

# Mineral Industry Surveys

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## SULFUR IN AUGUST 2008

During the month, production of recovered elemental sulfur was 742,000 metric tons (t), according to the U.S. Geological Survey. August 2008 production was slightly lower than that of July 2008 and 3% higher than that of August 2007. Shipments were 727,000 t, 5% lower than those of July 2008. Producers' ending stocks for August 2008 were 182,000 t.

Imports of recovered sulfur for August 2008 were estimated to be 314,000 t; exports were 104,000 t. Imports of sulfuric acid for August 2008 were 324,000 t; exports were 20,000 t.

U.S. sulfur consumption, calculated as shipments minus exports plus imports, was 937,000 t in August 2008. This was about the same as that of July 2008 and slightly higher than that of August 2007.

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.

Indications are that global sulfur prices have begun to decline, although the average customs value of elemental sulfur imported into the United States was still trending higher. The average unit value of imported sulfur was \$378 per ton in August 2008. This was 17% higher than that of July 2008 and nearly 20 times what it was in August 2007.

TABLE 1  
SALIENT SULFUR STATISTICS<sup>1</sup>

(Thousand metric tons)

Period	Production			Shipments, all sources	Ending stocks <sup>3</sup>
	Petroleum <sup>2</sup>	Natural gas	Total		
2007:					
January-December	7,000	1,280	8,280	8,320	XX
January-August <sup>f</sup>	4,590	852	5,440	5,480	XX
August	612	107	719	744	171
September	581	104	685	681	190
October	602	106	708	719	167
November	602	105	707	710	168
December	629	114	744	727	187
2008:					
January	624	86	711	712	202
February	526	93	618	622	180
March	609	89	697	711	174
April	602	94	697	687	179
May	645	95	740	743	176
June	604	98	701	682	182
July	651	101	752	769	179
August <sup>p</sup>	633	108	742	727	182
Total	4,890	763	5,660	5,650	XX

<sup>p</sup>Preliminary. <sup>f</sup>Revised. XX Not applicable.

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

<sup>2</sup>Includes a small quantity from coking operations.

<sup>3</sup>Subject to inventory adjustments.

TABLE 2  
U.S. IMPORTS OF SULFUR<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Venezuela		Total, all countries <sup>2</sup>	
	Quantity <sup>e</sup>	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	Quantity <sup>e</sup>	Value <sup>3</sup>	Quantity <sup>e</sup>	Value <sup>3</sup>
2007:								
January-December	2,090	43,200	424	16,100	406	17,200	2,930	79,400
January-August	1,370 <sup>r</sup>	18,700 <sup>r</sup>	303	8,820	261 <sup>r</sup>	7,680 <sup>r</sup>	1,940 <sup>r</sup>	37,400 <sup>r</sup>
August	190	4,480	29	1,000	32	1,420	251	7,020
September	185	4,940	29	1,520	33	1,730	247	8,390
October	180	6,850	33	2,040	25	1,560	238	10,600
November	175	5,110	44	2,550	34	2,250	253	10,200
December	180	7,610	15	1,140	53	3,930	248	12,800
2008:								
January	205	11,600	43	3,070	63	4,480	311	19,300
February	190	16,100	29	6,820	35	8,260	254	31,400
March	205	36,000	22	8,000	19	4,110	273	60,300
April	195	25,200	22	12,900	11	6,720	228	45,000
May	205	40,800	43	16,800	16	6,330	264	64,200
June	195	36,800	29	9,840	23	8,230	257	64,700
July	205	62,900	14	5,940	20	8,230	240	77,300
August	205	55,900	30	11,600	60	39,100	314	119,000
Total	1,610	285,000	232	74,900	247	85,500	2,140	481,000

<sup>e</sup>Estimated. <sup>r</sup>Revised.

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

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared 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 ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada			Mexico			Total, all countries <sup>2</sup>		
	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>
2007:									
January-December	2,310	688	101,000	239	79	6,760	2,600	833	112,000
January-August	1,570	446	67,800	195	64	5,360	1,800	572	75,400 <sup>r</sup>
August	194	14	8,350	22	7	581	237	77	9,360
September	176	58	8,310	10	3	293	187	61	8,630
October	190	62	8,300	11	4	295	201	66	8,710
November	183	60	7,810	12	4	318	208	68	9,380
December	192	62	9,060	11	4	493	202	66	9,610
2008:									
January	193	63	11,500	12	4	711	205	67	12,300
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
Total	1,710	553	153,000	180	59	29,800	2,320	761	252,000

<sup>r</sup>Revised.

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

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared customs valuation.

Source: U.S. Census Bureau.

