

# Mineral Industry Surveys

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## SULFUR IN FEBRUARY 2011

During the month, production of recovered elemental sulfur was 560,000 metric tons (t), according to the U.S. Geological Survey. Production was 23% lower than that of January 2011 and 6% lower than that of February 2010. Shipments were 577,000 t, 21% lower than those of January 2011. Producers' ending stocks for February 2011 were 127,000 t.

Imports of recovered sulfur for February 2011 were estimated to be 247,000 t; exports were 122,000 t. Imports of sulfuric acid for February 2011 were 234,000 t; exports were 28,000 t.

U.S. sulfur consumption, calculated as shipments minus

exports plus imports, was 702,000 t in February 2011. This was 23% lower than that of January 2011 and 3% lower than that of February 2010.

Significant adjustments have been made to the sulfur import data. The U.S. Census Bureau appears 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 STATISTICS<sup>1</sup>

(Thousand metric tons)

Period	Production			Shipments, all sources	Stocks, end of period <sup>3</sup>
	Petroleum <sup>2</sup>	Natural gas	Total		
2010:					
January-December	7,080	1,170	8,250	8,310	184
January-February <sup>f</sup>	1,040	215	1,260	1,250	457
February <sup>f</sup>	492	105	597	608	224
March	587	104	691	704	225
April	609	104	713	705	219
May	641	114	755	744	211
June	597	98	694	696	213
July	629	79	708	721	218
August	657	99	756	756	219
September	573	99	673	681	218
October	573	81	654	654	219
November	575	81	656	667	208
December	592	96	687	730	184
2011:					
January	625	104	729	732	146
February <sup>p</sup>	470	91	560	577	127
Total	1,100	195	1,290	1,310	127

<sup>p</sup>Preliminary. <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>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>
2010:								
January-December	2,320	122,000	379	37,400	41	4,200	2,950	214,000
January-February	365 <sup>f</sup>	13,100	47	2,400	--	--	419 <sup>f</sup>	16,800
February	175	6,730	29	1,930	--	--	210	9,700
March	190	8,950	43	2,890	--	--	237	12,800
April	180	18,200	29	1,210	--	--	209	19,700
May	185	9,740	43	4,630 <sup>f</sup>	--	--	229	14,800
June	180	9,960	29	3,710	20	2,470	273	33,400
July	195	11,600	44	4,790	--	--	310	31,400
August	195	13,300	28	3,000	10	601	234	17,500
September	190	7,560	29	3,150	--	--	258	15,900
October	215	13,400	29	3,310	11	1,140	255	18,400
November	210	7,400	29	3,870	--	--	273	18,000
December	215	9,050	29	4,470	--	--	254	15,100
2011:								
January	215	10,000	29	3,620	13	1,600	267	17,600
February	195	10,700	14	2,750	--	--	247	13,500
Total	410	20,800	43	6,360	13	1,600	514	31,100

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

<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 ICIS 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>
2010:									
January-December	1,150	378	79,100	196	65	11,100	2,110	690	139,000
January-February	74	25	3,210	10 <sup>r</sup>	3	295	175 <sup>r</sup>	57 <sup>r</sup>	6,230
February	48	16	1,810	7	2	210	119	39	4,060
March	46 <sup>r</sup>	15	2,080	10	3	321	134	43	5,450
April	70	23	4,760	8	3	464	119	40	7,010
May	40	13	2,280	23	8	2,770	101	33	7,320
June	62	20	4,810	20	7	547	113	37	7,540
July	127	42	8,730	26	8	965 <sup>r</sup>	211	69	14,100
August	124	41	8,840	14	5	357	226	74	14,900
September	158	52	11,200	7	2	209	219	72	15,400
October	164	54	12,500	17	6	1,840	205	67	17,400
November	139	45	10,500	37	12	2,480	275	90	21,800
December	147	48	10,200	25	8	830	335	110	21,800
2011:									
January	150	49	11,500	27	9	1,620	206	67	17,500
February	152	50	11,400	14	4	989	234	54	19,800
Total	302	99	22,900	41	13	2,600	440	121	37,300

