USGS
science for a changing world

2008 Minerals Yearbook

STATISTICAL SUMMARY

U.S. Department of the Interior
U.S. Geological Survey

October 2010
[Revised February 2012]

STATISTICAL SUMMARY

By Joseph M. Krisanda

The world production table was prepared by Glenn J. Wallace, international data coordinator.

This annual report summarizes data on crude nonfuel mineral production[1] for the United States, its island possessions, and the Commonwealth of Puerto Rico.

Although crude mineral production may be measured at any of several stages of extraction and processing, the stage of measurement used in this annual report is what is termed "mine output." This term refers to minerals or ores in the form in which they are first extracted from the ground, but customarily may include the output from auxiliary processing at or near the mines.

Because of inadequacies in the statistics available, some series deviate from the foregoing definition. For copper, gold, lead, silver, and zinc, the quantities listed are recorded on a mine basis (as the recoverable content of ore sold or treated). The values assigned to the quantities, however, are based on the average selling price of refined metal, not the mine value.

The total value of all nonfuel mineral production in the United States in 2008 increased to $71.1 billion, which was a 2% increase compared with that of 2007; metals increased to $27.3 billion, which was an increase of 8%; and industrial minerals decreased to $43.7 billion, a decrease of 2%.

In 2008, the value of nonfuel mineral commodity production for the following 13 mined commodities, in descending order of production value, was greater than $1 billion: stone (crushed), copper, cement (portland), sand and gravel (construction), gold, molybdenum concentrates, iron ore (usable shipped), phosphate rock (marketable), lime, salt, soda ash, zinc, and lead. They accounted for 89% of the U.S. total production value (table 1).

In 2008, the value of nonfuel mineral commodity production in the following 24 States, in descending order of production value, was greater than $1 billion: Arizona, Nevada, California, Utah, Florida, Texas, Minnesota, Alaska, Missouri, Colorado, Wyoming, Michigan, Pennsylvania, Georgia, New Mexico, New York, Montana, Alabama, Ohio, Illinois, Virginia, Kansas, North Carolina, and Idaho. They accounted for 85% of the U.S. total production value (table 3).

[1]The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All 2008* U.S. Geological Survey (USGS) mineral production data published in this chapter are as of September 2010. For some mineral commodities, such as construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Specialist contact information is available on the Internet at http://minerals.usgs.gov/minerals/contacts/comdir.html; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). Minerals Yearbook chapters (for mineral commodities, States, and countries) and Mineral Industry Surveys are also available on the Internet at http://minerals.usgs.gov/minerals.

*Correction posted on February 28, 2012.

TABLE 1

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		2006		2007		2008	
		Quantity	Value	Quantity	Value	Quantity	Value
Metals:							
Beryllium concentrates[4]	metric tons	3,830	NA	3,810	NA	4,410	NA
Copper[5]		1,200	8,310,000	1,170	8,450,000	1,310	9,200,000
Gold[5]	kilograms	252,000	4,910,000	238,000	5,350,000	233,000	6,550,000
Iron ore, usable shipped		52,700	2,840,000	50,900	3,040,000	53,500	3,770,000
Lead[5]	metric tons	419,000	715,000	434,000	1,180,000	399,000	1,060,000
Molybdenum concentrates[6]	do.	59,800	3,040,000	57,000	3,530,000	55,900	3,830,000
Palladium[5]	kilograms	14,400	150,000	12,800	148,000	11,600	136,000
Platinum[5]	do.	4,290	158,000	3,860	162,000	2,580	182,000
Silver[5]	do.	1,160,000	431,000	1,280,000	554,000	1,250,000	600,000
Zinc[5]	metric tons	699,000	2,450,000	769,000	2,620,000	748,000	1,470,000
Combined values of cadmium (byproduct from zinc concentrates), iron oxide pigments (crude), magnesium metal, titanium concentrates, tungsten (2007–08), zirconium concentrates		XX	297,000	XX	309,000 r	XX	536,000
Total		XX	23,300,000	XX	25,400,000	XX	27,300,000
Industrial minerals, excluding fuels:[7]							
Barite		589	23,500	455	20,600	648	30,900
Bromine	metric tons	243,000	339,000	(8)	W	(8)	W
Cement:[9]							
Masonry		5,400	743,000 e	4,320	614,000 e	3,030	428,000 e
Portland		92,800	9,230,000 e	91,100	9,230,000 e	83,300	8,390,000 e
Clays:							
Ball		1,190	53,100	1,070	49,000	968	44,300
Bentonite		4,940	236,000	4,820	252,000	5,030	247,000
Common		24,200	243,000	20,600	216,000	17,500	202,000
Fire		848	19,000	565	23,800	446	17,700
Fuller's earth		2,540	243,000	2,600 r	247,000 r	2,350 10	231,000 10
Kaolin		7,470	981,000	7,110	959,000	6,740	900,000
Diatomite		799	176,000	687	163,000	764	171,000
Feldspar[9]		760 11	44,600	730 11	43,800	650 11	43,100
Garnet, industrial[9]	metric tons	34,100	4,230	61,400	11,300	62,900	13,600
Gemstones, natural[9]		NA	11,300	NA	11,900	NA	11,500
Gypsum, crude[9]		18,500	167,000	17,900	146,000	14,400	125,000
Helium:							
Crude	million cubic meters	41	66,000	40	68,900	42	90,100
Grade–A	do.	137	395,000	138	497,000	130	630,000
Kyanite[e]		102 r	23,600 r	118 r	29,100 r	97	25,500
Lime		21,000	1,700,000	20,200	1,760,000	19,800	1,830,000
Mica, crude	metric tons	110,000	22,400	96,600	14,400	84,000	11,000
Peat		734	20,100	694	17,800	647	17,100
Perlite, crude	metric tons	454,000	19,500	409,000	18,500	434,000	20,800
Phosphate rock, marketable[9]		30,100	919,000	29,700	1,520,000	30,200	2,320,000
Potash, gross weight[11]		2,400	410,000	2,600	480,000	2,400	740,000
Pumice and pumicite	metric tons	1,540,000	44,300	1,270,000	28,900	791,000	15,900
Salt		40,600	1,310,000	45,500 r	1,520,000	47,600	1,780,000
Sand and gravel:							
Construction		1,330,000 r	8,600,000 r	1,240,000 r	8,730,000 r	1,040,000	7,780,000
Industrial		28,900	759,000	30,100 r	832,000 r	30,400	937,000
Silica stone[12]	metric tons	227	992	231	1,020	(8)	W
Soda ash[9]		11,000	1,170,000	11,100	1,260,000	11,300	1,520,000

See footnotes at end of table.

TABLE 1—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		2006		2007		2008	
		Quantity	Value	Quantity	Value	Quantity	Value
Industrial minerals, excluding fuels—Continued:							
Stone:							
Crushed[13]		1,780,000 r	14,300,000 r	1,650,000 r	14,100,000 r	1,440,000	13,400,000
Dimension		1,850 r	334,000 r	1,920 r	346,000 r	1,800	324,000
Talc, crude[9]		895	27,400	769	24,400	706	21,800
Tripoli[9]	metric tons	76,000	18,200	96,400	17,400	132,000	17,100
Vermiculite, concentrate[e]		100	W	100	W	100	W
Combined values of andalusite, boron minerals, brucite, clays [fuller's earth (2008)], emery (2008), greensand marl, iodine (crude), lithium carbonate, magnesite, magnesium compounds, pyrophyllite (crude), staurolite, vermiculite, olivine, wollastonite, zeolites, and values indicated by symbol W		XX	1,030,000	XX	1,360,000 r	XX	1,380,000
Total		XX	43,700,000 r	XX	44,600,000 r	XX	43,700,000
Grand total		XX	67,000,000 r	XX	70,000,000 r	XX	71,100,000

[e]Estimated. [r]Revised. do. Ditto. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined value."
XX Not applicable.

