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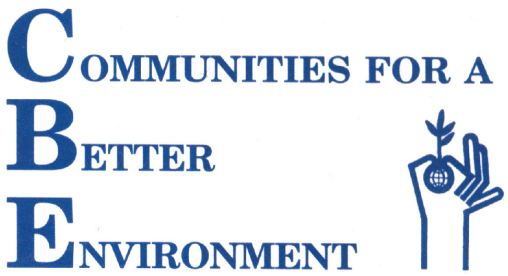
(Please confirm receipt to roger@cbecal.org)



14 January 2014

Clerk of the Board
Contra Costa County Board of Supervisors
651 Pine Street, Room 106
Martinez, CA 94553

Attention: Tiffany Lennear (Tiffany.Lennear@cob.cccounty.us)

Appeal of Environmental Impact Report and Land Use Permit Filed 2 Dec 2013:

Phillips 66 Company Propane Recovery Project, Environmental Impact Report (EIR) and Land Use Permit, EIR SCH #2012072046, County File LP12-2073;

Communities for a Better Environment (CBE) Supplemental Evidence–C

Dear Clerk of the Board,

In support of our appeal, CBE respectfully submits Rodeo facility fuel gas propane and butane (LPG) content and fuel gas flow data. This evidence is appended hereto as Attachment 4.

The proposed project would recover propane and additional butane produced from crude oil in amounts that could boost this refinery's LPG yield to exceed 11 volume % on its crude oil feed.[1] Average monthly West Coast refinery LPG yields reported since 1993 never exceeded 4.1 vol. % on crude.[2] Feedstock and products are key process variables that are fundamentally interrelated. Thus, changing LPG production changes oil feedstock processing. CBE and the Rodeo Citizens Association (RCA) showed that the project would require increased LPG production, requiring a change in feedstock, and related proposals would enable such new, and likely lower quality, oil feeds, such as tar sands oils.[1] Refining lower quality oil can worsen pollution and safety hazards substantially.[1] The Governor's Office of Planning and Research (OPR),[3] and the Refinery Action Collaborative, which includes, among others, the Labor Occupational Health Program at U.C. Berkeley and the refinery workers' union United Steelworkers,[4] have joined CBE and RCA in asking that the EIR disclose and analyze potential changes in oil feedstock and resultant impacts.

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[1] See CBE and RCA expert reports: Karras Report dated 4 Sep 2013; Fox Report dated 15 Nov 2013.
[2] *PADD 5 Refinery Yield;* www.eia.gov/dnav/pet/pet_pnp_pct_dc_r50_pct_m.htm. Download 13 Jan 2013. This 4.1% maximum may be an overestimate: it may include other liquefied gases (e.g., ethane, ethylene).
[3] See CBE Supplemental Evidence–A, submitted on 12 Dec 2013.
[4] Refinery Action Collaborative letter of 18 Dec 2013, appended hereto as Attachment 5.

1904 Franklin Street, Suite 600 • Oakland, CA 94612 • T (510) 302-0430 • F (510) 302-0437
In Southern California: 6325 Pacific Blvd., Suite 300 • Huntington Park, CA 90255 • (323) 826-9771

The EIR admits it "did not address changes in crude oil use"[5] and argues against this disclosure, asserting that the proposed change in LPG has no relationship to any change in oil feedstock. Specifically, the EIR asserts that the project "would not change, enlarge, or otherwise impact" the refinery's oil feedstock[5] because, it asserts:

(1) "the actual amount of propane and butane available for recovery (determined using measured flow data and lab analysis of propane and butane content) is approximately 4,200 bpd [*barrels per day, or b/d*] of propane and 9,300 bpd of butane"[5] so that;

(2) the 4,200 b/d of propane[6] and 3,800 b/d of additional butane[6] the project design would recover from refinery fuel gas "do not represent any anticipated increase in LPG production."[5]

Despite its explicit reliance on "measured flow data and lab analysis of propane and butane content" for this claimed amount of LPG recoverable in the baseline, no such data is included anywhere in the EIR.[7] Therefore, the data in Attachment 4 are relevant to environmental review of this project.

The Rodeo Fuel Gas LPG Data

Phillips 66 submitted a "Refinery Fuel Gas Speciation Profile" and "Daily U233 Fuel Gas Data" in attachments A-4 and A-7 to its air permits application for this project.[8] These data are given in Attachment 4. The Speciation Profile reports the propane and butane[9] content, mass fractions, and molecular weight (MW) of fuel gas from analysis of samples taken at the Unit 233 fuel gas mix drum, described as the mix drum for the fuel gas system. Propane and butane concentrations ranged by 10% and 17%, respectively, in three samples taken during August 2011. Phillips' Attachment A-7 reports daily Unit 233 fuel gas flow from Jan 2009–Nov 2012. In the most recent three-year baseline period reported (Dec 2009–Nov 2012) this fuel gas flow averaged ≈29.83 million standard cubic feet per day (MMSCFD) with a 90th Percentile flow of 35.21 MMSCFD.

Phillips asserted that these data are representative of the refinery baseline for project review.[10] Table S-1 summarizes these baseline data.

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[5] FEIR at 3.2-130 [*explanation added*]: As used in the EIR, "bpd" refers to barrels per day (b/d).
[6] Project design reported by the EIR. See DEIR at 3-23; see also DEIR at 3-21 (Table 3-2).
[7] The EIR's failure to disclose these purported baseline data is improper. See also Fox Report at 5.
[8] *Rodeo Propane Recovery Project BAAQMD Authority to Construct and Significant Revision to Major Facility Review Permit Application,* February 2013. Previously submitted attached to Karras Report.
[9] Butane, herein, is the sum of *n*-butane and isobutane, each of which is reported in Attachment A-4.
[10] Indeed, this refinery baseline is asserted explicitly ("Refinery fuel gas [RFG] volume and total sulfur content *for the baseline period* were provided in the original permit application") (*emphasis added*) on page 3 of Phillips' 28 June 2013 response to the Air Quality Management District's 21 May 2013 Incomplete Letter (included in the Karras Report "Air Permit Correspondence" Attachment). Phillips' statement must refer to air permit app. attachments A-4 and A-7 as no other refinery fuel gas data were included in the application or its attachments. Thus, these are the only data available at this time that represent the "measured flow data and lab analysis of propane and butane content" the EIR purports to rely upon, and Phillips asserted that these data are representative of the project baseline. CBE submits these data on this basis, however, more data are required for full environmental review. For example, other, undisclosed, and new streams containing LPG could be routed to recovery, such as streams from the refinery's Santa Maria Facility (see Fox Report), and Phillips reports analysis of only three samples for LPG in fuel gas.

Table S-1. Baseline LPG in Rodeo Facility Fuel Gas, December 2009–November 2012[a]

	Units	Average	90th Percentile
U233 fuel gas flow	(MMSCFD)	29.83	35.21
	(million lbs/day)	1.71	2.02
Propane in fuel gas	(lb/lb fuel gas)	0.2381	0.2381
	(million lbs/day)	0.407	0.481
	(barrels/day)	**2,290**	**2,700**
	(% of project design)	**54%**	**64%**
Butane in fuel gas	(lb/lb fuel gas)	0.2230	0.2230
	(million lbs/day)	0.381	0.450
	(barrels/day)	**1,880**	**2,220**
	(% of project design)	**49%**	**58%**

(a) Project design: 4,200 b/d propane and 3,800 b/d butane; data from DEIR at 3-23. Compressed liquid densities at 60 ºF: 178 lb/barrel propane and 203 lb/b butane; data from EPA's AP 42 Appendix A. All other data from Phillips 66 Air Permit Application attachments provided in Attachment 4 hereto. Conversions from MMSCFD (1 atm., 60 ºF) to lbs/d based on fuel gas MW (21.75 lb/lb-mol), and on propane and butane mass fractions (lb/lb fuel gas shown in table), from Attachment 4. Butane shown includes *n*-Butane and Isobutane.

LPG Baseline Errors

As estimated from Phillips' data, the baseline Rodeo facility fuel gas contains an average of ≈2,290 b/d of propane and ≈1,880 b/d of butane. See Table S-1. Even at the 90th Percentile (conditions existing only 10% of the time) it contains only ≈2,700 b/d of propane and 2,220 b/d of butane. These amounts are smaller than the "4,200 bpd of propane and 9,300 bpd of butane" baseline asserted by the EIR. Thus, Phillips' data show that the EIR overestimates the project LPG baseline. Therefore, the EIR's unsupported LPG baseline is contradicted by available data that the EIR has failed to disclose.

LPG Production and Feedstock Errors

Phillips data show that baseline refinery fuel gas does not contain enough LPG to implement the project goals. See Table S-1. Instead, LPG available from existing crude stocks would meet about half of the project's goals—54% of projected propane production and 49% of projected butane production. Therefore, the EIR's unsupported assertion that the project goals "do not represent any anticipated increase in LPG production" is contradicted by available data that the EIR has failed to disclose.

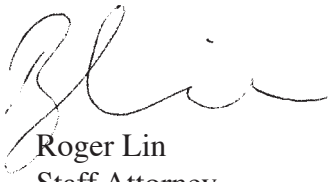
At roughly half of project design (see Table S-1), LPG production would roughly double—*on average*—in order to implement the project as proposed. This substantial increase in production would require a change in the amount or composition of the feedstock or processing methods. Thus, the EIR's unsupported claim that the project "would not change, enlarge, or otherwise impact" refinery oil feedstock is contradicted by Phillips' own data, which the EIR has failed to disclose. Changing refinery oil feedstock has known potential to worsen air pollution and safety

hazards substantially. Therefore, the EIR's admission that it "did not address changes in crude oil use" indicates a serious deficiency in the environmental review of this project.

Conclusion

CBE seeks an adequate environmental review that, among other things, resolves the EIR's failure to include information on the sources, types, or quality of this refinery's oil feedstock. Failing to include this information, the EIR fails to answer even the most straightforward questions about whether tar sands oils could be a new feedstock, what changes in oil feedstock are anticipated, potential impacts of those changes, and how those impacts will be addressed. The EIR argues against this necessary environmental disclosure, inappropriately, and erroneously. Its claim that LPG production and oil feed changes are unrelated suffers from the logical fallacy that products are unrelated to feedstock, relies on unsupported conclusory statements, ignores related wharf, rail, and processing expansions that enable new feedstock, and—as documented further herein—is contradicted by substantial evidence that the project requires new feedstock. This new evidence further strongly supports CBE's appeal.

Respectfully Submitted,



Roger Lin
Staff Attorney

Greg Karras
Senior Scientist

Attachments: CBE Supp. Attachment 4. Refinery Fuel Gas Speciation Profile and Daily U233 Fuel Gas Data, as submitted by Phillips 66 in attachments to its air permit application for the project

CBE Supp. Attachment 5. Refinery Action Collaborative letter of 18 Dec. 2013

Copy: Lashun Cross, Principal Planner, Department of Conservation and Development
Laurel L. Impett, AICP, Urban Planner, Shute, Mihaly & Weinberger LLP
Ken Alex, Director, Governor's Office of Planning and Research
Jean Roggenkamp, Deputy Air Pollution Control Officer, BAAQMD
Refinery Action Collaborative, San Francisco Bay Area
Interested Organizations and Individuals

CBE Supplemental Attachment 4

Refinery Fuel Gas Speciation Profile and Daily U233 Fuel Gas Data, as submitted by Phillips 66 in attachments to its Air Permit Application for the Project*

Contents

Part 1: **Refinery Fuel Gas Speciation Profile Permit App. Attachment A-4 excerpt (5 pages)**

Part 2: **Daily U233 Fuel Gas Data Permit App. Attachment A-7 (22 pages)**

*** *Rodeo Propane Recovery Project BAAQMD Authority to Construct and Significant Revision to Major Facility Review Permit Application,* February 2013.**
Previously submitted attached to 4 Sep 2013 Karras Report.

