.3	413.0				malfunction
6/20/03	valve	flare		5.9	735.0	8.0	348.0	40.5	277.0				maintenance

Wasson CO₂ Removal, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
6/12/03	#1 inlet gas compressor	flare		4.0	740.0	8.0	350.0	40.8	279.0				malfunction
5/29/03	#2inlet compressor	flare		6.6	2,330.0	25.3	1,101.0	128.4	879.0				malfunction
5/27/03	valve	flare		1.4	376.0	4.1	178.0	20.7	142.0				maintenance
5/19/03	Sat F west compressor	flare		12.7	826.0	9.0	383.0	44.6	305.0				malfunction
5/12/03	turbine	flare		9.3			80.0	9.4					maintenance
5/4/03	#2 inlet compressor	flare		4.1	1,263.0	13.7	585.0	68.2	467.0				malfunction
5/1/03	PIC-102	flare		112.9	5,420.0	58.8	2,562.0	298.7	2,045.0				malfunction
4/29/03	inlet compressor	flare		120.5	6,868.0	74.5	3,246.0	378.6	2,592.0				maintenance
4/23/03	inlet compressor	flare		3.4	1,313.0	14.2	1,022.0	119.2	489.0				malfunction
4/12/03	#1 inlet compressor	flare		2.4	657.0	7.1	304.0	35.5	243.0				malfunction
3/28/03	#2 york compressor	FEI/flare		22.4	1,510.0	16.4	2,028.0	236.5	579.0				malfunction
3/27/03	#4 inlet compressor	flare		11.8	3,864.0	41.9	3,014.0	351.6	1,573.0				malfunction
3/21/03	# 2 inlet compressor	flare		21.3	64,467.0	698.9	30,471.0	3,553.8	24,326.0				malfunction
3/20/03	compressor valve	FEI/flare		2.4	867.0	9.4	410.0	47.8	327.0				maintenance
3/13/03	inlet compressor	flare		12.7	3,199.0	34.7	1,512.0	176.3	1,207.0				malfunction
3/10/03	inlet compressor	FEI/flare		259.3	25,441.0	275.8	12,025.0	1,402.4	9,600.0				maintenance
3/4/03	phase A	flare		4.0	505.0	5.5	505.0	58.8	193.0				malfunction
2/7/03	#1 york	flare		6.3	808.0								malfunction
TOTALS				1,985.3	384,612.0	4,162.3	184,076.9	25,677.2	142,183.0	0.0	0.0		

WELCH CO₂ GAS PROCESSING FACILITY • Welch, Dawson County
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compounds	Butadiene	Other Emissions	Type of Event
1/29/04	CO ₂ plant	Flare		3.7	3032	32.9	180	21.1	190				Malfunction
12/11/03	U201 Compressor	Flare		1.5	78.0	0.8	2.0	0.3	9.0				Malfunction
9/25/03	CO ₂ plant	Flare		1.7	517	5.6	45	5.2	44				Malfunction
9/20/03	U201 Compressor	Flare		7.0	2070	22.5	153	17.9	141.0				Malfunction
9/5/03	U201 Compressor	Flare		6.3	976	10.6	72	8.4	66				Malfunction
8/29/03	U202 Compressor	Flare		1.8	2297	24.9	170	19.8	156				Malfunction
8/25/03	U202 Compressor	Flare		3.0	1043	11.3	77	9.1	71				Malfunction
8/22/03	Flare Field Gas	Flare		480.0	9200	99.7	681	79.4	625				Malfunction
8/19/03	U202 Compressor	Flare		7.3	1479	16	109	12.7	101				Malfunction
8/11/03	PLC #1	Flare		1.0	1466	15.9	127	14.7	124				Malfunction
8/4/03	Dehydration System	Flare		149.5	100404	1088.6	8674	1011.7	8494				Malfunction
7/28/03	U202 Compressor	Flare		10.5	1139	12.4	84	9.8	77.0				Malfunction
6/29/03	CO ₂ plant	Flare		2.0	872	9.5	75	8.8	74.0				Malfunction
6/24/03	CO ₂ plant	Flare		3.1	1299	14.1	112	13.1	110				Malfunction
6/18/03	PLC#1	Flare		2.0	713	7.7	62	7.2	60				Malfunction
6/5/03	CO ₂ plant	Flare		4.0	5897	63.9	510	59.5	499				Malfunction
6/4/03	CO ₂ plant	Flare		15.5	20115	218.1	1738	202.6	1702				Maintenance
6/1/03	CO ₂ plant	Flare		8.0	4126	44.7	356	41.6	349				Malfunction
5/20/03	CO ₂ plant	Flare		4.0	3005	32.6	260	30.3	254				Malfunction
5/13/03	U202 Compressor	Flare		100.5	9168	99.4	678	79.2	623				Malfunction
4/7/03	U101 Compressor	Flare		2.0	1293	14	85	9.9	100				Maintenance
4/7/03	U101 Compressor	7B/Flare		6.0	3305	35.8	217	25.3	255				Maintenance
3/31/03	U101 Compressor	Flare		2.5	1377	14.9	90	10.5	106				Maintenance
3/21/03	CO ₂ plant	Flare		2.0	1832	19.9	158	18.4	155				Malfunction
3/12/03	U201 Compressor	7B		2.3	706	7.7	48	5.6	50				Malfunction
2/20/03	U202 Compressor	Flare		187.2	23822	258.3	1620	188.9	1693				Malfunction
2/2/03	U201 Compressor	7B		151.7	12679	137.5	862	100.0	901				Malfunction
TOTALS				1165.9	213,910.0	2,319.3	17,245.0	2,011.0	17,029.0	0.0	0.0		