[1]Table includes data available through August 26, 2010.

[2]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

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

[4]Shipments.

[5]Recoverable content of ores, etc.

[6]Content of ore and concentrate.

[7]Sold or used unless otherwise specified.

[8]Withheld to avoid disclosing company proprietary data.

[9]Production.

[10]Excludes attapulgite; included in "Combined value."

[11]Data are rounded to no more than two significant digits.

[12]Includes grindstones, pulpstones, and sharpening stones; excludes mill liners and grinding pebbles.

[13]Excludes abrasive stone and bituminous limestone and sandstone; all included elsewhere in table.

TABLE 2

NONFUEL MINERALS PRODUCED IN THE UNITED STATES, BY COMMODITY AND STATES IN 2008[1]

(Principal States based on quantity unless otherwise noted)

Mineral	Principal States	Other States (alphabetical order)
Andalusite	NC	
Barite	NV and GA	
Beryllium concentrates	UT	
Boron	CA	
Bromine	AR	
Brucite	TX	
Cement:		
Masonry	CA, SC, FL, AL, TX	AR, AZ, CO, GA, IA, IN, KS, KY, MD, ME, MI, MO, MT, NE, NM, NY, OH, OK, PA, TN, VA, WV.
Portland	TX, CA, PA, FL, MI	All other States, except AK, CT, DE, HI, LA, MA, MN, NC, ND, NH, NJ, RI, VT, WI.
Clays:		
Ball	TN, TX, MS, KY, IN	
Bentonite	WY, UT, MT, AL, TX	AZ, CA, CO, MS, NV, OR.
Common	TX, AL, NC, OH, GA	All other States, except AK, DE, HI, ID, NH, NJ, NV, RI, VT, WI.
Fire	MO, CA, OH, SC	
Fuller's earth	GA, MO, MS, VA, CA	FL, IL, KS, NV, TN, TX.
Kaolin	GA, SC, AL, AR, NV	CA, FL, NC, TX.
Copper[2]	AZ, UT, NM, NV, MT	ID and MO.
Diatomite	CA, NV, OR, WA	
Emery	OR	
Feldspar	NC, VA, CA, OK, GA	ID and SD.
Garnet, industrial	MT, NY, ID	
Gemstones, natural[3]	TN, AZ, OR, UT, CA	All other States.
Gold[2]	NV, AK, UT, CO, MT	AZ, CA, ID, NM, SD, WA.
Greensand marl	NJ	
Gypsum, crude	NV, IA, CA, OK, TX	AR, AZ, CO, IN, KS, LA, MI, NM, NY, SD, UT, WA, WY.
Helium:		
Crude	KS and TX	
Grade–A	KS, WY, TX, OK, CO	NM and UT.
Iodine, crude	OK	
Iron ore, usable	MN, MI, SD, CA	
Iron oxide pigments, crude	GA, AL, VA	
Kyanite	VA	
Lead[2]	MO, AK, ID, MT, WA	
Lime	MO, AL, KY, OH, TX	All other States, except AK, CT, DE, HI, KS, MD, ME, MS, NC, NH, NJ, NY, RI, SC, VT.
Lithium carbonate	NV	
Magnesite	NV	
Magnesium compounds	MI, UT, FL, DE, CA	
Magnesium metal	UT	
Mica, crude	SD, NC, GA, SC, AL	
Molybdenum, concentrates	CO, AZ, UT, ID, MT	NM and NV.
Olivine	WA and NC	
Palladium[2]	MT	
Peat	FL, MN, NY, ME, IL	IA, IN, MI, NJ, OH, PA, WA, WI.
Perlite, crude	NM, OR, AZ, CA, ID	NV.
Phosphate rock	FL, NC, ID, UT	
Platinum[2]	MT	
Potash	NM, UT, MI	
Pumice and pumicite	AZ, CA, ID, NM, OR	KS and NV.
Pyrophyllite, crude	NC	
Salt	LA, TX, NY, OH, KS	AL, AZ, CA, MI, NM, NV, OK, TN, UT, VA, WV.

See footnotes at end of table.

TABLE 2—Continued

NONFUEL MINERALS PRODUCED IN THE UNITED STATES, BY COMMODITY AND STATES IN 2008[1]

(Principal States based upon quantity unless otherwise noted)

Mineral	Principal States	Other States (alphabetical order)
Sand and gravel:		
Construction	CA, TX, AZ, MI, WA	All other States.
Industrial	IL, TX, WI, OK, MN	All other States, except AK, CT, DE, HI, KY, MA, ME, MT, NE, NH, OR, SD, UT, VT, WY.
Silica stone[4]	AR	
Silver[2]	AK, NV, ID, UT, AZ	CA, CO, MO, MT, NM.
Soda ash	WY and CA	
Staurolite	FL	
Stone:		
Crushed	TX, PA, MO, FL, IL	All other States.
Dimension	TX, WI, IN, GA, AZ	All other States, except AK, DE, FL, HI, IA, KY, LA, MS, ND, NE, NJ, OR, RI.
Talc, crude	MT, TX, VT, NY, CA	
Titanium concentrates, ilmenite	VA and FL	
Tripoli	OK, IL, AR, PA	
Tungsten	CA	
Vermiculite, crude	SC and VA	
Wollastonite	NY	
Zeolites	NM, ID, TX, CA, AZ	NV.
Zinc[2]	AK, TN, WA, MO, MT	ID and NY.
Zirconium concentrates	VA and FL	

[1]Table includes data available through August 26, 2010.

[2]Content of ores, etc.

[3]Principal States based on value.

[4]Grindstones, pulpstones, and sharpening stones; excludes mill liners and grinding pebbles.

TABLE 3

VALUE OF NONFUEL MINERAL PRODUCTION IN THE UNITED STATES AND PRINCIPAL NONFUEL MINERALS PRODUCED IN 2008[1, 2]