Refinery Fuel Gas Speciation Profile

Form Approved 03/28/2011
OMB Control No. 2060-0657
Approval Expires 03/31/2014

Fuel Gas Data

Instruction:			General source description, e.g., mix drum for X,Y,Z units; mix drum for fuel gas system 1; etc.	Assign a unique ID for each test report	Enter start date		Enter the fuel gas flow rate or usage rates from measurement data, company records, or engineering analyses. Use 1 atm and 60°F as standard conditions.			
Field:						Process Throughput or Production Rate				
	Facility ID Number	Fuel gas mix drum ID	General Description	Test Report ID	Test Date (mm/dd/yyyy)	Run Number	Actual Fuel Gas Flow Rate (acfm)	Standard Fuel Gas Flow Rate (scfm)	Dry Standard Fuel Gas Flow Rate (dscfm)	Production comment
	CA5A0280	Unit 233	mix drum for fuel gas system	11045.2	08/15/2011	Run 1	3,826.83	20,011.19	19,811.08	
	CA5A0280	Unit 233	mix drum for fuel gas system	11045.2	08/17/2011	Run 2	3,747.39	20,394.04	20,210.49	
	CA5A0280	Unit 233	mix drum for fuel gas system	11045.2	08/17/2011	Run 3	4,036.96	21,014.92	20,783.76	
Molecular Wt	Molecular Weight of RFG		21.75	(per Brent's email)						
Mass Fraction										

Refinery Fuel Gas Speciation Profil

Form Approved 03/28/2011
OMB Control No. 2060-0657
Approval Expires 03/31/2014

Fuel Gas Data

Instruction:		Enter the fuel gas higher heating value (HHV) content and general composition data						
Field:			CAS No. >>	1333-74-0	630-08-0	124-38-9	7727-37-9	7782-44-7
	Facility ID Number	HHV (Btu/scf)	Moisture Content (vol%)	Hydrogen (vol%, dry basis)	Carbon monoxide (vol%, dry basis)	Carbon dioxide (vol%, dry basis)	Nitrogen (vol%, dry basis)	Oxygen (vol%, dry basis)
	CA5A0280	1323.33	1.00	29.44	0.43	0.11	2.03	0.43
	CA5A0280	1335.42	0.90	29.49	0.44	0.11	2.39	0.44
	CA5A0280	1320.85	1.10	29.44	0.43	0.11	2.03	0.43
Molecular Wt	Molecular V		18.0153	2.014	28.01	44.01	28.0134	32
Mass Fraction			0.008282897	0.027274137	0.005531228	0.002225793	0.027678106	0.006319147

Refinery Fuel Gas Speciation Profil

Form Approved 03/28/2011
OMB Control No. 2060-0657
Approval Expires 03/31/2014

Fuel Gas Data Assume all TRS is H2S

Instruction:		Enter the sulfur compound composition data												
Field:		CAS No. >>	7783-06-4	463-58-1	75-15-0	74-82-8	74-84-0	74-85-1	74-86-2	74-98-6	115-07-1	463-49-0	106-97-8	75-28-5
	Facility ID Number	TRS (ppmvd)	Hydrogen sulfide (ppmvd)	Carbonyl sulfide (ppmvd)	Carbon disulfide (ppmvd)	Methane (ppmvd)	Ethane (ppmvd)	Ethylene (ppmvd)	Acetylene (ppmvd)	Propane (ppmvd)	Propylene (ppmvd)	Propadiene (ppmvd)	n-Butane (ppmvd)	Isobutane (ppmvd)
	CA5A0280	505.56	8.370	29.50	0.344	285,832.00	115,500.66	6,783.18	0.53	113,270.53	13,323.18	0.53	50,774.64	35,532.76
	CA5A0280	571.99	12.300	30.60	0.459	275,316.91	113,347.86	6,775.19	0.54	114,580.81	13,684.23	0.54	54,365.84	34,297.09
	CA5A0280	551.55	18.300	32.70	0.359	278,916.27	123,708.52	6,628.30	0.54	124,396.66	12,803.23	0.54	47,143.31	28,321.31
Molecular Wt	Molecular V	34.0809	34.0809	60.07	76.139	16.04	30.07	28.05	26.04	44.1	42.08	40.065	58.12	58.12
Mass Fraction		0.0009	0.0000	0.0001	0.00000136	0.2065	0.1625	0.0087	0.0000	0.2381	0.0257	0.0000	0.1356	0.0874

Refinery Fuel Gas Speciation Profil

Form Approved 03/28/2011
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Fuel Gas Data

Instruction:		Enter the organic compound composition data													
Field:		106-98-9	107-01-7	115-11-7	590-19-2	106-99-0	109-66-0	78-78-4	287-92-3	109-67-1	627-20-3	646-04-8	563-46-2	563-45-1	513-35-9
	Facility ID Number	1-Butene (ppmvd)	2-Butene (ppmvd)	Isobutene (ppmvd)	1,2-Butadiene (ppmvd)	1,3-Butadiene (ppmvd)	n-Pentane (ppmvd)	2-Methylbutane (ppmvd)	Cyclopentane (ppmvd)	1-Pentene (ppmvd)	Cis-2-pentene (ppmvd)	Trans-2-pentene (ppmvd)	2-Methyl-1-butene (ppmvd)	3-Methyl-1-butene (ppmvd)	2-Methyl-2-butene (ppmvd)
	CA5A0280	3,845.93	3,281.74	4,959.40	0.53	90.87	6,159.25	8,323.26	603.66	840.43	239.12	487.41	603.66	364.76	700.72
	CA5A0280	4,218.99	3,561.71	4,991.62	0.54	92.39	7,002.63	9,746.00	685.57	958.71	277.82	562.60	694.28	414.61	810.72
	CA5A0280	3,651.76	3,012.08	3,904.83	0.54	88.31	5,850.78	7,771.96	579.37	813.06	253.07	479.22	581.52	358.61	685.98
Molecular Wt	Molecular V	56.106	56.106	56.106	54.091	54.091	72.15	72.15	70.1	70.13	70.13	70.13	70.13	70.13	70.13
Mass Fraction		0.0101	0.0085	0.0119	0.0000	0.0002	0.0210	0.0286	0.0020	0.0028	0.0008	0.0016	0.0020	0.0012	0.0024

Refinery Fuel Gas Speciation Profil

Form Approved 03/28/2011
OMB Control No. 2060-0657
Approval Expires 03/31/2014

Fuel Gas Data

Assume n-Hexane

Instruction:												
Field:		142-29-0	591-95-7	1574-41-0	2004-70-8	591-93-5	591-96-8	598-25-4	78-79-5	542-92-7	71-43-2	110-54-3
	Facility ID Number	Cylcopentene (ppmvd)	1,2-Pentadiene (ppmvd)	1-cis-3-Pentadiene (ppmvd)	1-trans-3-Pentadiene (ppmvd)	1,4-Pentadiene (ppmvd)	2,3-Pentadiene (ppmvd)	3-Methyl-1,2-butadiene (ppmvd)	2-Methyl-1,3-butadiene (ppmvd)	Cyclopentadiene (ppmvd)	Benzene (ppmvd)	other C6+ (ppmvd)
	CA5A0280	121.48	19.09	159.13	40.64	6.29	N/A	10.24	26.66	N/A	257.25	12,947.76
	CA5A0280	138.75	23.61	170.52	46.90	7.73	N/A	11.64	31.45	N/A	292.29	14,456.86
	CA5A0280	130.41	21.54	178.12	43.18	6.57	N/A	11.42	28.32	N/A	283.22	13,355.67
Molecular Wt	Molecular W	68.12	68.12	68.12	68.12	68.12	68.12	68.12	68.12	66.10114	78.11	86.18
Mass Fraction		0.0004	0.0001	0.0005	0.0001	0.0000	0.0000	0.0000	0.0001	0.0000	0.000997	0.0538

Attachment A-7
Daily U233 Fuel Gas Data

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
1/1/2009	36,424	272.3	1,648
1/2/2009	35,533	270.2	1,595
1/3/2009	36,013	313.1	1,873
1/4/2009	35,013	324.2	1,885
1/5/2009	35,133	310.4	1,811
1/6/2009	35,162	302.3	1,766
1/7/2009	36,438	282.3	1,708
1/8/2009	36,114	305.3	1,831
1/9/2009	35,737	283.6	1,684
1/10/2009	35,381	321.8	1,891
1/11/2009	34,445	302.8	1,733
1/12/2009	33,907	304.3	1,714
1/13/2009	34,348	306.1	1,747
1/14/2009	35,624	317.0	1,876
1/15/2009	36,061	283.7	1,700
1/16/2009	36,715	261.2	1,593
1/17/2009	36,823	272.5	1,667
1/18/2009	32,963	380.5	2,083
1/19/2009	32,132	370.0	1,975
1/20/2009	33,395	296.5	1,645
1/21/2009	32,368	304.8	1,639
1/22/2009	32,765	309.8	1,686
1/23/2009	33,833	327.0	1,838
1/24/2009	35,622	280.8	1,662
1/25/2009	36,994	256.1	1,574
1/26/2009	35,268	284.0	1,664
1/27/2009	34,667	340.9	1,963
1/28/2009	34,025	326.5	1,846
1/29/2009	33,793	313.0	1,757
1/30/2009	33,527	321.3	1,789
1/31/2009	33,817	335.6	1,885
2/1/2009	33,276	333.8	1,845
2/2/2009	32,918	352.5	1,928
2/3/2009	31,799	386.6	2,042
2/4/2009	30,532	428.0	2,171
2/5/2009	31,341	383.3	1,996
2/6/2009	31,541	298.4	1,563
2/7/2009	32,050	308.2	1,641
2/8/2009	32,440	304.5	1,641
2/9/2009	32,521	359.9	1,944
2/10/2009	32,485	320.8	1,731
2/11/2009	31,750	342.8	1,808
2/12/2009	33,553	358.9	2,000
2/13/2009	34,433	313.9	1,795
2/14/2009	33,545	355.5	1,981
2/15/2009	33,810	333.3	1,872
2/16/2009	34,462	324.9	1,860
2/17/2009	35,806	283.9	1,688
2/18/2009	35,297	260.9	1,530
2/19/2009	36,933	284.1	1,743
2/20/2009	37,503	335.7	2,091
2/21/2009	38,282	359.3	2,285
2/22/2009	39,774	297.3	1,964
2/23/2009	39,470	269.6	1,768
2/24/2009	36,443	276.8	1,675
2/25/2009	33,406	287.0	1,592
2/26/2009	33,616	278.4	1,554
2/27/2009	36,151	197.1	1,184
2/28/2009	33,562	280.2	1,562
3/1/2009	36,386	277.3	1,676
3/2/2009	33,550	277.4	1,546
3/3/2009	32,106	249.6	1,331
3/4/2009	32,612	246.1	1,333
3/5/2009	32,071	317.9	1,693
3/6/2009	29,664	301.0	1,483
3/7/2009	28,452	296.3	1,400
3/8/2009	28,035	258.3	1,203
3/9/2009	28,322	258.0	1,214