WESTERN REFINING EL PASO NORTH PLANT • El Paso, El Paso County TX
Emissions Data (Lbs./Event): 1.31.03 – 1.31.04

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compound	Butadiene	Other Emissions	Type of Event
1/24/04	SRU Incinerator	SRU Incinerator	25	8.0	2,554.0								Malfunction
1/22/04	FCCU WCG	Main Process Flare		0.6	7,062.0	77.0		46.0				Liquefied petroleum gas (LPG) :776	Malfunction
1/22/04	Entire Facility	Main Process Flare		552.0	32,584.0	346.0		50.0					Shutdown
1/22/04	Entire Facility	SWS flare EPN 128		552.0	6,079.0	65.0		50.0					Shutdown
12/29/03	FCCU	Refinery Amine System		6.0	3,273.0	35.0		2.0					Malfunction
12/29/03	FCCU	Sour Water Stripper (SWS)		6.0	1,660.0	18.0		6.0				NH ₃ : 6	Malfunction
12/28/03	Truck Rack	Spill		0.0								Diesel	Excess Opacity
12/22/03	SRU flow meter	South SRU Incinerator	100	2.0	1,400.0			1.0					Malfunction
12/22/03	SRU flow meter	SWS		1.0	557.0	6.0		1.0				NH ₃ : 2	Malfunction
12/22/03	SRU flow meter	SWS Flare		0.0	557.0	6.0		1.0				NH ₃ : 2	Malfunction
11/22/03	SWS	SWS		3.0	1,159.0	12.0		2.0				NH ₃ : 5	Malfunction
11/15/03	SRU SWS	SWS Flare		25.0	6,290.0	67.0		16.0				NH ₃ : 22	Malfunction
11/9/03	#6 Crude Unit	#6 Crude Unit		0.9		8.0			7,728.0	172.0		LPG: 60	Malfunction
11/9/03	NHT Compressor	Main Flare		0.8	55.0		40.0	3.0				LPG 41	Malfunction
9/17/03	Flare Line	Flare Line		2.5		84.1			28.0	28.0			Malfunction
8/30/03	Compressor	Main Flare Line		6.5	1,107.0	12.0		3.0	28.0				Malfunction
8/3/03	#6 Crude Unit	#6 Crude Unit		20.0		7.0			50.0				Malfunction
7/26/03	Main flare	Main Process Flare		2.0	1,453.0	15.0	210.0	81.0				LPG: 346	Malfunction
7/26/03	SRU Incinerator	SRU Incinerator		1.0	437.0								Malfunction
7/24/03	Fuel Gas System Treater	Boiler Stack	0	0.2									Excess Opacity
7/21/03	Fuel Gas System Treater	Stack	1	0.2									Excess Opacity
6/24/03	Relief Gas Fuel Gas Compressor	Refinery Relief Fuel Gas System		744.0	240.0	4.0	161.0	19.0				LPG: 173	Maintenance
6/2/03	#6 Crude Unit	Furnace F1601		24.0	500.0								Malfunction
6/2/03	#6 Crude Unit	Furnace F1602		24.0	500.0								Maintenance
6/2/03	#6 Crude Unit	Main Flare		24.0	481.0				554.0				Maintenance
5/13/03	Rich Amine Pump	South Main Flare		0.3	354.0	4.0							Malfunction

Western Refining El Paso North Plant, continued

Start Date	Unit	Emission Point	Opacity (%)	Duration (hrs.)	SO ₂	H ₂ S	CO	NOX	Total VOCs	Benzene Compound	Butadiene	Other Emissions	Type of Event
5/13/03	Rich Amine Pump	SWS EPN 128		0.3	152.0	2.0						NH ₃ : 1	Malfunction
5/13/03	Rich Amine Pump	SWS		0.0	400.0	4.0		4.0					Malfunction
4/13/03	Crude Unit Off Gas Compressor	Crude Unit		26.0	554.0	6.0		13.0	130.0				Malfunction
2/26/03	FCCU Regenerator	WGS Stack		10.0								Opacity exceeded	Startup
2/14/03	FCCU Regenerator	SWS Flare		301.0	31,646.0	336.0		140.0				NH ₃ : 184	Maintenance
2/14/03	FCCU Regenerator	Main Process Flare		301.0	40,142.0	427.0		49.0					Maintenance
TOTALS				2,644.3	141,196.0	1,541.1	411.0	487.0	8,518.0	200.0	0.0		