

Mineral Industry Surveys

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SULFUR IN MARCH 2011

During the month, production of recovered elemental sulfur was 660,000 metric tons (t), according to the U.S. Geological Survey. Production was 18% higher than that of February 2011 and 4% lower than that of March 2010. Shipments were 649,000 t, 12% higher than those of February 2011. Producers' ending stocks for March 2011 were 150,000 t.

Imports of recovered sulfur for March 2011 were estimated to be 270,000 t; exports were 114,000 t. Imports of sulfuric acid for March 2011 were 254,000 t; exports were 22,000 t.

U.S. sulfur consumption, calculated as shipments minus

exports plus imports, was 805,000 t in March 2011. This was 15% higher than that of February 2011 and 7% lower than that of March 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 STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources	Stocks, end of period ³
	Petroleum ²	Natural gas	Total		
2010:					
January–December	7,080	1,170	8,250	8,310	184
January–March ^f	1,630	319	1,950	1,960	682
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	470	91	560	577	127
March ^p	566	94	660	649	150
January–March	1,660	289	1,950	1,960	150

^pPreliminary. ^fRevised.

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
2010:								
January–December	2,320	122,000	379	37,400	41	4,200	2,950	214,000
January–March	555	22,000	90	5,290	--	--	656	29,600
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	--	--	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	21,400 ^f
March	215	25,100	44	5,940	--	--	270	33,500
January–March	625	45,900	87	12,300	13	1,600	784	72,500

^eEstimated. ^fRevised. -- 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 ICIS 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
2010:									
January–December	1,150	378	79,100	196	65	11,100	2,110	690	139,000
January–March	120	40	5,290	20	6	616	309	100	11,700
March	46	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	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	5 ^r	989	234	76 ^r	19,800
March	146	48	11,700	58	19	3,310	254	83	22,200
January–March	448	147	34,600	99	33	5,910	694	227	59,500

^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
2010:					
January–December	1,450	171,000	215	70	26,400
January–March	294	28,300	54	18	7,190
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
March	114	20,500	22	7	3,220
January–March	322	55,300	70	23	9,010

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
2010:			
January–December	6,860	2,950	9,810
January–March ^f	1,660	656	2,320
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	247	702
March	535 ^p	270	805
January–March	1,640	784	2,420

^eEstimated. ^pPreliminary. ^fRevised.

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–March 2010		February 2011		March 2011 ^p		January–March 2011 ^{p, 2}	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	35	31	3	7	7	3	18	14
Natural gas	3	3	1	1	1	1	2	1
Total	39	34	4	9	9	4	20	15
PAD 2:								
Petroleum and coke	243 ^r	240 ^r	81	81	87	89	255	261
Natural gas	6	6	1	1	2	2	5	5
Total	249 ^r	246 ^r	82	82	88	90	260	265
PAD 3: ³								
Petroleum and coke	1,070 ^r	1,060 ^r	293	304	370	360	1,090	1,100
Natural gas	121 ^r	119 ^r	34	34	39	40	110	110
Total	1,190 ^r	1,180 ^r	327	338	409	400	1,200	1,210
PAD 4 and 5: ⁴								
Petroleum and coke	282 ^r	301 ^r	93	93	102	103	299	297
Natural gas	188	192	55	55	53	53	171	172
California	240 ^r	258 ^r	73	74	80	82	238	239
Total	471 ^r	493 ^r	148	148	155	156	469	469
Grand total	1,950 ^r	1,960 ^r	560	577	660	649	1,950	1,960

^pPreliminary. ^rRevised.

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

²May include revisions to prior month(s) data.

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)

	2010	2011		Total
	Total	February	March	
Production	8.25 ^r	7.30	7.77 ^p	7.90
Shipments	8.31	7.52	7.64 ^p	7.94
Exports of sulfur	1.45	1.59	1.34	1.31
Imports of sulfur:				
Canada ^e	2.32	2.54	2.53	2.53
Mexico	0.38	0.18	0.52	0.35
Venezuela ^e	0.04	--	--	0.05
Total ^{e, 2}	2.95	3.22	3.18	3.18
Exports of H ₂ SO ₄	0.22	0.37	0.26	0.28
Imports of H ₂ SO ₄ :				
Canada	1.15	1.98	1.72	1.82
Mexico	0.20	0.18	0.68	0.40
Total ²	2.11	3.05	2.99	2.81
Consumption:				
Domestic sources	6.86	5.93	6.30	6.63
Imports ^e	2.95	3.22	3.18	3.18
Total	9.81 ^r	9.15	9.48	9.81
Sulfur export values ³	119	171	180	172
Sulfur import values: ³				
Canada	53	55	117	73
Mexico	99	196	135	141
Venezuela	103	XX	XX	123
Average ²	73	86	124	92
H ₂ SO ₄ export values ³	123	124	146	129
H ₂ SO ₄ import values: ³				
Canada	69	75	80	77
Mexico	56	71	57	60
Average ²	66	85	88	86

^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.