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
3/10/2009	29,279	310.8	1,511
3/11/2009	28,637	325.5	1,548
3/12/2009	28,622	287.9	1,369
3/13/2009	27,867	265.8	1,230
3/14/2009	27,652	291.3	1,338
3/15/2009	26,924	344.9	1,543
3/16/2009	25,347	380.1	1,600
3/17/2009	25,090	350.1	1,459
3/18/2009	26,214	365.7	1,592
3/19/2009	26,574	378.6	1,671
3/20/2009	25,970	403.9	1,742
3/21/2009	25,400	334.0	1,409
3/22/2009	26,028	305.1	1,319
3/23/2009	25,555	365.7	1,552
3/24/2009	25,896	327.2	1,408
3/25/2009	24,863	344.3	1,422
3/26/2009	25,724	352.6	1,506
3/27/2009	25,650	351.8	1,499
3/28/2009	25,654	347.8	1,482
3/29/2009	25,181	371.0	1,552
3/30/2009	24,548	409.9	1,671
3/31/2009	25,261	389.1	1,633
4/1/2009	24,889	408.6	1,689
4/2/2009	24,239	418.7	1,686
4/3/2009	23,935	380.7	1,514
4/4/2009	22,849	373.0	1,416
4/5/2009	23,040	404.5	1,548
4/6/2009	22,314	447.3	1,658
4/7/2009	23,849	432.7	1,714
4/8/2009	25,886	321.9	1,384
4/9/2009	26,817	329.8	1,469
4/10/2009	27,214	337.0	1,523
4/11/2009	27,201	344.3	1,556
4/12/2009	26,937	322.8	1,444
4/13/2009	27,465	329.9	1,505
4/14/2009	29,098	332.9	1,609
4/15/2009	30,389	317.2	1,601
4/16/2009	30,427	332.5	1,680
4/17/2009	30,920	325.0	1,669
4/18/2009	31,696	320.6	1,688
4/19/2009	34,618	308.2	1,772
4/20/2009	30,953	239.8	1,233
4/21/2009	25,738	25.1	107
4/22/2009	26,210	31.3	136
4/23/2009	27,990	24.5	114
4/24/2009	28,929	23.0	111
4/25/2009	28,605	23.4	111
4/26/2009	28,615	23.0	109
4/27/2009	28,963	22.1	107
4/28/2009	29,078	23.4	113
4/29/2009	28,169	20.4	95
4/30/2009	26,032	24.9	108
5/1/2009	26,005	26.9	116
5/2/2009	26,146	25.0	108
5/3/2009	27,733	102.5	472
5/4/2009	29,291	419.0	2,039
5/5/2009	30,456	547.3	2,769
5/6/2009	29,237	548.1	2,662
5/7/2009	29,067	538.0	2,598
5/8/2009	28,600	448.5	2,131
5/9/2009	30,062	463.3	2,314
5/10/2009	25,634	490.8	2,090
5/11/2009	27,591	481.5	2,207
5/12/2009	26,859	562.7	2,510
5/13/2009	26,997	566.7	2,541
5/14/2009	27,631	543.0	2,492
5/15/2009	28,233	563.9	2,645
5/16/2009	28,660	556.5	2,649
5/17/2009	28,370	561.3	2,645
5/18/2009	29,479	545.0	2,669

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
5/19/2009	28,778	522.0	2,495
5/20/2009	27,056	559.4	2,514
5/21/2009	27,554	529.5	2,424
5/22/2009	28,606	514.3	2,444
5/23/2009	27,414	527.2	2,401
5/24/2009	30,695	499.3	2,546
5/25/2009	32,257	488.2	2,616
5/26/2009	34,029	474.1	2,680
5/27/2009	33,326	477.2	2,641
5/28/2009	33,917	417.4	2,352
5/29/2009	33,488	437.3	2,432
5/30/2009	33,606	458.2	2,557
5/31/2009	33,958	446.9	2,521
6/1/2009	33,970	515.4	2,908
6/2/2009	34,419	444.8	2,543
6/3/2009	33,144	451.6	2,486
6/4/2009	31,957	434.0	2,304
6/5/2009	32,053	445.8	2,374
6/6/2009	31,981	447.1	2,375
6/7/2009	32,338	469.7	2,523
6/8/2009	32,311	486.6	2,611
6/9/2009	32,663	479.4	2,601
6/10/2009	32,185	498.1	2,663
6/11/2009	31,583	516.2	2,708
6/12/2009	31,758	484.1	2,553
6/13/2009	30,058	420.2	2,098
6/14/2009	30,315	474.9	2,391
6/15/2009	30,711	495.9	2,530
6/16/2009	31,386	506.3	2,640
6/17/2009	31,745	451.0	2,378
6/18/2009	31,702	492.8	2,595
6/19/2009	31,487	453.5	2,372
6/20/2009	32,321	478.6	2,569
6/21/2009	31,827	443.1	2,343
6/22/2009	31,517	535.4	2,803
6/23/2009	31,485	501.4	2,622
6/24/2009	32,223	486.7	2,605
6/25/2009	32,568	378.9	2,050
6/26/2009	32,315	394.5	2,117
6/27/2009	31,861	461.9	2,445
6/28/2009	32,386	402.1	2,163
6/29/2009	32,855	401.0	2,188
6/30/2009	32,476	441.2	2,380
7/1/2009	31,446	473.2	2,472
7/2/2009	31,976	465.6	2,473
7/3/2009	33,195	448.4	2,472
7/4/2009	33,548	355.9	1,983
7/5/2009	34,016	430.0	2,429
7/6/2009	33,448	386.8	2,149
7/7/2009	33,007	415.9	2,280
7/8/2009	33,215	392.2	2,164
7/9/2009	32,826	466.3	2,543
7/10/2009	32,683	420.2	2,281
7/11/2009	32,666	459.1	2,491
7/12/2009	31,153	354.5	1,835
7/13/2009	31,633	337.4	1,773
7/14/2009	31,668	489.4	2,574
7/15/2009	32,957	469.9	2,572
7/16/2009	33,305	429.6	2,377
7/17/2009	32,920	396.0	2,165
7/18/2009	32,771	410.9	2,237
7/19/2009	32,815	428.4	2,335
7/20/2009	33,403	406.5	2,255
7/21/2009	33,458	418.1	2,324
7/22/2009	33,279	372.0	2,056
7/23/2009	33,703	402.7	2,254
7/24/2009	33,484	422.1	2,348
7/25/2009	33,204	422.0	2,327
7/26/2009	32,967	452.0	2,475
7/27/2009	33,032	434.0	2,381

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
7/28/2009	32,942	471.8	2,582
7/29/2009	33,234	446.5	2,465
7/30/2009	32,999	464.2	2,544
7/31/2009	33,131	462.7	2,546
8/1/2009	33,199	484.7	2,673
8/2/2009	33,572	495.3	2,762
8/3/2009	33,847	476.2	2,677
8/4/2009	33,676	464.7	2,599
8/5/2009	33,495	488.4	2,717
8/6/2009	32,588	493.4	2,671
8/7/2009	31,314	522.1	2,716
8/8/2009	31,954	470.9	2,499
8/9/2009	32,187	510.6	2,730
8/10/2009	31,452	520.4	2,719
8/11/2009	32,112	407.7	2,174
8/12/2009	31,111	536.6	2,773
8/13/2009	31,689	495.8	2,610
8/14/2009	32,452	424.3	2,287
8/15/2009	31,919	453.6	2,405
8/16/2009	31,823	470.1	2,485
8/17/2009	31,443	471.0	2,460
8/18/2009	31,928	431.6	2,289
8/19/2009	32,200	389.6	2,084
8/20/2009	32,267	412.1	2,209
8/21/2009	32,380	461.9	2,484
8/22/2009	33,915	473.7	2,669
8/23/2009	33,003	443.2	2,430
8/24/2009	33,471	451.9	2,512
8/25/2009	33,255	431.9	2,386
8/26/2009	33,468	458.5	2,549
8/27/2009	33,597	469.5	2,620
8/28/2009	32,898	486.0	2,656
8/29/2009	32,129	463.3	2,472
8/30/2009	33,061	445.3	2,445
8/31/2009	32,987	394.9	2,164
9/1/2009	33,036	467.6	2,566
9/2/2009	32,533	509.9	2,755
9/3/2009	33,174	484.7	2,671
9/4/2009	33,515	435.9	2,427
9/5/2009	33,484	476.1	2,648
9/6/2009	33,284	490.1	2,710
9/7/2009	33,175	457.5	2,521
9/8/2009	33,047	454.0	2,492
9/9/2009	34,239	398.8	2,268
9/10/2009	33,071	422.8	2,323
9/11/2009	34,130	465.6	2,640
9/12/2009	34,070	431.3	2,441
9/13/2009	33,824	352.8	1,982
9/14/2009	33,501	405.6	2,257
9/15/2009	33,158	349.3	1,924
9/16/2009	30,697	449.2	2,290
9/17/2009	29,823	441.0	2,185
9/18/2009	30,155	473.9	2,374
9/19/2009	30,843	432.8	2,217
9/20/2009	30,442	450.4	2,277
9/21/2009	31,131	446.9	2,311
9/22/2009	29,473	416.0	2,037
9/23/2009	31,038	379.1	1,955
9/24/2009	31,735	303.4	1,599
9/25/2009	30,369	322.0	1,624
9/26/2009	32,828	341.6	1,863
9/27/2009	32,196	216.6	1,158
9/28/2009	30,296	180.9	911
9/29/2009	30,946	178.7	918
9/30/2009	33,470	176.0	978
10/1/2009	30,715	220.3	1,124
10/2/2009	31,648	198.4	1,043
10/3/2009	28,276	226.9	1,066
10/4/2009	27,083	257.7	1,159
10/5/2009	26,405	276.3	1,212

