

Mineral Industry Surveys

For information, contact:

Joyce A. Ober, Sulfur Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-7717, Fax: (703) 648-7757
E-mail: jober@usgs.gov

Robin C. Kaiser (Data)
Telephone: (703) 648-7948
Fax: (703) 648-7792
E-mail: rkaiser@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

SULFUR IN FEBRUARY 2009

During the month, production of recovered elemental sulfur was 675,000 metric tons (t), according to the U.S. Geological Survey. Production was 13% lower than that of January 2009 and 10% higher than that of February 2008. Shipments were 671,000 t, 13% lower than those of January 2009. Producers' ending stocks for February 2009 were 215,000 t.

Imports of recovered sulfur for February 2009 were estimated to be 89,000 t; exports were 114,000 t. Imports of sulfuric acid for February 2009 were 206,000 t; exports were 17,000 t.

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 646,000 t in February 2009. This was 14% lower than that of January 2009 and 19% lower than that of February 2008. Consumption remained relatively 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 may not increase significantly until the beginning of the spring planting season. The decline in consumption was mostly reflected in reduced imports of elemental sulfur, which fell sharply in the fourth quarter of 2008 and declined further in February 2009. Exports were also higher than normal during that period.

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-February	1,150	177	1,320	1,330	379
February	522	91	613	617	177
March	607	89	695	708	174
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 ^p	583	92	675	671	215
Total	1,270	181	1,450	1,450	XX

^pPreliminary. 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-February	415	27,700	72	9,890	98	12,700	585	50,700
February	210	16,100	29	6,820	35	8,260	274	31,400
March	205	36,000	22	8,000	19	4,110	272	60,300
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	85	3,360	--	--	10	200	95	3,900
February	75	1,650	14	805	--	--	89	2,750
Total	160	5,010	14	805	10	200	184	6,650

^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-February	391	128	24,800	28	9	2,040	447	146	29,600
February	198	65	13,400	16	5	1,330	242	79	17,300
March	239	74	17,700	45	15	6,380	326	107	30,300
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
Total	314	102	56,200	37	13	4,050	401	131	68,400

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-February	123	37,900	40	13	5,010
February	92	32,900	18	6	1,780
March	53	17,000	33	11	5,410
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
Total	230	15,300	33	11	3,270

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 ^r	3,000	10,600 ^r
January-February	1,210	585	1,790
February	525	274	799
March	655	272	927
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	95	755
February	557	89	646
Total	1,220	184	1,400

^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-February 2008 ²		January 2009		February 2009		January-February 2009 ³	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	56	51	17	16	16	17	32	32
Natural gas	2	2	1	1	1	1	2	2
Total	58	53	18	17	17	18	35	35
PAD 2:								
Petroleum and coke	167	168	77	71	68	64	145	134
Natural gas	3	3	3	3	3	--	6	3
Total	170	172	80	73	71	64	151	138
PAD 3: ³								
Petroleum and coke	719	725	492	498	397	398	890	897
Natural gas	94	98	45	42	39	41	84	83
Total	813	823	537	541	437	439	973	980
PAD 4 and 5: ⁴								
Petroleum and coke	204	202	101	98	102	103	203	201
Natural gas	78	78	41	46	48	47	90	93
California	168	161	83	82	80	81	163	162
Total	282	280	142	145	151	150	293	295
Grand total	1,320	1,330	776	776	675	671	1,450	1,450

³Preliminary. -- Zero.

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	January	February	Total
Production	8.54	9.14	8.80 ^P	8.98
Shipments	8.51	9.14	8.75 ^P	8.95
Exports of sulfur	0.95	1.37	1.49	1.42
Imports of sulfur:				
Canada ^e	2.18	1.00	0.98	0.99
Mexico	0.37	-- ^r	0.18	0.09
Venezuela ^e	0.36	0.12	--	0.06
Total ^{e,2}	3.00	1.12	1.16	1.14
Exports of H ₂ SO ₄	0.26	0.19	0.22	0.20
Imports of H ₂ SO ₄ :				
Canada	2.35	1.67	2.23	1.94
Mexico	0.30	0.27	0.18	0.23
Total ²	3.44	2.31	2.69	2.48
Consumption:				
Domestic sources	7.56	7.77	7.26	7.53
Imports ^e	3.00	1.12	1.16	1.14
Total	10.60	8.89	8.42	8.67
Sulfur export values ³	285	91	42	67
Sulfur import values: ³				
Canada	191	40	22	31
Mexico	383	XX	58	58
Venezuela	372	20	XX	20
Average ²	251	41	31	36
H ₂ SO ₄ export values ³	164	97	101	99
H ₂ SO ₄ import values: ³				
Canada	99	173	184	179
Mexico	188	156	33	109
Average ²	133	183	158	171

^eEstimated. ^rRevised. ^PPreliminary. 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.