State	Value (thousands)	Rank	Percentage of U.S. total	Principal minerals, in order of value
Alabama	$1,300,000	18	1.83	Cement (portland), stone (crushed), lime, sand and gravel (construction), salt.
Alaska	2,640,000	8	3.72	Zinc, gold, lead, silver, sand and gravel (construction).
Arizona	7,840,000	1	11.03	Copper, molybdenum concentrates, sand and gravel (construction), cement (portland), stone (crushed).
Arkansas	704,000	30	0.99	Stone (crushed), bromine, cement (portland), sand and gravel (construction), lime.
California	4,200,000	3	5.91	Sand and gravel (construction), cement (portland), boron minerals, stone (crushed), soda ash.
Colorado	2,040,000	10	2.88	Molybdenum concentrates, sand and gravel (construction), gold, cement (portland), stone (crushed).
Connecticut[3]	159,000	43	0.22	Stone (crushed), sand and gravel (construction), stone (dimension), clays (common), gemstones (natural).
Delaware[3]	20,600	50	0.03	Sand and gravel (construction), magnesium compounds, stone (crushed), gemstones (natural).
Florida	3,730,000	5	5.25	Phosphate rock, stone (crushed), cement (portland), sand and gravel (construction), zirconium concentrates.
Georgia	1,800,000	14	2.53	Clays (kaolin), stone (crushed), cement (portland), clays (fuller's earth), sand and gravel (construction).
Hawaii	162,000	42	0.23	Stone (crushed), sand and gravel (construction), gemstones (natural).
Idaho	1,070,000	24	1.50	Molybdenum concentrates, phosphate rock, sand and gravel (construction), silver, lead.
Illinois	1,200,000	20	1.69	Stone (crushed), cement (portland), sand and gravel (construction), sand and gravel (industrial), lime.
Indiana	891,000	25	1.25	Stone (crushed), cement (portland), sand and gravel (construction), lime, cement (masonry).
Iowa	680,000	31	0.96	Stone (crushed), cement (portland), sand and gravel (construction), lime, gypsum (crude).
Kansas	1,120,000	22	1.58	Helium (Grade–A), cement (portland), stone (crushed), salt, helium (crude).
Kentucky	776,000	28	1.09	Stone (crushed), lime, cement (portland), sand and gravel (construction), clays (common).
Louisiana	618,000	34	0.87	Salt, sand and gravel (construction), stone (crushed), sand and gravel (industrial), clays (common).
Maine	158,000	44	0.22	Sand and gravel (construction), cement (portland), stone (crushed), stone (dimension), cement (masonry).
Maryland[3]	353,000	36	0.50	Cement (portland), stone (crushed), sand and gravel (construction), cement (masonry), stone (dimension).
Massachusetts[3]	242,000	40	0.34	Stone (crushed), sand and gravel (construction), lime, stone (dimension), clays (common).
Michigan	1,990,000	12	2.80	Iron ore (usable shipped), cement (portland), sand and gravel (construction), salt, magnesium compounds.
Minnesota	3,430,000	7	4.82	Iron ore (usable shipped), sand and gravel (construction), stone (crushed), sand and gravel (industrial), stone (dimension).
Mississippi	261,000	38	0.37	Sand and gravel (construction), stone (crushed), clays (fuller's earth), cement (portland), clays (ball).
Missouri	2,060,000	9	2.90	Stone (crushed), lead, cement (portland), lime, sand and gravel (construction).
Montana	1,360,000	17	1.91	Molybdenum concentrates, copper, platinum metal, gold, palladium metal.
Nebraska[3]	152,000	45	0.21	Cement (portland), stone (crushed), sand and gravel (construction), lime, clays (common).
Nevada	6,300,000	2	8.86	Gold, copper, sand and gravel (construction), silver, lime.
New Hampshire[3]	101,000	47	0.14	Stone (crushed), sand and gravel (construction), stone (dimension), gemstones (natural).
New Jersey[3]	345,000	37	0.49	Sand and gravel (construction), stone (crushed), sand and gravel (industrial), greensand marl, peat.
New Mexico	1,620,000	15	2.28	Copper, potash, molybdenum concentrates, sand and gravel (construction), cement (portland).
New York	1,480,000	16	2.08	Salt, stone (crushed), cement (portland), sand and gravel (construction), zinc.
North Carolina	1,090,000	23	1.53	Stone (crushed), phosphate rock, sand and gravel (construction), sand and gravel (industrial), stone (dimension).
North Dakota[3]	38,700	49	0.05	Sand and gravel (construction), lime, clays (common), stone (crushed), sand and gravel (industrial).
Ohio	1,270,000	19	1.79	Stone (crushed), salt, sand and gravel (construction), lime, cement (portland).
Oklahoma	810,000	27	1.14	Stone (crushed), cement (portland), sand and gravel (construction), sand and gravel (industrial), iodine.
Oregon	398,000	35	0.56	Stone (crushed), sand and gravel (construction), cement (portland), diatomite, perlite (crude).
Pennsylvania[3]	1,970,000	13	2.78	Stone (crushed), cement (portland), sand and gravel (construction), lime, cement (masonry).
Rhode Island[3]	51,200	48	0.07	Sand and gravel (construction), stone (crushed), sand and gravel (industrial), gemstones (natural).
South Carolina[3]	639,000	33	0.90	Cement (portland), stone (crushed), sand and gravel (construction), cement (masonry), sand and gravel (industrial).
South Dakota	246,000	39	0.35	Cement (portland), gold, sand and gravel (construction), stone (crushed), stone (dimension).
Tennessee	856,000	26	1.20	Stone (crushed), cement (portland), zinc, sand and gravel (construction), sand and gravel (industrial).
Texas	3,430,000	6	4.83	Cement (portland), stone (crushed), sand and gravel (construction), salt, sand and gravel (industrial).
Utah	4,160,000	4	5.86	Copper, molybdenum concentrates, magnesium metal, gold, potash.
Vermont[3]	111,000	46	0.16	Stone (crushed), stone (dimension), sand and gravel (construction), talc (crude), gemstones (natural).

See footnotes at end of table.

TABLE 3—Continued

VALUE OF NONFUEL MINERAL PRODUCTION IN THE UNITED STATES AND PRINCIPAL NONFUEL MINERALS PRODUCED IN 2008[1, 2]

State	Value (thousands)	Rank	Percentage of U.S. total	Principal minerals, in order of value
Virginia	1,130,000	21	1.60	Stone (crushed), sand and gravel (construction), cement (portland), lime, zirconium (concentrates).
Washington	718,000	29	1.01	Sand and gravel (construction), stone (crushed), cement (portland), zinc, gold.
West Virginia	238,000	41	0.33	Stone (crushed), cement (portland), lime, sand and gravel (industrial), cement (masonry).
Wisconsin[3]	647,000	32	0.91	Stone (crushed), sand and gravel (construction), sand and gravel (industrial), lime, stone (dimension).
Wyoming	2,020,000	11	2.84	Soda ash, clays (bentonite), helium (Grade–A), sand and gravel (construction), cement (portland).
Undistributed	449,000	XX	0.63	
Total	71,100,000	XX	100.00	

XX Not applicable.

[1]Table includes data available through August 26, 2010.

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

[3]Partial total; excludes values that must be withheld to avoid disclosing company proprietary data which are included with “Undistributed.”

TABLE 4

VALUE OF NONFUEL MINERAL PRODUCTION PER CAPITA AND PER SQUARE KILOMETER IN 2008 BY STATE[1, 2]