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
10/6/2009	25,487	293.8	1,244
10/7/2009	25,154	324.0	1,354
10/8/2009	25,468	288.8	1,222
10/9/2009	26,672	337.1	1,493
10/10/2009	29,994	396.8	1,977
10/11/2009	32,823	386.5	2,107
10/12/2009	35,289	352.2	2,065
10/13/2009	39,336	337.3	2,204
10/14/2009	33,275	421.6	2,330
10/15/2009	33,069	412.6	2,267
10/16/2009	31,624	431.5	2,266
10/17/2009	32,299	460.6	2,471
10/18/2009	32,665	445.8	2,419
10/19/2009	31,912	371.4	1,969
10/20/2009	31,662	410.8	2,161
10/21/2009	32,380	389.8	2,097
10/22/2009	31,272	329.3	1,711
10/23/2009	30,108	393.4	1,967
10/24/2009	29,825	440.2	2,181
10/25/2009	31,214	447.9	2,322
10/26/2009	33,290	440.0	2,433
10/27/2009	33,726	361.5	2,025
10/28/2009	32,080	256.1	1,365
10/29/2009	32,920	356.9	1,952
10/30/2009	32,553	345.4	1,868
10/31/2009	32,702	329.2	1,788
11/1/2009	32,666	335.2	1,819
11/2/2009	32,667	340.0	1,845
11/3/2009	32,678	330.7	1,795
11/4/2009	32,480	325.5	1,756
11/5/2009	30,808	380.7	1,948
11/6/2009	30,508	382.7	1,939
11/7/2009	31,993	324.9	1,726
11/8/2009	32,559	341.8	1,849
11/9/2009	30,490	341.1	1,728
11/10/2009	31,270	349.6	1,816
11/11/2009	30,780	401.8	2,054
11/12/2009	30,241	421.4	2,117
11/13/2009	31,799	384.9	2,033
11/14/2009	31,750	378.6	1,996
11/15/2009	33,049	427.4	2,346
11/16/2009	37,205	332.4	2,054
11/17/2009	37,601	327.1	2,043
11/18/2009	37,957	323.2	2,038
11/19/2009	35,313	384.5	2,255
11/20/2009	37,038	366.5	2,255
11/21/2009	37,910	316.7	1,994
11/22/2009	37,458	340.2	2,117
11/23/2009	37,229	355.0	2,195
11/24/2009	36,782	359.8	2,198
11/25/2009	36,605	372.4	2,265
11/26/2009	36,202	361.5	2,174
11/27/2009	35,433	345.8	2,035
11/28/2009	35,411	347.9	2,046
11/29/2009	35,150	386.4	2,256
11/30/2009	35,182	395.1	2,309
12/1/2009	34,616	404.9	2,328
12/2/2009	35,065	382.5	2,228
12/3/2009	34,519	406.1	2,328
12/4/2009	34,618	395.1	2,272
12/5/2009	33,858	389.8	2,192
12/6/2009	35,588	346.3	2,047
12/7/2009	34,831	347.3	2,009
12/8/2009	29,690	41.3	203
12/9/2009	27,149	20.3	92
12/10/2009	27,278	15.7	71
12/11/2009	29,776	121.5	601
12/12/2009	31,754	330.5	1,743
12/13/2009	32,746	357.6	1,945
12/14/2009	32,219	356.9	1,910

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
12/15/2009	33,455	380.6	2,115
12/16/2009	31,960	398.8	2,117
12/17/2009	32,435	413.3	2,226
12/18/2009	33,637	374.6	2,093
12/19/2009	32,468	377.7	2,037
12/20/2009	32,270	372.4	1,996
12/21/2009	31,934	361.0	1,915
12/22/2009	32,744	393.1	2,138
12/23/2009	31,613	423.6	2,224
12/24/2009	31,238	430.2	2,232
12/25/2009	31,890	408.9	2,166
12/26/2009	31,439	386.3	2,017
12/27/2009	32,049	393.5	2,095
12/28/2009	31,554	431.5	2,261
12/29/2009	33,780	387.8	2,176
12/30/2009	36,698	375.7	2,290
12/31/2009	37,763	363.8	2,282
1/1/2010	36,887	414.9	2,542
1/2/2010	37,113	419.8	2,588
1/3/2010	38,316	381.5	2,428
1/4/2010	40,225	348.6	2,329
1/5/2010	39,453	369.0	2,418
1/6/2010	34,638	403.0	2,318
1/7/2010	33,459	379.5	2,109
1/8/2010	34,474	397.6	2,277
1/9/2010	31,163	407.3	2,108
1/10/2010	35,750	409.7	2,433
1/11/2010	36,557	408.6	2,481
1/12/2010	33,343	435.9	2,414
1/13/2010	33,316	374.2	2,071
1/14/2010	33,300	414.0	2,290
1/15/2010	32,374	453.8	2,440
1/16/2010	33,445	410.8	2,282
1/17/2010	32,050	409.5	2,180
1/18/2010	33,587	412.2	2,299
1/19/2010	36,122	386.6	2,319
1/20/2010	36,892	341.7	2,094
1/21/2010	31,429	409.9	2,140
1/22/2010	29,782	419.5	2,075
1/23/2010	31,180	420.5	2,178
1/24/2010	31,421	442.4	2,309
1/25/2010	32,400	372.0	2,002
1/26/2010	35,667	347.2	2,057
1/27/2010	35,146	400.8	2,340
1/28/2010	32,510	397.8	2,148
1/29/2010	34,802	418.2	2,417
1/30/2010	36,862	389.8	2,387
1/31/2010	37,542	407.6	2,542
2/1/2010	36,951	410.3	2,518
2/2/2010	36,742	318.5	1,944
2/3/2010	36,741	320.9	1,958
2/4/2010	37,005	373.2	2,294
2/5/2010	36,717	372.8	2,274
2/6/2010	35,910	400.0	2,386
2/7/2010	35,445	368.4	2,169
2/8/2010	33,620	396.2	2,212
2/9/2010	32,640	354.5	1,922
2/10/2010	33,886	424.8	2,391
2/11/2010	33,836	403.6	2,268
2/12/2010	33,682	472.5	2,644
2/13/2010	32,035	483.1	2,571
2/14/2010	29,406	471.8	2,304
2/15/2010	33,756	463.7	2,600
2/16/2010	36,494	408.3	2,475
2/17/2010	35,735	404.6	2,402
2/18/2010	35,018	387.5	2,254
2/19/2010	33,977	405.0	2,286
2/20/2010	34,058	405.2	2,292
2/21/2010	34,436	336.8	1,927
2/22/2010	34,915	392.7	2,277

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
2/23/2010	36,740	348.8	2,129
2/24/2010	32,389	412.5	2,219
2/25/2010	33,592	360.4	2,011
2/26/2010	33,601	347.3	1,938
2/27/2010	34,773	386.3	2,231
2/28/2010	35,176	363.8	2,125
3/1/2010	34,192	418.2	2,375
3/2/2010	35,124	407.8	2,379
3/3/2010	35,965	256.7	1,533
3/4/2010	35,912	386.9	2,308
3/5/2010	35,515	390.4	2,303
3/6/2010	35,548	362.9	2,143
3/7/2010	35,284	369.5	2,165
3/8/2010	30,401	337.4	1,704
3/9/2010	29,429	352.5	1,723
3/10/2010	28,342	374.7	1,764
3/11/2010	31,064	361.8	1,867
3/12/2010	36,289	248.1	1,495
3/13/2010	38,198	269.6	1,710
3/14/2010	35,845	267.3	1,592
3/15/2010	31,116	318.7	1,647
3/16/2010	32,475	405.1	2,185
3/17/2010	31,198	432.0	2,239
3/18/2010	32,916	416.3	2,276
3/19/2010	30,368	412.5	2,081
3/20/2010	32,857	394.7	2,154
3/21/2010	32,880	372.6	2,035
3/22/2010	30,875	396.6	2,034
3/23/2010	31,347	408.6	2,127
3/24/2010	33,551	370.4	2,064
3/25/2010	33,965	380.9	2,149
3/26/2010	33,947	407.1	2,295
3/27/2010	33,539	429.4	2,392
3/28/2010	33,433	381.3	2,117
3/29/2010	34,959	393.6	2,286
3/30/2010	36,188	330.3	1,985
3/31/2010	36,101	349.6	2,096
4/1/2010	36,028	392.9	2,352
4/2/2010	37,397	364.4	2,263
4/3/2010	38,113	352.5	2,232
4/4/2010	38,378	330.2	2,105
4/5/2010	36,590	327.7	1,992
4/6/2010	32,062	413.9	2,205
4/7/2010	31,369	450.7	2,348
4/8/2010	31,123	368.5	1,905
4/9/2010	31,089	482.3	2,491
4/10/2010	30,439	420.6	2,127
4/11/2010	31,050	381.3	1,967
4/12/2010	29,711	413.2	2,039
4/13/2010	30,979	434.5	2,236
4/14/2010	32,966	375.7	2,057
4/15/2010	31,723	432.5	2,279
4/16/2010	31,865	267.8	1,418
4/17/2010	33,258	498.2	2,752
4/18/2010	32,791	533.5	2,906
4/19/2010	32,571	460.9	2,494
4/20/2010	31,485	435.4	2,277
4/21/2010	31,940	421.2	2,235
4/22/2010	31,438	491.6	2,567
4/23/2010	31,989	486.0	2,583
4/24/2010	31,457	451.5	2,359
4/25/2010	31,702	453.1	2,386
4/26/2010	31,974	465.2	2,471
4/27/2010	31,093	427.5	2,208
4/28/2010	28,295	427.8	2,011
4/29/2010	27,683	452.8	2,082
4/30/2010	28,745	541.0	2,583
5/1/2010	29,604	514.9	2,532
5/2/2010	33,958	466.5	2,631
5/3/2010	33,255	467.7	2,584

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
5/4/2010	32,786	443.4	2,415
5/5/2010	31,936	398.8	2,115
5/6/2010	29,912	449.6	2,234
5/7/2010	31,785	437.8	2,311
5/8/2010	30,381	539.0	2,720
5/9/2010	31,585	521.3	2,735
5/10/2010	34,315	434.5	2,476
5/11/2010	36,256	447.3	2,694
5/12/2010	38,217	488.5	3,101
5/13/2010	37,482	446.4	2,779
5/14/2010	36,739	453.0	2,765
5/15/2010	36,426	519.0	3,140
5/16/2010	36,508	545.3	3,306
5/17/2010	35,446	501.9	2,955
5/18/2010	34,448	505.0	2,889
5/19/2010	36,805	458.8	2,805
5/20/2010	36,988	380.8	2,339
5/21/2010	36,589	407.5	2,477
5/22/2010	36,351	406.5	2,454
5/23/2010	35,767	400.4	2,379
5/24/2010	35,583	389.9	2,304
5/25/2010	34,983	430.4	2,501
5/26/2010	35,345	463.7	2,722
5/27/2010	36,378	416.0	2,514
5/28/2010	35,527	468.4	2,764
5/29/2010	34,545	524.2	3,008
5/30/2010	35,211	546.6	3,197
5/31/2010	35,637	541.6	3,206
6/1/2010	35,366	495.6	2,911
6/2/2010	35,226	424.8	2,486
6/3/2010	33,842	400.5	2,251
6/4/2010	33,305	409.6	2,266
6/5/2010	34,104	458.8	2,599
6/6/2010	34,493	524.6	3,005
6/7/2010	34,415	543.8	3,108
6/8/2010	34,429	487.4	2,787
6/9/2010	33,489	478.1	2,659
6/10/2010	33,605	498.4	2,782
6/11/2010	34,073	521.9	2,954
6/12/2010	33,784	561.9	3,153
6/13/2010	33,281	565.2	3,124
6/14/2010	33,093	484.3	2,662
6/15/2010	33,883	458.4	2,580
6/16/2010	32,592	463.8	2,511
6/17/2010	34,323	439.5	2,505
6/18/2010	35,575	382.5	2,260
6/19/2010	35,371	269.9	1,586
6/20/2010	35,836	433.3	2,579
6/21/2010	36,147	462.7	2,778
6/22/2010	34,559	457.4	2,626
6/23/2010	34,702	486.8	2,806
6/24/2010	35,249	483.8	2,832
6/25/2010	34,883	477.1	2,764
6/26/2010	34,480	429.7	2,461
6/27/2010	34,106	401.5	2,275
6/28/2010	33,062	273.3	1,501
6/29/2010	32,157	231.8	1,238
6/30/2010	27,206	249.9	1,129
7/1/2010	23,717	308.0	1,213
7/2/2010	27,067	291.4	1,310
7/3/2010	34,369	408.5	2,332
7/4/2010	35,103	469.2	2,736
7/5/2010	33,758	465.5	2,610
7/6/2010	34,412	464.2	2,653
7/7/2010	36,702	429.9	2,621
7/8/2010	35,451	449.2	2,645
7/9/2010	34,710	506.8	2,922
7/10/2010	37,634	508.6	3,179
7/11/2010	38,242	453.8	2,883
7/12/2010	38,524	434.6	2,781
7/13/2010	37,105	449.7	2,771
7/14/2010	36,010	422.0	2,524

