

Mineral Industry Surveys

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SULFUR IN APRIL 2009

During the month, production of recovered elemental sulfur was 786,000 metric tons (t), according to the U.S. Geological Survey. Production was slightly higher than that of March 2009 and 14% higher than that of April 2008. Shipments were 806,000 t, 4% higher than those of March 2009. Producers' ending stocks for April 2009 were 241,000 t.

Imports of recovered sulfur for April 2009 were estimated to be 71,000 t; exports were 119,000 t. Imports of sulfuric acid for April 2009 were 105,000 t; exports were 17,000 t.

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 758,000 t in April 2009. This was 23% higher than that of March 2009 and 11% lower than that of April 2008. Consumption remained low compared with levels reached during most of 2008 because phosphate fertilizer

producers curtailed production at most operations as a result of decreased demand for fertilizer products. Sulfur consumption is expected to increase when fertilizer production increases. The decline in consumption was mostly reflected in reduced imports of elemental sulfur, which fell sharply in the fourth quarter of 2008, declined further in January 2009, and remained low through April 2009. Exports were higher than normal since October 2008.

Significant adjustments have been made to the sulfur import data. Reports from the U.S. Census Bureau appear to underreport sulfur imports, especially material from Canada. The revised figures are based on Census information and data from personal communications with industry experts.

TABLE 1
SALIENT SULFUR STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources	Ending stocks ³
	Petroleum ²	Natural gas	Total		
2008:					
January-December	7,370	1,170	8,540	8,510	XX
January-April	2,350	360	2,710	2,720	XX
April	593	94	688	678	179
May	637	95	733	735	176
June	601	96	697	678	182
July	652	101	753	771	174
August	634	105	739	724	182
September	500	94	596	574	209
October	656	106	760	767	198
November	636	100	736	720	209
December	713	110	823	828	205
2009:					
January	687	89	776	776	205
February	583	92	675	671	215
March	678	101 ^r	780 ^r	778 ^r	201 ^r
April ^p	694	93	786	806	241
Total	2,640	375	3,020	3,030	XX

^pPreliminary. ^rRevised. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes a small quantity from coking operations.

³Subject to inventory adjustments.

TABLE 2
U.S. IMPORTS OF SULFUR¹

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Venezuela		Total, all countries ²	
	Quantity ^e	Value ³	Quantity	Value ³	Quantity ^e	Value ³	Quantity ^e	Value ³
2008:								
January-December	2,180	415,000	365	140,000	360	134,000	3,000	753,000
January-April	810	89,000	116	30,800	128	23,600	1,080	156,000
April	190	25,200	22	12,900	11	6,720	223	45,000
May	195	40,800	43	16,800	16	6,330	254	64,200
June	190	36,800	29	9,840	23	8,230	253	64,700
July	200	62,900	14	5,940	20	8,230	261	102,000
August	200	55,900	29	11,600	60	39,100	309	119,000
September	195	52,000	29	13,800	49	22,800	273	88,700
October	130	55,200	49	25,400	40	15,100	232	99,500
November	125	17,600	29	16,300	9	5,250	164	39,500
December	130	4,900	27	9,210	15	5,260	172	19,500
2009:								
January	65	3,360	--	--	10	200	75	3,900
February	59 ^r	1,650	14	805	--	--	73 ^r	2,750
March	65	2,020	8 ^r	157	10 ^r	164	83 ^r	2,670
April	63	3,260	--	--	8	142	71	3,690
Total	252	10,300	22	962	28	506	302	13,000

^eEstimated. ^rRevised. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Sources: U.S. Census Bureau data as adjusted by U.S. Geological Survey and PentaSul North America Sulphur Service.

TABLE 3
U.S. IMPORTS OF SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Canada			Mexico			Total, all countries ²		
	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³
2008:									
January-December	2,350	765	233,000	296	97	55,700	3,440	1,130	459,000
January-April	843	272	61,600	91	30	10,500	1,100	359	96,300
April	213	70	19,000	18	6	2,050	323	106	36,400
May	237	77	23,800	15	5	1,530	305	100	36,700
June	192	63	18,100	12	4	1,370	357	117	33,300
July	196	64	21,000	21	7	2,970	241	79	29,000
August	237	77	28,400	41	13	13,500	324	106	57,100
September	186	61	21,400	24	8	5,360	319	104	61,600
October	164	54	21,900	34	11	7,480	278	91	55,200
November	151	49	18,600	25	8	5,320	257	84	45,200
December	146	48	18,000	33	11	7,690	265	87	44,400
2009:									
January	142	46	24,500	23	8	3,590	196	64	35,800
February	172	56	31,700	14	5	458	206	67	32,600
March	192	63	34,700	18	6	334	281	92 ^r	40,600 ^r
April	70	23	9,290	2	1	97	105	34	10,200
Total	576	188	100,000	57	20	4,480	788	257	119,000