State	Land area (square kilometers)	Population (thousands)	Total value (thousands)	Per capita		Per square kilometer	
				Dollars	Rank	Dollars	Rank
Alabama	131,000	4,680	1,300,000	$279	14	$9,920	19
Alaska	1,480,000	688	2,640,000	3,840	1	1,780	46
Arizona	294,000	6,500	7,840,000	1,210	6	26,600	2
Arkansas	135,000	2,870	704,000	246	15	5,220	31
California	404,000	36,600	4,200,000	115	35	10,400	18
Colorado	269,000	4,940	2,040,000	414	10	7,610	27
Connecticut	12,500	3,500	159,000 [3]	45	47	12,600	11
Delaware	5,060	876	20,600 [3]	24	50	4,070	41
Florida	140,000	18,400	3,730,000	202	18	26,700	1
Georgia	150,000	9,700	1,800,000	185	20	12,000	14
Hawaii	16,600	1,290	162,000	126	31	9,720	20
Idaho	214,000	1,530	1,070,000	698	8	4,980	34
Illinois	144,000	12,800	1,200,000	93	39	8,340	23
Indiana	92,900	6,390	891,000	139	27	9,590	21
Iowa	145,000	2,990	680,000	227	16	4,700	35
Kansas	212,000	2,800	1,120,000	400	11	5,290	30
Kentucky	103,000	4,290	776,000	181	21	7,540	28
Louisiana	113,000	4,450	618,000	139	28	5,480	29
Maine	79,900	1,320	158,000	120	32	1,980	45
Maryland	25,300	5,660	353,000 [3]	62	44	14,000	9
Massachusetts	20,300	6,540	242,000 [3]	37	49	11,900	15
Michigan	147,000	10,000	1,990,000	199	19	13,500	10
Minnesota	206,000	5,230	3,430,000	655	9	16,600	8
Mississippi	121,000	2,940	261,000	89	40	2,150	44
Missouri	178,000	5,960	2,060,000	346	12	11,500	16
Montana	377,000	968	1,360,000	1,400	5	3,600	43
Nebraska	199,000	1,780	152,000 [3]	85	41	762	49
Nevada	284,000	2,620	6,300,000	2,410	3	22,100	3
New Hampshire	23,200	1,320	101,000 [3]	76	42	4,340	39
New Jersey	19,200	8,660	345,000 [3]	40	48	18,000	6
New Mexico	314,000	1,990	1,620,000	815	7	5,150	32
New York	122,000	19,500	1,480,000	76	43	12,100	12
North Carolina	126,000	9,250	1,090,000	118	33	8,640	22
North Dakota	179,000	641	38,700 [3]	60	45	217	50
Ohio	106,000	11,500	1,270,000	110	36	12,000	13
Oklahoma	178,000	3,640	810,000	222	17	4,560	38
Oregon	249,000	3,780	398,000	105	38	1,600	47
Pennsylvania	116,000	12,600	1,970,000 [3]	157	23	17,000	7
Rhode Island	2,710	1,050	51,200 [3]	49	46	18,900	5
South Carolina	78,000	4,500	639,000 [3]	142	25	8,200	24
South Dakota	197,000	805	246,000	305	13	1,250	48
Tennessee	107,000	6,240	856,000	137	29	8,020	25
Texas	678,000	24,300	3,430,000	141	26	5,060	33
Utah	213,000	2,730	4,160,000	1,530	4	19,600	4
Vermont	24,000	621	111,000 [3]	178	22	4,620	36
Virginia	103,000	7,800	1,130,000	145	24	11,100	17
Washington	172,000	6,570	718,000	109	37	4,170	40
West Virginia	62,400	1,820	238,000	131	30	3,810	42
Wisconsin	141,000	5,630	647,000 [3]	115	34	4,600	37
Wyoming	251,000	533	2,020,000	3,780	2	8,020	26
Undistributed	XX	XX	449,000	XX	XX	XX	XX
Total or average	9,160,000 [4]	304,000 [4]	71,100,000	234	XX	7,760	XX

See footnotes at end of table.

TABLE 4—Continued

VALUE OF NONFUEL MINERAL PRODUCTION PER CAPITA AND PER SQUARE KILOMETER IN 2008 BY STATE[1, 2]

XX Not applicable.

[1]Table includes data available through August 26, 2010.

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

[3]Partial total; excludes values that must be concealed to avoid disclosing company proprietary data. Concealed values included with "Undistributed."

[4]Excludes Washington, DC (which has no mineral production), with an area of 179 square kilometers and a population of 590,000.

Sources: U.S. Geological Survey and U.S. Census Bureau.

TABLE 5

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Alabama:						
Cement:						
Masonry	526	66,500 e	450	59,300 e	303	38,000 e
Portland	5,200	468,000 e	5,060	486,000 e	4,640	450,000 e
Clays, common	2,210	38,800	2,240	42,300 r	1,970	34,400
Gemstones, natural	NA	398	NA	398	NA	398
Lime	2,450	224,000	2,480	234,000	2,320	239,000
Sand and gravel:						
Construction	20,100	96,000	16,700	96,500	13,700	86,700
Industrial	474	9,300 r	459	9,810	619	14,600
Stone:						
Crushed	57,600 r	387,000	55,600 r	382,000 r	50,000	369,000
Dimension	4	3,630	(4)	W	7	3,720
Combined values of clays [bentonite, fire (2006), kaolin], iron oxide pigments (crude), mica [crude (2006, 2008)], salt, and values indicated by symbol W	XX	28,400	XX	24,300	XX	68,200
Total	XX	1,320,000	XX	1,330,000 r	XX	1,300,000
Alaska:						
Gemstones, natural	NA	13	NA	13	NA	69
Sand and gravel, construction	12,800 r	65,500 r	13,200 r	77,300 r	11,300	84,000
Stone, crushed	2,180	22,500 r	1,750 r	20,000 r	1,940	20,100
Combined values of cadmium (byproduct from zinc concentrates), gold, lead, silver, zinc	XX	2,940,000	XX	3,440,000	XX	2,540,000
Total	XX	3,030,000 r	XX	3,540,000 r	XX	2,640,000
Arizona:						
Clays, bentonite	34	1,710	30	1,520	23	1,220
Copper[5]	712	4,950,000	731	5,290,000	836	5,880,000
Gemstones, natural	NA	1,560	NA	1,950	NA	1,960
Sand and gravel, construction	94,100 r	662,000	85,800	652,000	66,600	556,000
Stone:						
Crushed	15,000 r	123,000 r	17,100 r	157,000 r	14,400	143,000
Dimension	(4)	W	(4)	W	123	16,400
Combined values of cement, clays (common), gold, gypsum (crude), lime, molybdenum concentrates, perlite (crude), pumice and pumicite, salt, sand and gravel (industrial), silver, zeolites	XX	1,030,000 r	XX	1,180,000 r	XX	1,240,000
Total	XX	6,760,000 r	XX	7,280,000 r	XX	7,840,000
Arkansas:						
Clays, common	1,140	2,550	1,120	4,520 r	796	10,700
Gemstones, natural	NA	439	NA	601	NA	607
Sand and gravel, construction	11,100	73,600	9,080	66,300	8,800	65,100
Silica stone[6] metric tons	227	992	231	1,020	(4)	W
Stone:						
Crushed	36,800	250,000	33,000 r	237,000 r	32,200	239,000
Dimension	(4)	W	(4)	W	21	2,740
Combined values of bromine, cement, clays (kaolin), gypsum (crude), lime, sand and gravel (industrial), tripoli	XX	471,000	XX	464,000	XX	386,000
Total	XX	799,000	XX	774,000 r	XX	704,000