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
7/15/2010	35,444	397.1	2,338
7/16/2010	36,168	493.9	2,967
7/17/2010	35,353	554.4	3,256
7/18/2010	36,236	388.9	2,341
7/19/2010	36,916	431.8	2,648
7/20/2010	33,646	396.5	2,216
7/21/2010	32,115	398.8	2,127
7/22/2010	36,843	438.7	2,685
7/23/2010	35,548	454.6	2,685
7/24/2010	34,454	442.3	2,531
7/25/2010	32,324	430.0	2,309
7/26/2010	34,412	456.0	2,606
7/27/2010	34,546	407.8	2,340
7/28/2010	32,921	505.4	2,764
7/29/2010	30,741	551.5	2,816
7/30/2010	30,378	578.9	2,921
7/31/2010	30,875	499.4	2,561
8/1/2010	31,421	512.8	2,677
8/2/2010	32,666	565.7	3,069
8/3/2010	33,373	579.7	3,213
8/4/2010	33,684	550.0	3,077
8/5/2010	35,529	526.2	3,106
8/6/2010	36,907	460.4	2,823
8/7/2010	36,855	391.1	2,394
8/8/2010	35,759	412.0	2,447
8/9/2010	35,988	448.0	2,678
8/10/2010	36,285	438.7	2,644
8/11/2010	35,117	461.6	2,692
8/12/2010	34,669	472.6	2,721
8/13/2010	34,865	437.1	2,532
8/14/2010	34,822	403.6	2,334
8/15/2010	34,678	417.7	2,406
8/16/2010	34,897	442.8	2,567
8/17/2010	35,627	359.9	2,130
8/18/2010	35,294	425.6	2,495
8/19/2010	34,871	460.8	2,669
8/20/2010	35,636	427.2	2,529
8/21/2010	35,601	414.6	2,452
8/22/2010	35,484	441.4	2,602
8/23/2010	33,761	436.5	2,448
8/24/2010	32,021	477.2	2,538
8/25/2010	31,853	518.4	2,743
8/26/2010	33,051	448.6	2,463
8/27/2010	32,144	432.8	2,311
8/28/2010	32,203	449.0	2,402
8/29/2010	31,718	456.8	2,407
8/30/2010	32,554	494.5	2,674
8/31/2010	34,563	498.2	2,860
9/1/2010	35,157	450.7	2,632
9/2/2010	35,124	486.6	2,839
9/3/2010	36,082	363.5	2,179
9/4/2010	36,093	395.5	2,371
9/5/2010	35,636	420.4	2,488
9/6/2010	34,926	401.6	2,330
9/7/2010	35,203	281.7	1,647
9/8/2010	37,427	365.8	2,274
9/9/2010	38,586	338.4	2,169
9/10/2010	36,181	365.5	2,197
9/11/2010	34,683	410.1	2,363
9/12/2010	35,766	405.7	2,410
9/13/2010	33,939	388.0	2,188
9/14/2010	31,847	427.9	2,264
9/15/2010	32,304	405.9	2,178
9/16/2010	32,576	425.7	2,304
9/17/2010	32,809	479.0	2,611
9/18/2010	32,809	481.6	2,625
9/19/2010	33,414	451.1	2,504
9/20/2010	34,479	413.9	2,370
9/21/2010	33,949	376.8	2,125
9/22/2010	32,292	398.9	2,140
9/23/2010	32,040	443.2	2,359
9/24/2010	33,125	434.5	2,391

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
9/25/2010	32,672	432.0	2,344
9/26/2010	31,018	472.7	2,435
9/27/2010	31,366	491.0	2,558
9/28/2010	30,403	517.2	2,612
9/29/2010	30,588	434.9	2,210
9/30/2010	33,051	395.7	2,172
10/1/2010	32,720	418.5	2,274
10/2/2010	32,287	466.1	2,499
10/3/2010	31,483	419.4	2,193
10/4/2010	31,261	393.6	2,044
10/5/2010	30,368	469.9	2,370
10/6/2010	30,451	435.6	2,203
10/7/2010	28,546	400.5	1,899
10/8/2010	27,746	384.1	1,770
10/9/2010	31,114	308.2	1,593
10/10/2010	29,770	447.4	2,212
10/11/2010	29,272	457.0	2,222
10/12/2010	29,318	515.7	2,512
10/13/2010	30,307	421.1	2,120
10/14/2010	29,652	475.0	2,340
10/15/2010	30,179	417.1	2,091
10/16/2010	30,009	389.4	1,941
10/17/2010	30,756	388.3	1,984
10/18/2010	31,111	368.0	1,901
10/19/2010	31,142	391.4	2,025
10/20/2010	31,815	364.2	1,925
10/21/2010	32,220	339.4	1,816
10/22/2010	12,785	190.2	404
10/23/2010	9,082	43.8	66
10/24/2010	16,917	54.5	153
10/25/2010	22,740	115.5	436
10/26/2010	24,632	389.3	1,593
10/27/2010	22,132	452.1	1,662
10/28/2010	24,311	464.3	1,875
10/29/2010	26,682	363.9	1,613
10/30/2010	29,166	355.6	1,723
10/31/2010	27,253	431.8	1,954
11/1/2010	26,477	405.9	1,785
11/2/2010	25,935	395.2	1,703
11/3/2010	25,503	375.7	1,592
11/4/2010	24,985	373.9	1,552
11/5/2010	25,714	323.1	1,380
11/6/2010	28,460	309.0	1,461
11/7/2010	29,745	340.3	1,681
11/8/2010	30,151	349.6	1,751
11/9/2010	30,609	333.1	1,694
11/10/2010	31,075	263.6	1,360
11/11/2010	30,586	367.2	1,865
11/12/2010	30,035	341.1	1,702
11/13/2010	30,818	353.0	1,807
11/14/2010	30,465	397.3	2,010
11/15/2010	29,380	356.6	1,740
11/16/2010	29,690	397.2	1,959
11/17/2010	31,578	329.3	1,727
11/18/2010	32,986	269.9	1,479
11/19/2010	32,582	272.8	1,476
11/20/2010	31,174	300.5	1,556
11/21/2010	28,322	301.4	1,418
11/22/2010	29,334	271.7	1,324
11/23/2010	33,640	269.9	1,508
11/24/2010	34,882	347.2	2,012
11/25/2010	32,870	324.9	1,774
11/26/2010	32,201	325.4	1,741
11/27/2010	31,755	330.8	1,745
11/28/2010	32,096	307.2	1,638
11/29/2010	32,139	308.4	1,646
11/30/2010	30,773	304.5	1,557
12/1/2010	31,353	327.3	1,705
12/2/2010	32,247	316.8	1,697
12/3/2010	33,523	321.1	1,788
12/4/2010	33,503	353.6	1,968
12/5/2010	33,382	385.2	2,136

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
12/6/2010	32,733	375.9	2,044
12/7/2010	32,030	366.2	1,949
12/8/2010	31,364	366.1	1,907
12/9/2010	32,728	367.6	1,999
12/10/2010	33,413	397.4	2,206
12/11/2010	33,901	366.9	2,066
12/12/2010	33,095	360.1	1,979
12/13/2010	30,780	345.0	1,764
12/14/2010	31,267	264.0	1,371
12/15/2010	33,459	362.1	2,013
12/16/2010	32,773	379.6	2,067
12/17/2010	31,632	290.0	1,524
12/18/2010	30,176	203.5	1,020
12/19/2010	30,485	272.2	1,378
12/20/2010	30,595	290.5	1,476
12/21/2010	31,456	326.3	1,705
12/22/2010	30,843	378.3	1,938
12/23/2010	30,723	295.6	1,508
12/24/2010	31,130	385.0	1,991
12/25/2010	31,555	363.0	1,903
12/26/2010	31,316	324.3	1,687
12/27/2010	31,603	378.9	1,989
12/28/2010	31,687	339.8	1,789
12/29/2010	31,922	364.8	1,934
12/30/2010	31,872	349.3	1,849
12/31/2010	31,660	353.2	1,857
1/1/2011	32,152	326.7	1,745
1/2/2011	31,589	361.9	1,899
1/3/2011	31,494	361.0	1,889
1/4/2011	31,360	282.9	1,474
1/5/2011	31,563	348.8	1,829
1/6/2011	32,050	361.7	1,926
1/7/2011	32,011	371.6	1,976
1/8/2011	30,895	311.2	1,597
1/9/2011	30,838	377.1	1,932
1/10/2011	31,043	365.5	1,885
1/11/2011	31,072	386.9	1,997
1/12/2011	30,336	411.5	2,073
1/13/2011	28,579	427.3	2,028
1/14/2011	28,145	415.1	1,941
1/15/2011	27,507	430.0	1,965
1/16/2011	29,125	407.6	1,972
1/17/2011	28,648	400.1	1,904
1/18/2011	28,028	218.5	1,017
1/19/2011	28,526	199.9	947
1/20/2011	27,054	216.8	974
1/21/2011	27,836	256.6	1,186
1/22/2011	26,010	374.1	1,616
1/23/2011	24,720	362.2	1,487
1/24/2011	22,709	365.5	1,379
1/25/2011	21,157	426.4	1,499
1/26/2011	22,128	421.4	1,549
1/27/2011	22,917	370.4	1,410
1/28/2011	24,704	387.8	1,591
1/29/2011	25,447	406.9	1,720
1/30/2011	22,489	315.8	1,180
1/31/2011	19,350	19.4	62
2/1/2011	18,344	20.1	61
2/2/2011	20,365	12.3	41
2/3/2011	20,100	14.0	47
2/4/2011	21,449	23.4	83
2/5/2011	21,573	36.5	131
2/6/2011	20,448	23.8	81
2/7/2011	23,378	133.2	517
2/8/2011	28,162	304.6	1,425
2/9/2011	27,436	306.6	1,397
2/10/2011	28,365	392.2	1,848
2/11/2011	28,909	419.1	2,012
2/12/2011	29,226	447.0	2,170
2/13/2011	29,655	399.7	1,969
2/14/2011	29,444	438.5	2,145
2/15/2011	29,588	456.5	2,244