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF SULFUR AND SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value ²	Quantity	Sulfur content	Value ²
2008:					
January-December	954	272,000	261	85	42,700
January-April	232	76,100	88	29	13,000
April	56	21,200	15	5	2,590
May	39	9,210	23	8	5,450
June	74	24,800	18	6	2,130
July	69	16,700	15	5	1,900
August	104	53,900	20	7	2,670
September	37	18,700	24	8	3,430
October	125	36,800	37	10	8,490
November	101	14,800	14	5	1,350
December	173	20,400	22	7	4,240
2009:					
January	116	10,500	16	5	1,550
February	114	4,790	17	6	1,720
March	247	9,960	11	4	1,500
April	119	5,820	17	6	1,740
Total	596	31,100	61	21	6,500

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5
U.S. CONSUMPTION OF SULFUR¹

(Thousand metric tons)

Period	Domestic sources ²	Imports ^e	Consumption
2008:			
January-December	7,560	3,000	10,600
January-April	2,480	1,080	3,560
April	622	223	845
May	696	254	950
June	604	253	857
July	702	261	963
August	620	309	929
September	537	273	810
October	642	232	874
November	619	164	783
December	655	172	827
2009:			
January	660	75	735
February	557	73 ^r	630 ^r
March	531 ^r	83 ^r	614 ^r
April	687	71	758
Total	2,440	302	2,740

^eEstimated. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Calculated as shipments minus exports.

TABLE 6
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT¹

(Thousand metric tons)

District and source	January-April 2008 ²		March 2009		April 2009		January-April 2009 ^p	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	91	85	15	14	16	15	63	62
Natural gas	4	4	1	1	1	1	3	3
Total	95	90	15	14	17	17	67	65
PAD 2:								
Petroleum and coke	326	330	68	68	76	76	289	278
Natural gas	9	9	3	--	2	8	11	11
Total	335	339	71	68	78	84	299	289
PAD 3: ³								
Petroleum and coke	1,500	1,510	489	487	507	518	1,890	1,900
Natural gas	170	174	39	39	32	30	157	154
Total	1,670	1,680	529	526	539	548	2,040	2,060
PAD 4 and 5: ⁴								
Petroleum and coke	430	421	106	105	95	95	403	402
Natural gas	177	182	58 ^r	62 ^r	57	62	204	218
California	355	339	85	86	83	83	332	332
Total	607	602	163 ^r	168 ^r	151	157	607	620
Grand total	2,710	2,720	780 ^r	778 ^r	786	806	3,020	3,030

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions.

³Includes the U.S. Virgin Islands.

⁴Quantities produced and shipped in California included in petroleum and coke. California total shown for information purpose only

TABLE 7
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS¹

(Million metric tons per year [annualized basis] and dollars per metric ton for period shown)

	2008	2009		
	total	March	April	Total
Production	8.54	9.18 ^r	9.56 ^p	9.18
Shipments	8.51	9.16 ^r	9.81 ^p	9.22
Exports of sulfur	0.95	2.91	1.45	1.81
Imports of sulfur:				
Canada ^e	2.18	0.77	0.77	0.77
Mexico	0.37	0.06 ^r	--	0.07
Venezuela ^e	0.36	0.12 ^r	0.10	0.09
Total ^{e,2}	3.00	0.98 ^r	0.86	0.92
Exports of H ₂ SO ₄	0.26	0.13	0.21	0.19
Imports of H ₂ SO ₄ :				
Canada	2.35	2.26	0.85	1.75
Mexico	0.30	0.21	(3)	0.17
Total ²	3.44	3.31 ^r	1.28	2.40
Consumption:				
Domestic sources	7.56	6.25 ^r	8.36	7.41
Imports ^e	3.00	0.98 ^r	0.86	0.92
Total	10.60 ^r	7.23 ^r	9.22	8.32
Sulfur export values ⁴	285	40	49	52
Sulfur import values: ⁴				
Canada	191	31	52	41
Mexico	383	20 ^r	XX	44
Venezuela	372	16 ^r	18	18
Average ²	251	32 ^r	52	43
H ₂ SO ₄ export values ⁴	164	136	102	107
H ₂ SO ₄ import values: ⁴				
Canada	99	181	133	174
Mexico	188	19	49	79
Average ²	133	144 ^r	97	151

^eEstimated. ^pPreliminary. ^rRevised. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes other countries not listed.

³Less than ½ unit.

⁴Average value per ton.