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
California:						
Cement:						
Masonry	698	89,500 e	522	68,900 e	337	43,600 e
Portland	10,900	1,190,000 e	10,800	1,180,000 e	9,880	1,030,000 e
Clays:						
Bentonite	24	2,510	29	3,090 r	30	3,360
Common	744	7,640	549	3,390 r	469	3,570
Fire	(4)	W	(4)	W	118	W
Gemstones, natural	NA	1,040	NA	818	NA	732
Sand and gravel:						
Construction	128,000 r	1,570,000 r	141,000 r	1,520,000 r	110,000	1,250,000
Industrial	1,670	57,800	1,850	43,400	1,500	42,300
Stone:						
Crushed	70,500 r	780,000 r	51,000 r	533,000 r	51,500	573,000
Dimension	40	10,000	39	12,300	26	7,320
Combined values of boron minerals, clays (fuller's earth, kaolin), diatomite, feldspar, gold, gypsum (crude), iron ore (usable shipped), lime, magnesium compounds, perlite (crude), pumice and pumicite, salt, silver, soda ash, talc (crude), tungsten, zeolites, and values indicated by symbol W	XX	1,070,000	XX	1,050,000	XX	1,250,000
Total	XX	4,780,000 r	XX	4,420,000 r	XX	4,200,000
Colorado:						
Clays:						
Bentonite	(4)	W	(4)	W	2	40
Common	211	1,300	174	1,100	141	644
Gemstones, natural	NA	261	NA	261	NA	419
Lime	50	5,750	(4)	W	(4)	W
Sand and gravel, construction	48,000	327,000	46,100	364,000	36,300	286,000
Stone:						
Crushed	12,100	87,600 r	10,300 r	76,700 r	9,660	72,400
Dimension	32 r	3,390 r	21	3,870	27	4,510
Combined values of cement, gold, gypsum (crude), helium (Grade–A), molybdenum concentrates, sand and gravel (industrial), silver, and values indicated by symbol W	XX	1,250,000	XX	1,590,000	XX	1,680,000
Total	XX	1,680,000	XX	2,040,000	XX	2,040,000
Connecticut:						
Clays, common	85	(7)	36	(7)	(4)	(7)
Gemstones, natural	NA	6	NA	6	NA	7
Sand and gravel, construction	8,780	75,600	8,290	73,400	7,320	69,300
Stone:						
Crushed	10,800	99,000	10,400 r	119,000 r	9,550	89,200
Dimension	(4)	(7)	(4)	(7)	(4)	(7)
Total	XX	175,000	XX	192,000 r	XX	159,000
Delaware:						
Gemstones, natural	NA	1	NA	1	NA	1
Magnesium compounds	(4)	(7)	(4)	(7)	(4)	(7)
Sand and gravel, construction	2,790	22,400	3,520 r	26,400 r	2,550	20,600
Stone, crushed	(4)	(7)	(4)	(7)	(4)	(7)
Total	XX	22,400	XX	26,400 r	XX	20,600

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Florida:						
Cement:						
Masonry	900	146,000 [e]	524	86,100 [e]	310	47,000 [e]
Portland	5,880	602,000 [e]	5,510	557,000 [e]	4,980	518,000 [e]
Clays:						
Common	3	W	3	W	2	W
Kaolin	23	2,900	21	2,770	19	2,520
Gemstones, natural	NA	1	NA	1	NA	1
Peat	496	10,000	501	9,800	488	9,760
Sand and gravel:						
Construction	40,000	266,000	30,300	231,000	28,100	219,000
Industrial	500	8,050	441	8,110	573	7,480
Stone, crushed	134,000	1,400,000	96,400 [r]	1,150,000 [r]	68,300	892,000
Combined values of clays (fuller's earth), lime, magnesium compounds, phosphate rock, staurolite, titanium concentrates, zirconium concentrates, and values indicated by symbol W	XX	810,000	XX	1,360,000	XX	2,040,000
Total	XX	3,240,000	XX	3,410,000 [r]	XX	3,730,000
Georgia:						
Barite	(4)	W	(4)	W	7	1,350
Clays:						
Common	1,510	9,150	1,350	8,110	952	6,020
Fuller's earth	747	64,300	758 [r]	67,700	682 [8]	58,000 [8]
Kaolin	6,920	945,000	6,570	924,000	6,290	872,000
Gemstones, natural	NA	9	NA	9	NA	74
Sand and gravel:						
Construction	10,700	69,000	10,200	63,800	7,350	40,200
Industrial	973	17,400	1,040	18,100	841	20,700
Stone:						
Crushed	89,000	802,000	80,100 [r]	815,000 [r]	61,900	666,000
Dimension	140 [r]	22,800 [r]	162 [r]	18,900 [r]	169	18,200
Combined values of cement, clays [fuller's earth (2008)], feldspar, iron oxide pigments (crude), lime, mica (crude), and values indicated by symbol W	XX	140,000	XX	148,000	XX	114,000
Total	XX	2,070,000	XX	2,060,000	XX	1,800,000
Hawaii:						
Gemstones, natural	NA	107	NA	151	NA	151
Sand and gravel, construction	1,230	15,900	1,570 [r]	20,400 [r]	1,410	25,600
Stone, crushed	8,980	138,000	8,800 [r]	141,000 [r]	7,540	136,000
Total	XX	154,000	XX	161,000 [r]	XX	162,000
Idaho:						
Gemstones, natural	NA	388	NA	339	NA	430
Sand and gravel, construction	23,800	117,000	23,900 [r]	125,000 [r]	18,400	105,000
Stone:						
Crushed	5,270	31,700	6,170 [r]	37,500 [r]	5,570	36,300
Dimension	38	4,660	34 [r]	4,200 [r]	34	4,130

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Idaho—Conitnued:						
Combined values of cadmium (byproduct from zinc concentrates), cement (portland), copper, feldspar, garnet (industrial), gold, lead, lime, molybdenum concentrates, perlite (crude), phosphate rock, pumice and pumicite, sand and gravel (industrial), silver, zeolites, zinc	XX	628,000 r	XX	612,000	XX	921,000
Total	XX	782,000 r	XX	779,000	XX	1,070,000
Illinois:						
Cement, portland	3,110	308,000 e	3,120	309,000 e	2,660	263,000 e
Clays, fuller's earth	(4)	W	(4)	W	112	W
Gemstones, natural	NA	34	NA	34	NA	10
Sand and gravel:						
Construction	32,500	176,000	31,800	175,000	26,600	165,000
Industrial	5,410	102,000	4,090	86,800	3,980	108,000
Stone, crushed	79,000 r	601,000 r	78,400 r	614,000 r	66,600	604,000
Combined values of clays (common), lime, peat, stone [dimension dolomite (2008)], tripoli, and values indicated by symbol W	XX	64,100 r	XX	61,100 r	XX	60,900
Total	XX	1,250,000	XX	1,250,000 r	XX	1,200,000
Indiana:						
Cement, portland	3,030	267,000 e	2,980	263,000 e	2,590	226,000 e
Clays, common	779	16,400	624	8,980 r	667	8,080
Gemstones, natural	NA	4	NA	4	NA	4
Sand and gravel, construction	29,300	153,000	28,300 r	153,000	23,200	138,000
Stone:						
Crushed	59,300	352,000	57,800 r	383,000 r	52,400	353,000
Dimension	233	39,000	236	37,800	203	35,600
Combined values of cement (masonry), clays (ball), gypsum (crude), lime, peat, sand and gravel (industrial)	XX	159,000	XX	139,000 r	XX	130,000
Total	XX	986,000	XX	985,000 r	XX	891,000
Iowa:						
Clays, common	356	2,750	331	2,630	269	1,140
Gemstones, natural	NA	3	NA	3	NA	3
Peat	(4)	60	(4)	W	(4)	W
Sand and gravel, construction	18,400	91,300	17,100	94,000	15,600	88,400
Stone, crushed	37,500 r	298,000 r	35,500 r	286,000 r	37,800	304,000
Combined values of cement, gypsum (crude), lime, sand and gravel (industrial), and values indicated by symbol W	XX	313,000	XX	311,000	XX	286,000
Total	XX	705,000 r	XX	693,000 r	XX	680,000
Kansas:						
Cement, portland	3,000	286,000 e	2,760	282,000 e	2,400	246,000 e
Clays, common	697	7,440	563	3,830	548	2,840
Gemstones, natural	NA	1	NA	1	NA	1
Helium, Grade–A million cubic meters	85	245,000	88	316,000	79	384,000
Salt	2,600	144,000	2,870	158,000	3,010	178,000
Sand and gravel, construction	12,100	50,000	10,700	49,600	9,930	49,000
Stone:						
Crushed	23,300	181,000	23,400 r	199,000 r	23,000	180,000
Dimension	13 r	1,930 r	14 r	1,990 r	20	2,560