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
2/16/2011	29,098	362.5	1,752
2/17/2011	28,926	304.2	1,462
2/18/2011	29,174	338.0	1,638
2/19/2011	29,306	364.3	1,774
2/20/2011	29,673	416.8	2,054
2/21/2011	25,001	376.0	1,561
2/22/2011	19,875	345.3	1,140
2/23/2011	24,574	301.9	1,232
2/24/2011	26,411	308.9	1,355
2/25/2011	26,765	333.5	1,483
2/26/2011	27,498	369.1	1,686
2/27/2011	27,833	393.6	1,820
2/28/2011	29,285	386.4	1,880
3/1/2011	30,104	387.5	1,938
3/2/2011	31,618	387.6	2,036
3/3/2011	32,135	369.1	1,970
3/4/2011	33,162	461.5	2,542
3/5/2011	35,886	403.1	2,403
3/6/2011	32,913	386.6	2,113
3/7/2011	31,951	381.7	2,026
3/8/2011	32,517	406.4	2,195
3/9/2011	32,866	436.7	2,384
3/10/2011	32,758	425.0	2,313
3/11/2011	32,838	410.7	2,240
3/12/2011	32,113	460.6	2,457
3/13/2011	32,307	446.7	2,397
3/14/2011	31,017	513.0	2,643
3/15/2011	31,681	448.8	2,362
3/16/2011	32,758	471.8	2,567
3/17/2011	34,560	448.3	2,573
3/18/2011	35,367	412.8	2,425
3/19/2011	35,848	471.2	2,806
3/20/2011	35,251	414.4	2,426
3/21/2011	35,871	414.3	2,469
3/22/2011	36,399	368.3	2,227
3/23/2011	36,681	381.8	2,326
3/24/2011	35,653	341.8	2,024
3/25/2011	33,478	425.7	2,367
3/26/2011	33,696	474.6	2,656
3/27/2011	32,503	475.5	2,567
3/28/2011	30,971	532.9	2,742
3/29/2011	32,425	495.5	2,669
3/30/2011	33,451	513.5	2,853
3/31/2011	33,721	488.5	2,736
4/1/2011	33,081	488.3	2,683
4/2/2011	31,826	484.2	2,560
4/3/2011	33,422	524.5	2,912
4/4/2011	31,571	438.0	2,297
4/5/2011	32,832	469.0	2,558
4/6/2011	32,428	463.7	2,497
4/7/2011	32,448	450.5	2,428
4/8/2011	32,345	475.6	2,555
4/9/2011	34,603	432.6	2,486
4/10/2011	34,781	403.2	2,330
4/11/2011	34,440	446.0	2,551
4/12/2011	34,820	384.1	2,222
4/13/2011	33,525	369.2	2,056
4/14/2011	32,329	424.6	2,280
4/15/2011	31,853	428.0	2,264
4/16/2011	32,430	426.3	2,296
4/17/2011	32,762	415.6	2,262
4/18/2011	32,652	418.7	2,271
4/19/2011	32,375	430.5	2,315
4/20/2011	32,898	462.7	2,528
4/21/2011	32,823	451.8	2,463
4/22/2011	32,741	516.9	2,811
4/23/2011	32,425	567.6	3,057
4/24/2011	32,397	461.8	2,485
4/25/2011	32,259	497.0	2,663
4/26/2011	32,484	609.7	3,290
4/27/2011	32,165	669.9	3,579
4/28/2011	32,268	531.7	2,850

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
4/29/2011	32,310	447.0	2,399
4/30/2011	31,570	497.0	2,606
5/1/2011	31,388	603.8	3,148
5/2/2011	31,590	671.0	3,521
5/3/2011	31,526	590.8	3,094
5/4/2011	31,217	748.2	3,880
5/5/2011	30,551	716.1	3,634
5/6/2011	30,918	678.4	3,484
5/7/2011	31,593	414.0	2,173
5/8/2011	31,667	332.2	1,748
5/9/2011	28,672	470.1	2,239
5/10/2011	31,950	434.6	2,307
5/11/2011	25,334	184.1	775
5/12/2011	21,016	76.9	268
5/13/2011	21,842	51.8	188
5/14/2011	21,498	48.9	175
5/15/2011	21,449	54.7	195
5/16/2011	20,770	61.7	213
5/17/2011	21,105	77.0	270
5/18/2011	18,877	98.3	308
5/19/2011	19,538	67.9	220
5/20/2011	18,425	110.5	338
5/21/2011	19,882	107.1	354
5/22/2011	18,917	55.5	174
5/23/2011	18,397	152.1	465
5/24/2011	17,975	231.1	690
5/25/2011	19,702	99.1	324
5/26/2011	18,048	96.1	288
5/27/2011	16,286	110.2	298
5/28/2011	17,996	119.0	356
5/29/2011	17,896	119.0	354
5/30/2011	18,759	137.8	429
5/31/2011	20,497	207.1	705
6/1/2011	19,879	310.1	1,024
6/2/2011	20,611	50.0	171
6/3/2011	20,559	16.2	55
6/4/2011	23,771	73.0	288
6/5/2011	28,513	55.8	264
6/6/2011	27,932	6.0	28
6/7/2011	25,169	8.1	34
6/8/2011	26,088	6.0	26
6/9/2011	25,810	8.3	36
6/10/2011	25,930	7.9	34
6/11/2011	24,955	29.2	121
6/12/2011	23,674	19.8	78
6/13/2011	20,055	57.8	193
6/14/2011	20,268	105.1	354
6/15/2011	21,291	176.5	624
6/16/2011	22,329	206.9	767
6/17/2011	22,354	221.7	823
6/18/2011	22,223	211.4	780
6/19/2011	21,781	246.6	892
6/20/2011	19,434	238.4	770
6/21/2011	20,316	197.7	667
6/22/2011	21,061	174.9	612
6/23/2011	21,726	198.4	716
6/24/2011	22,590	188.1	706
6/25/2011	23,875	296.1	1,174
6/26/2011	22,012	375.1	1,371
6/27/2011	21,201	358.8	1,264
6/28/2011	23,008	267.3	1,021
6/29/2011	23,664	275.6	1,083
6/30/2011	24,109	373.9	1,497
7/1/2011	24,104	402.9	1,613
7/2/2011	26,167	425.3	1,848
7/3/2011	27,598	501.4	2,298
7/4/2011	29,142	447.7	2,167
7/5/2011	31,674	444.9	2,341
7/6/2011	33,521	440.2	2,451
7/7/2011	34,194	435.3	2,472
7/8/2011	33,956	451.0	2,544
7/9/2011	34,341	470.8	2,686

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
7/10/2011	33,950	460.2	2,595
7/11/2011	33,805	455.4	2,557
7/12/2011	33,056	394.7	2,167
7/13/2011	32,921	405.2	2,216
7/14/2011	32,298	434.3	2,330
7/15/2011	32,946	456.2	2,496
7/16/2011	32,403	470.1	2,530
7/17/2011	31,636	393.0	2,065
7/18/2011	32,137	432.7	2,310
7/19/2011	32,279	460.0	2,466
7/20/2011	31,755	504.1	2,659
7/21/2011	32,160	484.3	2,587
7/22/2011	32,060	497.7	2,651
7/23/2011	31,593	446.3	2,342
7/24/2011	30,225	384.9	1,932
7/25/2011	30,951	366.7	1,885
7/26/2011	31,700	326.1	1,717
7/27/2011	32,658	360.0	1,953
7/28/2011	33,987	390.4	2,204
7/29/2011	33,498	444.7	2,475
7/30/2011	31,913	449.8	2,384
7/31/2011	29,512	436.4	2,139
8/1/2011	29,242	445.0	2,161
8/2/2011	30,233	429.4	2,157
8/3/2011	31,352	415.6	2,164
8/4/2011	32,036	425.3	2,263
8/5/2011	32,169	459.6	2,456
8/6/2011	32,707	418.9	2,276
8/7/2011	32,491	444.8	2,401
8/8/2011	32,504	467.4	2,523
8/9/2011	33,034	427.7	2,347
8/10/2011	33,944	402.4	2,269
8/11/2011	33,468	374.5	2,082
8/12/2011	32,844	461.4	2,517
8/13/2011	33,005	510.1	2,797
8/14/2011	33,147	455.6	2,509
8/15/2011	33,340	212.9	1,179
8/16/2011	33,154	297.1	1,636
8/17/2011	32,302	419.2	2,249
8/18/2011	32,537	409.5	2,213
8/19/2011	32,774	425.0	2,314
8/20/2011	33,075	438.9	2,411
8/21/2011	36,305	390.5	2,355
8/22/2011	36,666	378.9	2,307
8/23/2011	34,933	448.3	2,601
8/24/2011	32,355	542.1	2,913
8/25/2011	32,392	531.8	2,861
8/26/2011	32,218	486.9	2,606
8/27/2011	33,021	313.8	1,721
8/28/2011	34,348	409.6	2,337
8/29/2011	33,355	403.7	2,237
8/30/2011	33,523	382.8	2,132
8/31/2011	33,636	424.0	2,369
9/1/2011	34,528	427.3	2,451
9/2/2011	35,403	448.8	2,639
9/3/2011	35,290	400.6	2,348
9/4/2011	35,612	441.2	2,610
9/5/2011	35,176	457.4	2,673
9/6/2011	34,807	438.3	2,534
9/7/2011	30,308	116.2	585
9/8/2011	29,506	69.1	338
9/9/2011	28,835	57.4	275
9/10/2011	29,577	40.1	197
9/11/2011	29,824	41.2	204
9/12/2011	31,012	91.0	469
9/13/2011	30,838	346.4	1,775
9/14/2011	30,805	333.2	1,705
9/15/2011	29,654	344.1	1,695
9/16/2011	30,495	340.2	1,723
9/17/2011	30,568	391.6	1,988
9/18/2011	30,470	422.3	2,137
9/19/2011	30,541	410.4	2,082

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
9/20/2011	31,085	387.8	2,003
9/21/2011	29,940	353.3	1,757
9/22/2011	29,517	374.2	1,835
9/23/2011	30,160	432.6	2,167
9/24/2011	32,083	393.7	2,098
9/25/2011	32,955	427.2	2,338
9/26/2011	33,498	512.9	2,854
9/27/2011	33,051	422.0	2,316
9/28/2011	31,823	561.7	2,969
9/29/2011	32,401	463.6	2,495
9/30/2011	30,691	412.2	2,101
10/1/2011	29,692	489.1	2,412
10/2/2011	29,456	488.5	2,390
10/3/2011	29,871	483.2	2,398
10/4/2011	29,720	522.2	2,578
10/5/2011	29,167	532.6	2,580
10/6/2011	28,827	605.2	2,898
10/7/2011	28,370	489.7	2,307
10/8/2011	27,300	254.5	1,154
10/9/2011	25,430	269.1	1,137
10/10/2011	25,829	286.2	1,228
10/11/2011	24,968	303.8	1,260
10/12/2011	23,599	354.0	1,388
10/13/2011	23,411	383.8	1,492
10/14/2011	26,579	586.8	2,591
10/15/2011	29,982	534.5	2,662
10/16/2011	29,376	483.6	2,360
10/17/2011	27,729	465.8	2,145
10/18/2011	27,732	496.1	2,285
10/19/2011	29,011	508.3	2,449
10/20/2011	29,964	438.3	2,182
10/21/2011	31,025	492.7	2,539
10/22/2011	28,850	509.8	2,443
10/23/2011	28,600	555.7	2,640
10/24/2011	29,501	549.3	2,692
10/25/2011	29,834	500.4	2,480
10/26/2011	28,359	526.0	2,478
10/27/2011	30,291	459.7	2,313
10/28/2011	31,011	486.9	2,508
10/29/2011	30,873	504.2	2,586
10/30/2011	29,368	543.7	2,652
10/31/2011	27,763	580.3	2,676
11/1/2011	28,691	641.1	3,055
11/2/2011	28,924	560.5	2,693
11/3/2011	30,478	479.8	2,429
11/4/2011	29,442	437.9	2,141
11/5/2011	29,917	506.0	2,515
11/6/2011	29,664	498.5	2,456
11/7/2011	29,823	432.7	2,143
11/8/2011	29,407	405.0	1,978
11/9/2011	28,961	472.0	2,271
11/10/2011	28,502	459.1	2,174
11/11/2011	27,467	434.8	1,984
11/12/2011	26,954	420.3	1,882
11/13/2011	27,904	430.2	1,994
11/14/2011	29,570	384.4	1,888
11/15/2011	29,441	517.3	2,530
11/16/2011	28,923	533.4	2,562
11/17/2011	28,129	470.1	2,196
11/18/2011	28,393	471.3	2,223
11/19/2011	29,016	506.5	2,441
11/20/2011	28,690	438.0	2,088
11/21/2011	28,827	463.4	2,219
11/22/2011	27,969	424.3	1,971
11/23/2011	28,211	394.4	1,848
11/24/2011	28,334	438.9	2,066
11/25/2011	27,803	421.1	1,945
11/26/2011	28,455	406.8	1,923
11/27/2011	28,162	440.0	2,058
11/28/2011	27,819	515.3	2,381
11/29/2011	27,615	554.9	2,545
11/30/2011	27,420	567.4	2,584