<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>
2010:					
January-December	1,450	171,000	215 <sup>r</sup>	70	26,400
January-February	215 <sup>r</sup>	19,700 <sup>r</sup>	39	13	3,600
February	92	11,800	12	4	1,450
March	79	8,590	15	5	3,590
April	74	13,100	16	5	1,540
May	83	17,500	31	10	3,630
June	81	18,000	19	6	2,010
July	165	19,500	19	6	1,920
August	119	8,360	13	4	2,220
September	182	14,100	18	6	1,940
October	194	18,600	18	6	1,810
November	159	19,000	12	4	2,030
December	94	15,000	16	5	2,090
2011:					
January	86	13,900	20	7	2,320
February	122	20,900	28	9	3,470
Total	208	34,800	48	16	5,790

<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
2010:			
January-December	6,860	2,950	9,810
January-February <sup>f</sup>	1,040	419	1,460
February	516	210	726
March	625	237	862
April	631	209	840
May	661	229	890
June	615	273	888
July	556	310	866
August	637	234	871
September	499	258	757
October	460	255	715
November	506	273	779
December	636	254	890
2011:			
January	646	267	913
February	455 <sup>p</sup>	247	702
Total	1,100	514	1,620

<sup>e</sup>Estimated. <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>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-February 2010		January 2011		February 2011		January-February 2011 <sup>p,2</sup>	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	22 <sup>r</sup>	22 <sup>r</sup>	8	3	3	7	11	11
Natural gas	2	2	1	1	1	1	1	1
Total	24 <sup>r</sup>	24 <sup>r</sup>	9	4	4	9	12	12
PAD 2:								
Petroleum and coke	159 <sup>r</sup>	158 <sup>r</sup>	87	90	81	81	168	172
Natural gas	4	4	2	2	1	1	3	3
Total	162 <sup>r</sup>	162 <sup>r</sup>	89	92	82	82	171	175
PAD 3: <sup>3</sup>								
Petroleum and coke	676 <sup>r</sup>	653 <sup>r</sup>	426	435	293	304	719	739
Natural gas	80 <sup>r</sup>	80 <sup>r</sup>	38	37	34	34	72	71
Total	757 <sup>r</sup>	733 <sup>r</sup>	464	472	327	338	791	810
PAD 4 and 5: <sup>4</sup>								
Petroleum and coke	187 <sup>r</sup>	201 <sup>r</sup>	104	101	93	93	197	194
Natural gas	128	131	63	63	55	55	118	119
California	160 <sup>r</sup>	174 <sup>r</sup>	85	83	73	74	158	157
Total	315 <sup>r</sup>	332 <sup>r</sup>	166	165	148	148	315	313
Grand total	1,260 <sup>r</sup>	1,250 <sup>r</sup>	729	732	560	577	1,290	1,310

<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 to prior month(s) data.

<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)

	2010	2011		
	Total	January	February	Total
Production	8.25	8.58	7.30 <sup>p</sup>	7.97
Shipments	8.31	8.62	7.52 <sup>p</sup>	8.10
Exports of sulfur	1.45	1.01	1.59	1.29
Imports of sulfur:				
Canada <sup>e</sup>	2.32	2.53	2.54	2.54
Mexico	0.38	0.34	0.18	0.27
Venezuela <sup>e</sup>	0.04	0.15	--	0.08
Total <sup>1e, 2</sup>	2.95	3.14	3.22	3.18
Exports of H <sub>2</sub> SO <sub>4</sub>	0.22	0.24	0.37	0.30
Imports of H <sub>2</sub> SO <sub>4</sub> :				
Canada	1.15	1.77	1.98	1.87
Mexico	0.20	0.32	0.18	0.24
Total <sup>2</sup>	2.11	2.43	3.05	2.72
Consumption:				
Domestic sources	6.86	7.61	5.93	6.81
Imports <sup>e</sup>	2.95	3.14 <sup>r</sup>	3.22	3.18
Total	10.40	10.80	9.15	9.99
Sulfur export values <sup>3</sup>	119	161	171	167
Sulfur import values: <sup>3</sup>				
Canada	53	47	55	51
Mexico	99	125	196	148
Venezuela	103	123	XX	123
Average <sup>2</sup>	73	66	86	76
H <sub>2</sub> SO <sub>4</sub> export values <sup>3</sup>	123 <sup>r</sup>	116	124	121
H <sub>2</sub> SO <sub>4</sub> import values: <sup>3</sup>				
Canada	69	76	75	76
Mexico	56	60	71	64
Average <sup>2</sup>	66	85	85	85

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. XX Not applicable. -- Zero.

<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.