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Kansas—Continued:						
Combined values of cement (masonry), clays (fuller's earth), gypsum (crude), helium (crude), pumice and pumicite, sand and gravel (industrial)	XX	63,100	XX	67,200	XX	78,400
Total	XX	979,000 r	XX	1,080,000 r	XX	1,120,000
Kentucky:						
Clays, common	1,000	5,140	598	3,720	419	8,170
Gemstones, natural	NA	48	NA	48	NA	173
Sand and gravel, construction	10,100	54,400	9,070	48,300	7,600	41,600
Stone, crushed	60,100	443,000	56,000 r	432,000 r	51,000	411,000
Combined values of cement, clays (ball), lime	XX	311,000	XX	307,000	XX	315,000
Total	XX	814,000	XX	791,000 r	XX	776,000
Louisiana:						
Clays, common	563	23,700	552	13,800	509	12,900
Gemstones, natural	NA	7	NA	7	NA	7
Salt	12,300	143,000	13,900	180,000	14,600	231,000
Sand and gravel:						
Construction	23,300	188,000	25,700 r	235,000 r	22,200	224,000
Industrial	663	16,100	635	21,200	748	23,100
Combined values of gypsum (crude), lime, stone (crushed limestone and sandstone)	XX	97,300 r	XX	112,000 r	XX	128,000
Total	XX	468,000 r	XX	562,000 r	XX	618,000
Maine:						
Gemstones, natural	NA	275	NA	277	NA	282
Sand and gravel, construction	10,400	62,400	10,900 r	83,100 r	9,820	67,000
Stone:						
Crushed	5,340	41,500	4,680 r	37,700 r	3,960	33,300
Dimension	6	1,640	6	1,580	7	1,720
Combined values of cement, clays (common), peat	XX	56,300 r	XX	53,900 r	XX	56,000
Total	XX	162,000	XX	177,000 r	XX	158,000
Maryland:						
Cement:						
Masonry	(4)	(7)	(4)	(7)	(4)	(7)
Portland	2,650	237,000 e	3,000	265,000 e	(4)	(7)
Clays, common	286	851	173	(7)	(4)	(7)
Gemstones, natural	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	11,900	96,700	12,400 r	123,000 r	12,000	126,000
Industrial	--	--	--	--	(4)	(7)
Stone:						
Crushed	33,100	327,000 r	31,100 r	282,000 r	24,800	225,000
Dimension	5 r	873 r	17 r	2,680 r	8	1,740
Total	XX	662,000 r	XX	672,000 r	XX	353,000
Massachusetts:						
Clays, common	36	(7)	31	(7)	24	(7)
Gemstones, natural	NA	1	NA	1	NA	1
Lime	(4)	(7)	(4)	(7)	(4)	(7)
Sand and gravel, construction	17,600	134,000	15,800 r	141,000 r	11,200	109,000
Stone:						
Crushed	13,700 r	145,000 r	12,300 r	140,000 r	10,900	126,000
Dimension	89 r	11,700 r	98 r	12,000 r	53	7,140
Total	XX	290,000 r	XX	293,000 r	XX	242,000

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Michigan:						
Cement:						
Masonry	176	22,700 e	149	20,200 e	99	12,000 e
Portland	5,440	536,000 e	5,490	537,000 e	4,930	502,000 e
Clays, common	405	1,010	533	2,250 r	365	1,730
Gemstones, natural	NA	2	NA	2	NA	2
Gypsum, crude	932	8,220	809	8,030	656	7,270
Iron ore, usable shipped	12,300	W	12,200	W	12,400	W
Peat	32	W	(4)	W	(4)	W
Sand and gravel:						
Construction	50,500	215,000	56,900 r	230,000 r	44,300	208,000
Industrial	1,460	30,400	1,360	30,000	1,500	26,800
Stone:						
Crushed	34,200	150,000	26,800 r	130,000 r	21,100	101,000
Dimension	(4)	W	(4)	W	11	891
Combined values of bromine (2006), lime, magnesium compounds, potash, salt, and values indicated by symbol W	XX	981,000	XX	1,010,000	XX	1,130,000
Total	XX	1,940,000	XX	1,970,000	XX	1,990,000
Minnesota:						
Gemstones, natural	NA	6	NA	6	NA	7
Iron ore, usable shipped	40,400	W	38,800	W	41,100	W
Peat	69	5,280	41	4,350	48	4,540
Sand and gravel, construction	50,300	240,000	46,100	239,000	33,700	220,000
Stone:						
Crushed	11,900	116,000	10,400 r	111,000 r	8,400	95,600
Dimension	28 r	14,400 r	28 r	14,400 r	31	17,200
Combined values of clays (common), lime, sand and gravel (industrial), and values indicated by symbol W		2,250,000	XX	2,410,000	XX	3,090,000
Total	XX	2,620,000 r	XX	2,780,000 r	XX	3,430,000
Mississippi:						
Clays:						
Bentonite	78	5,180	67	4,610	53	3,690
Common	549	3,100	508	2,980 r	433	2,340
Fuller's earth	(4)	W	(4)	W	384	W
Gemstones, natural	NA	1	NA	1	NA	1
Sand and gravel, construction	19,300	133,000	15,000 r	102,000 r	12,500	89,400
Stone, crushed	3,070	53,700	3,120	58,900	4,380	88,800
Combined values of cement (portland), clays (ball), lime (2007), sand and gravel (industrial), and values indicated by symbol W	XX	77,200	XX	76,900	XX	77,200
Total	XX	272,000	XX	245,000 r	XX	261,000
Missouri:						
Cement, portland	5,240	500,000 e	5,230	515,000 e	4,650	451,000 e
Clays, common	750	4,160	426	2,880 r	496	3,470
Sand and gravel:						
Construction	17,000	92,100	14,200 r	78,400 r	12,300	75,800
Industrial	595	16,400	642	19,400	648	21,400
Stone:						
Crushed	90,500 r	576,000	83,900 r	630,000 r	75,000	602,000
Dimension	(4)	W	(4)	W	3	668