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
12/1/2011	27,237	510.9	2,311
12/2/2011	26,843	502.7	2,241
12/3/2011	26,516	431.7	1,901
12/4/2011	26,238	444.7	1,938
12/5/2011	26,377	426.4	1,868
12/6/2011	26,748	399.0	1,773
12/7/2011	25,268	369.8	1,552
12/8/2011	26,568	348.8	1,539
12/9/2011	27,486	339.6	1,551
12/10/2011	26,909	377.5	1,687
12/11/2011	26,686	426.4	1,890
12/12/2011	26,985	438.3	1,965
12/13/2011	29,921	383.9	1,908
12/14/2011	30,279	382.9	1,926
12/15/2011	29,926	363.2	1,805
12/16/2011	29,733	413.2	2,041
12/17/2011	29,670	373.8	1,842
12/18/2011	30,562	392.6	1,993
12/19/2011	29,704	401.5	1,981
12/20/2011	29,596	400.0	1,966
12/21/2011	28,852	391.1	1,874
12/22/2011	30,020	329.5	1,643
12/23/2011	27,969	305.7	1,420
12/24/2011	25,205	336.4	1,408
12/25/2011	26,987	357.6	1,603
12/26/2011	25,602	360.3	1,532
12/27/2011	25,073	384.3	1,600
12/28/2011	26,335	418.6	1,831
12/29/2011	25,906	403.8	1,738
12/30/2011	24,576	436.5	1,782
12/31/2011	25,910	473.9	2,039
1/1/2012	24,917	507.2	2,099
1/2/2012	24,453	473.4	1,923
1/3/2012	23,849	451.9	1,790
1/4/2012	24,199	373.6	1,502
1/5/2012	24,494	364.1	1,481
1/6/2012	25,264	322.9	1,355
1/7/2012	24,877	302.1	1,248
1/8/2012	25,404	385.7	1,627
1/9/2012	25,380	367.8	1,551
1/10/2012	26,270	326.9	1,426
1/11/2012	26,064	297.2	1,287
1/12/2012	25,531	409.8	1,738
1/13/2012	26,121	472.7	2,051
1/14/2012	27,354	453.1	2,059
1/15/2012	27,331	438.6	1,991
1/16/2012	25,291	426.9	1,794
1/17/2012	25,938	422.4	1,820
1/18/2012	22,606	432.2	1,623
1/19/2012	20,952	442.9	1,541
1/20/2012	22,968	451.4	1,722
1/21/2012	28,051	492.0	2,293
1/22/2012	28,179	505.8	2,367
1/23/2012	27,267	501.2	2,270
1/24/2012	26,924	543.1	2,429
1/25/2012	27,984	476.0	2,212
1/26/2012	29,514	371.6	1,822
1/27/2012	29,369	414.0	2,020
1/28/2012	28,766	432.6	2,067
1/29/2012	26,075	470.7	2,039
1/30/2012	24,580	487.7	1,991
1/31/2012	25,811	488.8	2,096
2/1/2012	27,071	549.8	2,472
2/2/2012	27,464	550.1	2,509
2/3/2012	27,543	561.8	2,570
2/4/2012	28,260	549.3	2,579
2/5/2012	27,672	552.7	2,540
2/6/2012	28,248	540.0	2,534
2/7/2012	29,096	512.1	2,475
2/8/2012	29,572	467.8	2,298
2/9/2012	29,530	517.8	2,540
2/10/2012	27,892	535.7	2,482

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
2/11/2012	27,305	581.0	2,635
2/12/2012	26,335	519.8	2,274
2/13/2012	27,105	478.5	2,155
2/14/2012	26,879	543.1	2,425
2/15/2012	26,810	527.8	2,350
2/16/2012	26,548	347.9	1,534
2/17/2012	25,271	329.1	1,381
2/18/2012	24,951	368.6	1,527
2/19/2012	26,582	562.3	2,483
2/20/2012	25,840	493.1	2,116
2/21/2012	24,550	556.5	2,269
2/22/2012	24,852	575.8	2,377
2/23/2012	25,397	568.1	2,397
2/24/2012	25,660	407.2	1,736
2/25/2012	25,788	493.7	2,115
2/26/2012	24,963	506.3	2,099
2/27/2012	24,633	303.5	1,242
2/28/2012	23,777	299.4	1,182
2/29/2012	24,099	488.0	1,954
3/1/2012	23,922	721.1	2,865
3/2/2012	22,787	625.6	2,368
3/3/2012	23,202	663.5	2,557
3/4/2012	23,466	675.3	2,632
3/5/2012	24,540	646.6	2,636
3/6/2012	24,587	638.3	2,607
3/7/2012	26,106	640.1	2,776
3/8/2012	29,576	578.1	2,840
3/9/2012	30,647	480.7	2,447
3/10/2012	30,357	402.0	2,027
3/11/2012	27,786	387.7	1,789
3/12/2012	26,564	349.1	1,540
3/13/2012	27,606	335.9	1,540
3/14/2012	25,633	371.8	1,583
3/15/2012	25,966	447.7	1,931
3/16/2012	30,010	437.4	2,180
3/17/2012	28,829	421.8	2,020
3/18/2012	26,307	463.4	2,025
3/19/2012	25,805	547.9	2,348
3/20/2012	24,897	535.6	2,215
3/21/2012	26,421	514.8	2,259
3/22/2012	28,825	493.9	2,365
3/23/2012	29,079	467.1	2,256
3/24/2012	28,995	442.0	2,129
3/25/2012	28,384	457.1	2,155
3/26/2012	26,924	492.2	2,201
3/27/2012	25,347	508.1	2,139
3/28/2012	28,974	477.8	2,299
3/29/2012	28,145	502.4	2,349
3/30/2012	28,282	498.1	2,340
3/31/2012	29,642	470.1	2,314
4/1/2012	29,799	440.0	2,178
4/2/2012	29,277	477.5	2,322
4/3/2012	29,894	435.4	2,162
4/4/2012	29,816	416.9	2,065
4/5/2012	29,441	393.9	1,926
4/6/2012	29,194	407.7	1,977
4/7/2012	28,517	424.0	2,009
4/8/2012	29,314	384.4	1,872
4/9/2012	29,036	411.0	1,982
4/10/2012	29,951	468.2	2,329
4/11/2012	29,054	426.1	2,056
4/12/2012	28,203	445.7	2,088
4/13/2012	28,028	382.7	1,782
4/14/2012	29,272	318.7	1,550
4/15/2012	28,371	329.0	1,550
4/16/2012	28,798	336.7	1,611
4/17/2012	28,984	319.8	1,540
4/18/2012	29,242	312.2	1,516
4/19/2012	29,511	319.7	1,567
4/20/2012	28,053	332.3	1,549
4/21/2012	27,543	396.2	1,812
4/22/2012	27,273	442.1	2,003

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
4/23/2012	27,074	447.5	2,012
4/24/2012	27,806	470.6	2,174
4/25/2012	27,362	425.6	1,934
4/26/2012	27,937	410.5	1,905
4/27/2012	26,784	427.7	1,903
4/28/2012	25,291	399.9	1,680
4/29/2012	24,628	409.2	1,674
4/30/2012	24,672	364.9	1,496
5/1/2012	24,929	403.4	1,670
5/2/2012	25,196	368.1	1,540
5/3/2012	25,263	374.6	1,572
5/4/2012	24,868	359.7	1,486
5/5/2012	22,923	376.8	1,435
5/6/2012	23,472	416.7	1,625
5/7/2012	23,352	416.7	1,616
5/8/2012	23,747	388.1	1,531
5/9/2012	24,438	431.5	1,752
5/10/2012	24,409	404.0	1,638
5/11/2012	24,880	381.4	1,576
5/12/2012	25,306	339.3	1,426
5/13/2012	25,646	355.5	1,515
5/14/2012	26,103	290.8	1,261
5/15/2012	26,748	322.0	1,431
5/16/2012	26,983	315.0	1,412
5/17/2012	27,886	304.2	1,409
5/18/2012	27,447	336.7	1,535
5/19/2012	27,261	397.7	1,801
5/20/2012	28,425	383.6	1,811
5/21/2012	27,946	402.4	1,868
5/22/2012	28,531	392.2	1,859
5/23/2012	27,173	355.1	1,603
5/24/2012	27,800	279.3	1,290
5/25/2012	26,695	248.2	1,100
5/26/2012	25,890	298.8	1,285
5/27/2012	25,626	261.1	1,111
5/28/2012	25,853	233.6	1,003
5/29/2012	26,519	264.6	1,165
5/30/2012	27,974	275.8	1,281
5/31/2012	29,488	222.2	1,088
6/1/2012	30,040	234.5	1,170
6/2/2012	28,529	293.7	1,392
6/3/2012	29,191	324.3	1,572
6/4/2012	28,290	351.0	1,649
6/5/2012	20,731	398.5	1,372
6/6/2012	19,313	496.4	1,592
6/7/2012	21,415	391.9	1,394
6/8/2012	20,153	396.5	1,327
6/9/2012	20,280	395.3	1,331
6/10/2012	21,508	529.9	1,893
6/11/2012	23,444	405.1	1,577
6/12/2012	23,426	366.6	1,427
6/13/2012	24,596	398.2	1,627
6/14/2012	25,924	369.4	1,591
6/15/2012	26,626	316.9	1,401
6/16/2012	25,279	311.3	1,307
6/17/2012	23,201	333.9	1,287
6/18/2012	24,892	371.7	1,537
6/19/2012	25,581	400.9	1,703
6/20/2012	25,441	387.0	1,635
6/21/2012	25,095	354.0	1,476
6/22/2012	24,738	330.2	1,357
6/23/2012	25,040	252.2	1,049
6/24/2012	25,150	326.2	1,363
6/25/2012	25,541	346.7	1,471
6/26/2012	25,914	370.3	1,594
6/27/2012	26,154	380.2	1,652
6/28/2012	26,248	393.1	1,714
6/29/2012	26,825	332.1	1,480
6/30/2012	26,241	413.1	1,801
7/1/2012	28,666	395.8	1,885
7/2/2012	28,982	404.0	1,945
7/3/2012	29,046	434.8	2,098