TABLE 4  
U.S. EXPORTS OF SULFUR AND SULFURIC ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value <sup>2</sup>	Quantity	Sulfur content	Value <sup>2</sup>
2007:					
January-December	922	84,800	334	106	34,300
January-August	565 <sup>r</sup>	41,300	251 <sup>r</sup>	80 <sup>r</sup>	25,100
August	83	8,190	50	16	4,660
September	61	7,890	27	8	2,700
October	118	14,100	26	8	2,510
November	95	10,900	16	5	1,590
December	84	10,600	14	5	2,370
2008:					
January	31	4,910	22	7	3,230
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
Total	518	181,000	164	55	25,200

<sup>r</sup>Revised.

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

<sup>2</sup>Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5  
U.S. CONSUMPTION OF SULFUR<sup>1</sup>

(Thousand metric tons)

Period	Domestic sources <sup>2</sup>	Imports <sup>e</sup>	Consumption
2007:			
January-December	7,390	2,930	10,300
January-August <sup>f</sup>	4,910	1,940	6,850
August	661	251	912
September	620	247	867
October	605	238	843
November	615	253	868
December	643	248	858
2008:			
January	681	311	992
February	532	254	786
March	658	273	931
April	631	228	859
May	704	264	968
June	608	257	865
July	700	240	940
August	623	314	937
Total	5,140	2,140	7,280

<sup>e</sup>Estimated. <sup>f</sup>Revised.

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

<sup>2</sup>Calculated as shipments minus exports.

TABLE 6  
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,  
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT<sup>1</sup>

(Thousand metric tons)

District and source	January-August 2007		July 2008		August 2008 <sup>p</sup>		January-August 2008 <sup>2</sup>	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	179	182	23	24	24	24	200	196
Natural gas	9	8	1	1	1	1	9	9
Total	188	189	24	25	25	25	209	205
PAD 2:								
Petroleum and coke	615 <sup>r</sup>	614 <sup>r</sup>	82	83	75	73	657	660
Natural gas	28	28	2	2	3	2	20	19
Total	643 <sup>r</sup>	642 <sup>r</sup>	85	85	77	75	677	679
PAD 3: <sup>3</sup>								
Petroleum and coke	2,990 <sup>r</sup>	3,020	422	439	409	405	3,110	3,130
Natural gas	326 <sup>r</sup>	331 <sup>r</sup>	40	40	46	46	348	351
Total	3,310 <sup>r</sup>	3,350 <sup>r</sup>	462	480	455	451	3,460	3,490
PAD 4 and 5: <sup>4</sup>								
Petroleum and coke	775 <sup>r</sup>	766	122 <sup>r</sup>	121 <sup>r</sup>	127	120	921	896
Natural gas	522 <sup>r</sup>	528 <sup>r</sup>	57	58	58	57	387	388
California	622 <sup>r</sup>	605 <sup>r</sup>	99 <sup>r</sup>	99 <sup>r</sup>	104	98	751	720
Total	1,300 <sup>r</sup>	1,290 <sup>r</sup>	179 <sup>r</sup>	179 <sup>r</sup>	185	177	1,310	1,280
Grand total	5,440 <sup>r</sup>	5,480 <sup>r</sup>	752	769	742	727	5,660	5,650

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

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

<sup>2</sup>May include revisions.

<sup>3</sup>Includes the U.S. Virgin Islands.

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

TABLE 7  
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS<sup>1</sup>

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

	2007	2008		Total
	total	July	August	
Production	8.28	8.88	8.76 <sup>P</sup>	8.48
Shipments	8.31	9.08	8.58 <sup>P</sup>	8.48
Exports of sulfur	0.92	0.82	1.23	0.78
Imports of sulfur:				
Canada <sup>c</sup>	2.08	2.42	2.42	2.42
Mexico	0.42	0.17	0.35	0.35
Venezuela <sup>c</sup>	0.37	0.24	0.71	0.37
Total <sup>e, 2</sup>	2.93	2.83	3.71	3.20
Exports of H <sub>2</sub> SO <sub>4</sub>	0.33	0.18	0.24	0.25
Imports of H <sub>2</sub> SO <sub>4</sub> :				
Canada	2.31	2.31	2.80	2.57
Mexico	0.24	0.25	0.48	0.27
Total <sup>2</sup>	2.60	2.85	3.82	3.50
Consumption:				
Domestic sources	7.39	8.26	7.35	7.71
Imports <sup>c</sup>	2.90	2.83	3.71	3.20
Total	10.30	11.10	11.10	11.00
Sulfur export values <sup>3</sup>	92	243	518	349
Sulfur import values: <sup>3</sup>				
Canada	21	307	272	178
Mexico	38	424	386	323
Venezuela	42	412	652	346
Average <sup>2</sup>	27	322	378	224
H <sub>2</sub> SO <sub>4</sub> export values <sup>3</sup>	103	127	133	153
H <sub>2</sub> SO <sub>4</sub> import values: <sup>3</sup>				
Canada	44	107	120	90
Mexico	28	141	329	166
Average <sup>2</sup>	43	120	176	109

<sup>c</sup>Estimated. <sup>P</sup>Preliminary.

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

<sup>2</sup>Includes other countries not listed.

<sup>3</sup>Average value per ton.