

Mineral Industry Surveys

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SULFUR IN JANUARY 2004

During the month, production of recovered elemental sulfur was 724,000 metric tons (t), according to the U.S. Geological Survey. January production was 9% lower than December 2003, and 7% lower than that of January 2003. Shipments were 7% lower than those of December 2003. Producers' ending stocks for January 2004 were 178,000 t.

Import and export data for December 2003 were not available at the time of publication and will be published in the Sulfur in February 2004 Mineral Industry Surveys along with apparent consumption. Imports of recovered sulfur for December 2003

were estimated to be 230,000 t; exports were 67,000 t. Imports of sulfuric acid for December 2003 were 75,000 t; exports were 12,000 t.

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 data, from other published sources, and personal communications with industry experts. Better strategies for estimating import data from Canada are being explored.

TABLE 1
SALIENT SULFUR STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources
	Petroleum ²	Natural gas	Total	
2002	6,750	1,760	8,500	8,490
2003:				
January	608 ^r	169	778 ^r	774 ^r
February	525 ^r	148	673 ^r	658
March	595	161	756 ^r	736 ^r
April ^f	639	155	794	810
May ^f	639	135	773	769
June ^f	556	132	688	680
July ^f	615	141	755	760
August ^f	567	156	723	723
September ^f	557	141	698	708
October ^f	561	153	714	715
November ^f	628	147	775	783
December ^f	642	155	796	803
Total ^f	7,130	1,790	8,920	8,920
2004:				
January ^p	558	165	724	747

^pPreliminary. ^rRevised.

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

²Includes a small quantity from coking operations.

TABLE 2
U.S. IMPORTS OF SULFUR¹

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Total, all countries ²	
	Quantity ^e	Value ³	Quantity	Value ³	Quantity ^e	Value ³
2002:						
January-December	1,950	9,450	430	11,300	2,560	26,800
December	180	1,100	45	1,640	252	3,720
2003:						
January	180	1,280	44	2,460	224	3,740
February	170	2,330	45	1,850	215	4,250
March	200	2,870	45	2,130	245	5,660
April	190	2,950	44	2,380	234	5,230
May	200	4,160	45	2,530	266	7,760
June	180	2,940	44	2,410	241	6,270
July	160	2,440	45	2,180	241	6,390
August	160	2,040	45	1,940	267	4,820
September	160	2,910	44	2,070	213	6,160
October	160	2,460	49	2,470	229	5,760
November	160	2,850	45	2,170	205	6,860
December ^e	160	2,770	40	1,960	230	6,180
Total	2,080	32,000	535	26,500	2,810	69,100

^eEstimated.

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 PentalSul North America Sulphur Service.

TABLE 3
U.S. IMPORTS OF SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Canada			Europe			Total, all countries ²		
	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³
2002:									
January-December	615	201	17,900	217	71	3,750	1,060	344	36,400
December	45	15	1,310	30	10	548	142	47	2,590
2003:									
January	38	13	1,330	29	9	511	67	22	1,900
February	30	10	1,080	25	8	836	57	19	2,360
March	42	14	1,740	19	6	279	63	21	2,480
April	44	14	1,680	--	--	--	54	18	2,200
May	34	11	1,320	29	10	638	75	25	2,710
June	26	8	963	40	13	1,350	84	27	2,770
July	23	8	1,020	19	6	318	82	27	1,950
August	19	6	980	74	24	751	103	34	2,410
September	22	7	1,150	9	3	382	70	23	2,230
October	35	11	1,520	1	⁽⁴⁾	36	104	34	1,550
November	33	11	1,590	1	⁽⁴⁾	36 ^e	71	23	3,350
December	41	13	1,880	20	7	734	75	25	2,900
Total	387	126	16,200	266	86	5,870	905	298	28,800

^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.