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
7/4/2012	29,709	403.2	1,990
7/5/2012	29,638	379.3	1,867
7/6/2012	29,661	406.7	2,004
7/7/2012	29,149	391.3	1,895
7/8/2012	28,429	334.3	1,579
7/9/2012	28,590	279.2	1,326
7/10/2012	27,664	305.9	1,406
7/11/2012	27,486	339.1	1,548
7/12/2012	27,903	410.1	1,901
7/13/2012	28,625	328.9	1,564
7/14/2012	27,279	407.2	1,845
7/15/2012	27,198	378.2	1,709
7/16/2012	27,250	317.8	1,438
7/17/2012	27,148	374.2	1,688
7/18/2012	27,782	402.1	1,856
7/19/2012	28,102	390.8	1,824
7/20/2012	28,382	390.3	1,840
7/21/2012	28,379	390.0	1,838
7/22/2012	29,039	372.3	1,796
7/23/2012	30,055	368.9	1,842
7/24/2012	29,730	364.6	1,801
7/25/2012	27,547	400.7	1,834
7/26/2012	27,320	412.8	1,873
7/27/2012	27,694	389.0	1,790
7/28/2012	29,403	327.1	1,598
7/29/2012	28,906	348.5	1,674
7/30/2012	28,707	361.0	1,721
7/31/2012	28,680	347.9	1,657
8/1/2012	27,891	375.1	1,738
8/2/2012	31,494	322.6	1,688
8/3/2012	32,095	277.5	1,479
8/4/2012	31,863	293.8	1,555
8/5/2012	31,085	388.3	2,005
8/6/2012	31,473	362.6	1,896
8/7/2012	31,243	361.9	1,878
8/8/2012	30,234	398.5	2,001
8/9/2012	32,896	444.8	2,430
8/10/2012	33,004	385.5	2,113
8/11/2012	31,145	433.7	2,244
8/12/2012	30,629	383.9	1,953
8/13/2012	30,492	409.6	2,075
8/14/2012	31,019	393.9	2,029
8/15/2012	30,839	387.0	1,982
8/16/2012	30,893	428.1	2,197
8/17/2012	30,693	433.1	2,208
8/18/2012	30,440	406.2	2,054
8/19/2012	30,321	401.2	2,021
8/20/2012	30,680	386.4	1,969
8/21/2012	30,754	357.5	1,826
8/22/2012	31,097	327.9	1,694
8/23/2012	31,574	324.0	1,699
8/24/2012	29,239	309.2	1,502
8/25/2012	25,934	291.3	1,255
8/26/2012	25,408	339.5	1,433
8/27/2012	28,534	274.5	1,301
8/28/2012	25,213	354.5	1,485
8/29/2012	28,198	159.5	747
8/30/2012	25,222	20.6	86
8/31/2012	27,639	102.4	470
9/1/2012	28,309	212.0	997

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
9/2/2012	27,038	244.0	1,096
9/3/2012	27,550	299.7	1,372
9/4/2012	29,854	391.0	1,939
9/5/2012	28,634	360.2	1,713
9/6/2012	28,078	436.2	2,034
9/7/2012	28,311	428.3	2,014
9/8/2012	28,318	409.0	1,924
9/9/2012	28,949	395.1	1,900
9/10/2012	28,968	353.1	1,699
9/11/2012	26,835	392.1	1,748
9/12/2012	29,708	438.8	2,165
9/13/2012	28,372	439.2	2,070
9/14/2012	28,472	413.0	1,953
9/15/2012	27,277	401.0	1,817
9/16/2012	27,573	401.0	1,837
9/17/2012	26,892	401.0	1,791
9/18/2012	27,723	401.0	1,847
9/19/2012	27,855	401.0	1,855
9/20/2012	27,554	401.0	1,835
9/21/2012	28,194	401.0	1,878
9/22/2012	28,305	401.0	1,885
9/23/2012	27,873	401.0	1,857
9/24/2012	28,646	401.0	1,908
9/25/2012	28,557	401.0	1,902
9/26/2012	29,131	401.0	1,940
9/27/2012	29,178	401.0	1,943
9/28/2012	29,553	401.0	1,968
9/29/2012	29,362	401.0	1,956
9/30/2012	29,186	401.0	1,944
10/1/2012	32,171	401.0	2,143
10/2/2012	30,627	401.0	2,040
10/3/2012	30,901	400.7	2,057
10/4/2012	30,913	374.2	1,921
10/5/2012	32,326	304.7	1,636
10/6/2012	26,367	293.3	1,285
10/7/2012	24,725	407.7	1,674
10/8/2012	24,683	385.6	1,581
10/9/2012	24,223	375.3	1,510
10/10/2012	24,475	423.6	1,722
10/11/2012	24,520	436.8	1,779
10/12/2012	24,336	340.9	1,378
10/13/2012	24,331	365.1	1,475
10/14/2012	23,780	340.0	1,343
10/15/2012	24,110	313.3	1,255
10/16/2012	25,388	307.0	1,295
10/17/2012	25,083	325.9	1,358
10/18/2012	26,119	259.2	1,124
10/19/2012	23,386	256.8	998
10/20/2012	19,250	285.9	914
10/21/2012	17,644	176.2	516
10/22/2012	19,941	35.5	117
10/23/2012	23,737	32.6	129
10/24/2012	24,529	181.4	739
10/25/2012	24,405	340.4	1,380
10/26/2012	26,025	502.2	2,171
10/27/2012	30,900	427.2	2,192
10/28/2012	28,619	382.9	1,820
10/29/2012	28,723	388.4	1,853
10/30/2012	28,384	407.1	1,920
10/31/2012	26,285	420.7	1,837
11/1/2012	26,646	496.8	2,199
11/2/2012	27,235	515.4	2,331
11/3/2012	26,859	460.3	2,053

DATE	U233 FG	U233 Total S	U233 FG SO2
	MSCFD	ppm	lb/d
11/4/2012	26,966	491.5	2,201
11/5/2012	27,273	481.4	2,181
11/6/2012	27,422	512.9	2,336
11/7/2012	29,167	440.9	2,136
11/8/2012	29,439	343.7	1,681
11/9/2012	29,321	365.1	1,778
11/10/2012	29,759	346.1	1,711
11/11/2012	29,631	362.4	1,784
11/12/2012	26,908	417.3	1,865
11/13/2012	26,490	376.0	1,654
11/14/2012	24,863	385.3	1,591
11/15/2012	25,275	380.0	1,596
11/16/2012	25,129	353.0	1,473
11/17/2012	25,567	313.4	1,331
11/18/2012	26,089	330.0	1,430
11/19/2012	25,316	340.6	1,432
11/20/2012	25,088	433.5	1,806
11/21/2012	24,724	386.3	1,587
11/22/2012	24,968	413.6	1,715
11/23/2012	24,465	546.1	2,219
11/24/2012	25,390	543.9	2,294
11/25/2012	26,287	503.8	2,200
11/26/2012	26,716	520.4	2,309
11/27/2012	26,558	500.2	2,207
11/28/2012	26,797	501.8	2,234
11/29/2012	26,376	509.0	2,230
11/30/2012	26,244	425.0	1,852

CBE Supplemental Attachment 5

Refinery Action Collaborative letter of 18 December 2013 (3 pages)

REFINERY

ACTION COLLABORATIVE

SAN FRANCISCO BAY AREA

BY ELECTRONIC MAIL

18 December 2013

Hon. Federal Glover, Chair, and Members of the Board
Board of Supervisors, Contra Costa County

Hon. Elizabeth Patterson, Mayor, and Council Members
City Council, City of Benicia

Hon. Nancy Parent, Mayor, and Council Members
City Council, City of Pittsburg

Hon. Gayle McLaughlin, Mayor, and Council Members
City Council, City of Richmond

Re: **Chevron Richmond Refinery "Modernization" Project,**
Phillips 66 San Francisco Refinery Rodeo "Propane Recovery" Project,
Praxair "Contra Costa Pipeline" Project,
Valero Benicia Refinery "Crude by Rail" Project, and
WesPac Pittsburg "Energy Infrastructure" Project—Disclosure of
Refinery Oil Feedstock Quality Among Data for Environmental Review

Dear local government leaders,

The Refinery Action Collaborative (Collaborative) is a labor-community-university partnership working to address critical environmental health and safety concerns shared by refinery workers and residents regionally. Collaborative members include the Asian Pacific Environmental Network, the BlueGreen Alliance, Communities for a Better Environment, the Labor Occupational Health Program at UC Berkeley, the Natural Resources Defense Council, the United Steelworkers (USW) International Union, United Steelworkers Local 5, and United Steelworkers Local 326.

We understand that the proposed projects identified above are currently in environmental review, including public review of potential environmental health and safety impacts, and that your city or county is the California Environmental Quality Act "lead agency" in this review for one or more of these projects. The Collaborative has not taken a position on the projects at this time. We write to support an adequate environmental review of these

projects that includes, among other factors that have the potential to affect refinery safety and emissions, public disclosure of potential changes in refinery oil feedstock quality.

Our Collaborative's founding principles commit us to "pursue solutions that improve transparency and public accountability in the refinery industry." In a major effort earlier this year, our groups reached consensus on a *Recommendation to Ensure Prevention of Feedstock-Related Emissions Increase*, released in June 2013, that calls for the public disclosure and review of each Bay Area refiner's oil feedstock quality.[1] We also have supported community leaders' call for full and transparent environmental review of all potential risks associated with the Valero Benicia proposal, including its potential to facilitate a change in refinery oil feedstock quality.[2] More recently, we made recommendations to the Governor's Interagency Refineries Task Force that called, among other things, for public reporting of refinery crude feed quality, explaining that:

> Disclosure by the refineries of the quality of crude oil entering the plant is necessary for assessing the efficacy of a plant's safety measures and air pollution controls.[3]

As leaders of the public environmental reviews for these proposed projects under the state's Environmental Quality Act, your agencies are positioned to address these needs. Accordingly, we respectfully ask you to ensure that the environmental reviews of these proposed projects will disclose and address current and potentially changing refinery oil feedstock quality among the factors affecting community and worker health and safety.

On Behalf of the Collaborative,

Miya Yoshitani, Executive Director
Asian Pacific Environmental Network

Charlotte Brody, Vice President for Health Initiatives
BlueGreen Alliance

Greg Karras, Senior Scientist
Communities for a Better Environment

Nazima EL-Askari, MPH, Program Coordinator
Labor Occupational Health Program, UC Berkeley

Diane Bailey, Senior Scientist
Natural Resources Defense Council

Ron Espinoza, District 12 Sub-Director

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[1] *Bay Area Air Quality Management District Proposed Regulation 12, Rule 15; March 2013 Preliminary Draft Petroleum Refining Emissions Tracking Rule;* comments submitted to Jack Broadbent, Executive Officer, BAAQMD. 13 June 2013. See page 3.
[2] *Supporting the Committee's position on the Valero Crude-by-Rail Project;* letter to the Benicia Good Neighbor Steering Committee c/o Marilyn Bardet. 25 July 2013.
[3] *Initial Response of the Collaborative to the Findings & Recommendations of the July 2013 Draft Report of the Interagency Working Group on Refinery Safety;* 10 October 2013. See p. 7.

United Steelworkers International

Mike Smith, Local 5 Field Rep.
United Steelworkers Local 5

Moxie J. Loeffler, D.O.
Internal Medicine Physician