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		2006		2007		2008	
		Quantity	Value	Quantity	Value	Quantity	Value
Missouri—Continued:							
Combined values of cadmium (byproduct from zinc concentrates), cement (masonry), clays (fire, fuller's earth), copper, gemstones (natural), lead, lime, silver, stone (dimension granite), zinc, and values indicated by symbol W		XX	826,000	XX	1,040,000	XX	906,000
Total		XX	2,010,000	XX	2,280,000 r	XX	2,060,000
Montana:							
Gemstones, natural		NA	379	NA	386	NA	380
Palladium[5]	kilograms	14,400	150,000	12,800	148,000	11,900	136,000
Platinum[5]	do.	4,290	158,000	3,860	162,000	3,580	182,000
Sand and gravel, construction		13,700	95,300	15,900	134,000	13,200	108,000
Stone:							
Crushed		4,040	21,800	1,810 r	9,800 r	961	6,770
Dimension		(4)	W	(4)	W	58	9,490
Combined values of cadmium (byproduct from zinc concentrates), cement, clays (bentonite, common), copper, garnet (industrial), gold, lead, lime, molybdenum concentrates, silver, talc (crude), zinc, and values indicated by symbol W		XX	647,000 r	XX	910,000 r	XX	915,000
Total		XX	1,070,000	XX	1,360,000	XX	1,360,000
Nebraska:							
Cement:							
Masonry		(4)	(7)	(4)	(7)	(4)	(7)
Portland		(4)	(7)	(4)	(7)	(4)	(7)
Clays, common		158 e	(7)	135 e	(7)	109 e	(7)
Gemstones, natural		NA	4	NA	4	NA	4
Lime		13	700	(4)	(7)	(4)	(7)
Sand and gravel, construction		13,100	62,000	13,400	70,600	13,700	73,500
Stone, crushed		7,480	67,100	7,690 r	75,600 r	7,960 *	78,100
Total		XX	130,000	XX	146,000 r	XX	152,000
Nevada:							
Barite		(4)	W	(4)	W	641	29,500
Gold[5]	kilograms	206,000	4,010,000	186,000	4,170,000	178,000	5,000,000
Sand and gravel, construction		45,500	224,000	34,700	180,000	29,200	161,000
Silver[5]	kilograms	260,000	97,200	243,000	105,000	235,000	113,000
Stone, crushed		10,500 r	90,200 r	12,700 r	111,000 r	9,320	86,800
Combined values of brucite (2007), cement (portland), clays (bentonite, fuller's earth, kaolin), copper, diatomite, gemstones (natural), gypsum (crude), lime, lithium carbonate, magnesite, molybdenum concentrates, perlite (crude), pumice and pumicite, salt, sand and gravel (industrial), stone (dimension), zeolites, and values indicated by symbol W		XX	722,000 r	XX	836,000 r	XX	909,000
Total		XX	5,140,000	XX	5,410,000 r	XX	6,300,000
New Hampshire:							
Gemstones, natural		NA	6	NA	6	NA	7
Sand and gravel, construction		9,500	61,600	7,940	49,000	7,930	49,900
Stone:							
Crushed		6,600 r	56,800 r	6,550 r	67,800 r	5,170	50,900
Dimension, granite		36	6,100	37	5,570	(4)	(7)
Total		XX	125,000 r	XX	122,000 r	XX	101,000

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
New Jersey:						
Clays, common	(4)	W	65	W	--	--
Gemstones, natural	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	20,900	192,000	15,600 r	145,000	14,100	159,000
Industrial	1,520	40,600	1,090 r	33,200 r	1,010	31,800
Stone, crushed	24,100	169,000	20,000	162,000	17,900	155,000
Combined values of greensand marl, peat and values indicated by symbol W	XX	3,390	XX	3,220	XX	(7)
Total	XX	404,000	XX	343,000 r	XX	345,000
New Mexico:						
Clays, common	35	228	28	269 r	14	120
Copper[5]	113	784,000	108	783,000	104	734,000
Gemstones, natural	NA	23	NA	24	NA	21
Sand and gravel:						
Construction	18,400	157,000	18,300	157,000	14,500	126,000
Industrial	184	W	(4)	W	(4)	W
Stone:						
Crushed	4,970 r	33,800 r	7,590 r	56,700 r	6,750	38,800
Dimension	(4)	W	(4)	W	27	939
Combined values of cement, gold, gypsum (crude), helium (Grade–A), lime, molybdenum concentrates, perlite (crude), potash, pumice and pumicite, salt, silver, zeolites, and values indicated by symbol W	XX	509,000	XX	583,000	XX	720,000
Total	XX	1,480,000	XX	1,580,000 r	XX	1,620,000
New York:						
Clays, common	813	30,400	699	28,500	745	28,200
Gemstones, natural	NA	90	NA	96	NA	96
Gypsum, crude	367	3,230	299	1,540	406	3,810
Salt	4,890	257,000	7,990	400,000	7,660	431,000
Sand and gravel, construction	35,000	236,000	33,300	278,000	33,100	251,000
Stone:						
Crushed	52,400	438,000	47,300 r	432,000 r	43,900	392,000
Dimension	55 r	7,860 r	70 r	12,000 r	57	16,000
Combined values of cadmium (byproduct from zinc concentrates), cement, garnet (industrial), peat, sand and gravel (industrial), talc (crude), wollastonite, zinc	XX	368,000	XX	393,000	XX	354,000
Total	XX	1,340,000	XX	1,550,000 r	XX	1,480,000
North Carolina:						
Clays:						
Common	2,340	24,200	1,720	19,500 r	1,260	12,900
Kaolin	26	950	20	792	15	W
Feldspar	362	19,100	(4)	W	(4)	W
Gemstones, natural	NA	282	NA	384	NA	659
Mica, crude	57	12,600	43	10,300	22	4,580
Sand and gravel:						
Construction	12,900	70,000	11,400	62,300	9,700	58,300
Industrial	1,220	24,700	1,670	31,300 r	1,500	29,400
Stone:						
Crushed	78,800	868,000	70,200 r	898,000	57,500	806,000
Dimension	46 r	19,800 r	48 r	20,400 r	58	25,200

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
North Carolina—Continued:						
Combined values of andalusite (2007–08), olivine (2007–08), phosphate rock, pyrophyllite (crude), and values indicated by symbol W	XX	(7)	XX	131,000 r	XX	153,000
Total	XX	1,040,000	XX	1,170,000 r	XX	1,090,000
North Dakota:						
Clays, common	(4)	(7)	(4)	(7)	84	549
Gemstones, natural	NA	4	NA	4	NA	4
Lime	(4)	(7)	(4)	(7)	(4)	(7)
Sand and gravel:						
Construction	14,000	43,700	14,900	49,100	11,800	38,000
Industrial	(4)	(7)	(4)	(7)	(4)	(7)
Stone, crushed	147	683	274	1,270	26	133
Total	XX	44,400	XX	50,300	XX	38,700
Ohio:						
Cement, portland	966	96,100 e	916	92,000 e	762	74,000 e
Clays, common	1,580	17,800	1,190	16,500	983	15,900
Gemstones, natural	NA	4	NA	4	NA	4
Lime	1,850	150,000	1,690	159,000	1,670	166,000
Sand and gravel:						
Construction	46,300	289,000	40,800	271,000	33,000	237,000
Industrial	1,110	33,800	1,080	33,000	1,010	34,300
Stone:						
Crushed	70,100 r	437,000 r	68,000 r	448,000 r	53,600	442,000
Dimension	50 r	7,900 r	37 r	6,050 r	25	940
Combined values of cement (masonry), clays (fire), peat, salt	XX	251,000	XX	254,000	XX	303,000
Total	XX	1,280,000 r	XX	1,280,000 r	XX	1,270,000
Oklahoma:						
Clays, common	1,180	4,700	1,050	5,170 r	756	3,900
Gemstones, natural	NA	106	NA	106	NA	4
Gypsum, crude	3,420	30,200	3,410	26,100	1,370	12,800
Sand and gravel:						
Construction	17,000	91,900	16,200 r	94,100 r	14,600	93,400
Industrial	1,640	40,400	1,710	44,600	2,040	63,700
Stone:						
Crushed	43,800	258,000	45,800	298,000 r	46,600	341,000
Dimension	34 r	6,320 r	65 r	11,700 r	53	8,750
Tripoli metric tons	18,400	1,890	40,600	1,600	86,000	1,800
Combined values of cement, feldspar, helium (Grade–A), iodine (crude), lime, salt,	XX	263,000	XX	261,000 r	XX	285,000
Total	XX	696,000 r	XX	743,000 r	XX	810,000
Oregon:						
Gemstones, natural	NA	1,860	NA	2,150	NA	1,620
Sand and gravel, construction	23,800	175,000	21,200	163,000	14,800	120,000
Stone, crushed	29,300 r	219,000 r	30,600 r	211,000 r	23,000	171,000
Combine values of cement (portland), clays (bentonite, common), diatomite, emery (2008), lime, perlite (crude), pumice and pumicite, talc [crude (2006)]	XX	143,000	XX	128,000	XX	106,000
Total	XX	539,000 r	XX	505,000 r	XX	398,000