⁴Less than 1/2 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		
	Quantity	Value ²	Quantity	Sulfur content	Value ²
2002:					
January-December	555	40,000	148	49	12,800
December	14	5,300	14	5	1,190
2003:					
January	107	3,440	12	4	1,380
February	63	3,410	16	5	1,150
March	31	2,020	11	3	1,360
April	90	2,910	12	4	1,430
May	41	2,430	22	7	1,610
June	11	1,780	21	7	1,790
July	53	3,520	28	10	2,430
August	57	2,190	27	9	2,060
September	50	2,090	23	7	1,910
October	72	4,360	12	4	1,200
November	27	4,880	12	4	1,170
December	67	3,920	12	4	1,360
Total	669	36,900	207	68	18,800

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 ^c	Consumption
2002:			
January-December	7,930	2,560	10,500
December	741	252	993
2003:			
January	667 ^r	224	891 ^r
February	595	215	810
March	705 ^r	245	950 ^r
April	720 ^r	234	954 ^r
May	728 ^r	266	994 ^r
June	669 ^r	241	910 ^r
July	707 ^r	241	948 ^r
August	666 ^r	267	933 ^r
September	658 ^r	213	871 ^r
October	643 ^r	229	872 ^r
November	756 ^r	205	961 ^r
December	736	230	966
Total	8,250	2,810	11,100

^cEstimated. ^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 2004 ^p		December 2003		Total 2004 ²		Year to date 2003 ²	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	10	10	22	23	10	10	21 ^r	22 ^r
Natural gas	2	2	2	2	2	2	2 ^r	2 ^r
Total	12	12	24	25	12	12	23 ^r	23 ^r
PAD 2:								
Petroleum and coke	75	78	73 ^r	75 ^r	75	78	82 ^r	76
Natural gas	4	4	4	4	4	4	4 ^r	4
Total	79	82	77 ^r	79 ^r	79	82	86	81
PAD 3:³								
Petroleum and coke	369	378	423 ^r	430 ^r	369	378	386 ^r	402 ^r
Natural gas	47	48	39 ^r	39 ^r	47	48	36 ^r	38 ^r
Total	416	426	463 ^r	469 ^r	416	416	422 ^r	439 ^r
PAD 4 and 5:⁴								
Petroleum and coke	104	109	123 ^r	121 ^r	104	109	119 ^r	112 ^r
Natural gas	113	118	109	110 ^r	113	118	128 ^r	118 ^r
California	78	83	92	91	78	83	91	89
Total	217	227	233 ^r	231 ^r	217	227	247 ^r	230 ^r
Grand total	724	747	796 ^r	803 ^r	724	747	778 ^r	774 ^r

^pPreliminary. ^rRevised.

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

²May include revisions to prior months.

³Includes the U.S. Virgin Islands.

⁴Quantities produced and shipped in California included in petroleum and natural gas. California total shown for information purposes only.

TABLE 7
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS¹

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

	2004	2003		
	January	December	November	Total
Production	8.55 ^p	9.37 ^r	9.43 ^r	8.92 ^r
Shipments	8.82 ^p	9.45 ^r	9.53 ^r	8.92 ^r
Exports of sulfur	NA	0.79	0.33	0.67 ^r
Imports of sulfur:				
Canada	NA	1.88 ^e	1.95 ^e	2.08 ^e
Mexico	NA	0.47	0.55	0.54 ^r
Total ²	NA	2.71 ^e	2.49 ^e	2.81 ^e
Export of H ₂ SO ₄	NA	0.14	0.15	0.21
Import of H ₂ SO ₄ :				
Canada	NA	0.48	0.40	0.38
Europe	NA	0.24	0.01	0.27
Total ²	NA	0.88	0.86	0.91
Consumption: ³				
Domestic sources	NA	8.67	9.20 ^r	8.25 ^r
Imports	NA	2.71 ^e	2.49 ^e	2.81 ^e
Total	NA	11.37	11.69 ^r	11.06 ^r
Sulfur export values ⁴	NA	\$58	\$181	\$55
Sulfur import values: ⁴				
Canada	NA	\$17	\$18	\$15
Mexico	NA	\$49	\$48	\$50
Average	NA	\$27	\$33	\$25 ^r
H ₂ SO ₄ export values ⁴	NA	\$114	\$98	\$91
H ₂ SO ₄ import values: ⁴				
Canada	NA	\$46	\$48	\$42 ^r
Europe	NA	\$37	\$36 ^e	\$22 ^r
Average	NA	\$39	\$47	\$32 ^r

^eEstimated. ^pPreliminary. ^rRevised. NA Not available.

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

²Includes other countries not listed.

³Because January trade data were not available, January consumption was not determined.

⁴Average value per ton for most recent data available.