

Mineral Industry Surveys

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SULFUR IN MAY 2009

During the month, production of recovered elemental sulfur was 737,000 metric tons (t), according to the U.S. Geological Survey. Production was 7% lower than that of April 2009 and about the same as that of May 2008. Shipments were 693,000 t, 14% lower than those of April 2009. Producers' ending stocks for May 2009 were 289,000 t.

Imports of recovered sulfur for May 2009 were estimated to be 101,000 t; exports were 99,000 t. Imports of sulfuric acid for May 2009 were 43,000 t; exports were 19,000 t.

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 695,000 t in May 2009. This was 9% lower than that of April 2009 and 27% lower than that of May 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 May 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-May	2,980	455	3,440	3,450	XX
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	112 ^r	790 ^r	767 ^r	252 ^r
April	697 ^r	93	790 ^r	810 ^r	239 ^r
May ^p	651	86	737	693	289
Total	3,300	472	3,770	3,720	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-May	1,010	130,000	158	47,600	144	29,900	1,330	220,000
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	1,650	14	805	--	--	73	2,750
March	65	2,020	8	157	10	164	83	2,670
April	63	3,260	--	--	8	142	71	3,690
May	65	3,810	20	98	14	294	101	4,400
Total	317	14,100	42	1,060	42	800	402	17,400

^eEstimated. -- 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-May	1,080	349	85,400	106	35	12,000	1,400	459	133,000
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	40,600
April	70	23	9,290	2	1	97	105	34	10,200
May	32	10	3,440	1	(4)	12	43	14	3,630
Total	608	198	104,000	58	20	4,490	831	271	123,000

¹Revised.

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.

⁴Less than ½ unit.

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		
	Quantit	Value ²	Quantity	Sulfur content	Value ²
2008:					
January-December	954	272,000	261	85	42,700
January-May	271	85,300	111	37	18,500
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
May	99	5,490	19	6	1,980
Total	695	36,600	80	27	8,490

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		Consumption
	sources ²	Imports ^e	
2008:			
January-December	7,560	3,000	10,600
January-May	3,180 ^r	1,330	4,510 ^r
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	630
March	520 ^r	83	603 ^r
April	691 ^r	71	762 ^r
May	594	101	695
Total	3,020	403	3,430

^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-May 2008 ²		April 2009		May 2009 ^p		January-May 2009 ^{p, 2}	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	106	100	16	15	16	15	80	77
Natural gas	5	5	1	1	1	1	4	4
Total	111	106	17	17	17	16	84	82
PAD 2:								
Petroleum and coke	413	418	76	76	71	69	359	347
Natural gas	12	12	2	8	2	2	13	13
Total	425	430	78	84	73	71	373	360
PAD 3:³								
Petroleum and coke	1,910	1,930	507	518	466	439	2,350	2,340
Natural gas	217	219	32	30	31	28	198	171
Total	2,130	2,150	539	548	496	468	2,550	2,510
PAD 4 and 5:⁴								
Petroleum and coke	553	540	98	99	98	90	506	496
Natural gas	222	226	57	62	52	48	256	266
California	453	434	83	83	83	76	414	408
Total	775	766	155 ^r	161 ^r	150	138	762	761
Grand total	3,440	3,450	790 ^r	810 ^r	737	693	3,770	3,720

^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	April	May	Total
Production	8.54	9.61 ^r	8.68 ^p	9.11
Shipments	8.51	9.86 ^r	8.16 ^p	8.99
Exports of sulfur	0.95	1.45	1.17	1.68
Imports of sulfur:				
Canada ^e	2.18	0.77	0.76	0.77
Mexico	0.37	--	0.23	0.10
Venezuela ^e	0.36	0.10	0.16	0.10
Total ^{e,2}	3.00	0.86	1.19	0.97
Exports of H ₂ SO ₄	0.26	0.21	0.22	0.19
Imports of H ₂ SO ₄ :				
Canada	2.35	0.85	0.38	1.47
Mexico	0.30	0.02 ^r	0.01	0.14
Total ²	3.44	1.28	0.51	2.01
Consumption:				
Domestic sources	7.56	8.41 ^r	6.99	7.30
Imports ^e	3.00	0.86	1.19	0.97
Total	10.60	9.27 ^r	8.18	8.28
Sulfur export values ³	285	49	55	53
Sulfur import values: ³				
Canada	191	52	59	45
Mexico	383	XX	5	25
Venezuela	372	18	21	19
Average ²	251	52	44	43
H ₂ SO ₄ export values ³	164	102	104	106
H ₂ SO ₄ import values: ³				
Canada	99	133	108	170
Mexico	188	49	12	77
Average ²	133	97	85	148

^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.

³Average value per ton.