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Pennsylvania:						
Cement:						
Masonry	384	52,200 e	304	40,500 e	254	34,000 e
Portland	6,020	599,000 e	5,660	568,000 e	5,150	510,000 e
Clays, common	742	5,630	683	4,890 r	640	4,840
Gemstones, natural	NA	1	NA	1	NA	1
Lime	1,160	115,000	1,100	112,000	1,130	126,000
Peat	1	52	2	79	2	62
Sand and gravel:						
Construction	18,400	126,000	18,300	143,000	15,800	129,000
Industrial	696	15,500	685	15,800	677	16,300
Stone:						
Crushed	113,000	807,000 r	111,000 r	960,000 r	102,000	1,140,000
Dimension	63 r	16,200 r	59 r	16,200 r	42	11,100
Tripoli	(4)	(7)	(4)	(7)	(4)	(7)
Total	XX	1,740,000 r	XX	1,860,000 r	XX	1,970,000
Rhode Island:						
Gemstones, natural	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	2,430	25,800	2,410	31,200	2,080	33,000
Industrial	(4)	(7)	(4)	(7)	(4)	(7)
Stone, crushed	2,570	21,300	2,240	21,200	1,880	18,200
Total	XX	47,000	XX	52,400 r	XX	51,200
South Carolina:						
Cement:						
Masonry	575	68,900 e	491	60,100 e	323	41,600 e
Portland	3,320	294,000 e	3,680	355,000 e	2,930	284,000 e
Clays:						
Common	992	4,250	826	3,990 r	461	2,130
Fire	60	348	37	83	29	66
Kaolin	294	17,900	297	17,600	199	11,300
Gemstones, natural	NA	1	NA	1	NA	1
Mica, crude	(4)	(7)	(4)	(7)	(4)	(7)
Sand and gravel:						
Construction	10,900	51,100	10,300 r	56,500 r	9,160	44,100
Industrial	905	21,800	837	22,000	679	21,100
Stone:						
Crushed	31,400 r	270,000 r	30,400 r	290,000 r	22,500	235,000
Dimension	9	850	9	850	4	472
Vermiculite	(4)	(7)	(4)	(7)	(4)	(7)
Total	XX	729,000 r	XX	806,000 r	XX	639,000
South Dakota:						
Clays, common	176	W	151	W	155	W
Sand and gravel, construction	16,500	60,000	13,900	50,500	12,300	47,100
Stone, crushed	6,760 r	43,800 r	5,430 r	36,600 r	5,390	34,300
Combined values of cement (portland), feldspar, gemstones (natural), gold, gypsum (crude), iron ore (usable shipped), lime, mica (crude), stone (dimension granite), and values indicated by symbol W	XX	129,000	XX	175,000	XX	164,000
Total	XX	232,000 r	XX	262,000 r	XX	246,000

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		2006		2007		2008	
		Quantity	Value	Quantity	Value	Quantity	Value
Tennessee:							
Clays:							
Ball		713	30,800	677	30,600	568	25,900
Common		231	1,530	199	1,360	155	1,090
Sand and gravel:							
Construction		8,500	57,900	7,310 r	52,200 r	6,860	53,700
Industrial		1,010	29,300	1,070	32,400	963	32,800
Stone:							
Crushed		65,800 r	525,000 r	63,400 r	559,000 r	46,200	461,000
Dimension		(4)	W	(4)	W	6	1,820
Combined values of cadmium [byproduct from zinc concentrates (2007–08)], cement, clays [fuller's earth, kaolin (2006)], gemstones (natural), lime, salt, stone (dimension marble), zinc (2007–08), and values indicated by symbol W		XX	220,000 r	XX	315,000 r	XX	280,000
Total		XX	864,000 r	XX	990,000 r	XX	856,000
Texas:							
Cement:							
Masonry		382	50,700 e	368	52,100 e	274	40,300 e
Portland		11,300	1,070,000 e	10,900	1,060,000 e	11,100	1,110,000 e
Clays:							
Bentonite		71	4,000	64	3,730	73	12,000
Common		2,360	12,600	1,950	12,600 r	2,070	13,700
Gemstones, natural		NA	202	NA	202	NA	202
Gypsum, crude		1,010	10,200	1,180	8,200	1,040	7,550
Lime		1,650	130,000	1,620	132,000	1,500	128,000
Salt		9,570	132,000	8,950	143,000	9,080	157,000
Sand and gravel:							
Construction		99,500	603,000	95,900 r	654,000 r	87,700	627,000
Industrial		1,530	65,600	3,280	123,000	3,570	139,000
Stone:							
Crushed		141,000 r	861,000 r	153,000 r	1,020,000 r	148,000	1,090,000
Dimension		233 r	30,100 r	243 r	31,600 r	269	27,700
Combined values of brucite, clays (ball, fuller's earth, kaolin), helium, talc (crude), zeolites		XX	68,200	XX	72,100	XX	77,700
Total		XX	3,040,000 r	XX	3,310,000 r	XX	3,430,000
Utah:							
Beryllium concentrates	metric tons	3,830	NA	3,810	NA	4,410	NA
Clays, common		526	10,700	531	10,400	479	10,200
Gemstones, natural		NA	238	NA	240	NA	781
Salt		2,350	149,000	2,470	135,000	2,150	139,000
Sand and gravel, construction		42,400	204,000	45,100	261,000	37,400	214,000
Stone:							
Crushed		14,000	89,100	13,200 r	97,800 r	8,920	71,600
Dimension		8	585	8	619	9	707
Combined values of cement (portland), clays (bentonite), copper, gold, gypsum (crude), helium (Grade–A), lime, magnesium compounds, magnesium metal, molybdenum concentrates, perlite [crude (2006)], phosphate rock, potash, silver		XX	3,560,000	XX	3,370,000	XX	3,730,000
Total		XX	4,010,000	XX	3,880,000	XX	4,160,000

See footnotes at end of table.

TABLE 5—Continued

NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Vermont:						
Gemstones, natural	NA	1	NA	1	NA	1
Sand and gravel, construction	5,810	37,300	5,140	34,100	4,700	31,900
Stone:						
Crushed	5,880 r	50,200 r	6,460 r	46,200 r	5,170	42,900
Dimension	116 r	35,800 r	110 r	35,700 r	112	35,900
Talc, crude	(4)	(7)	(4)	(7)	(4)	(7)
Total	XX	123,000 r	XX	116,000 r	XX	111,000
Virginia:						
Clays, common	762	1,810	725	7,840 r	766	8,540
Kyanite[e]	102 r	23,600 r	118 r	29,100 r	97	25,500
Mica, crude	--	--	(9)	1	--	--
Sand and gravel, construction	14,200	110,000	12,300	115,000	10,200	109,000
Stone:						
Crushed	77,800 r	849,000 r	62,600 r	713,000 r	54,500	673,000
Dimension	(4)	W	(4)	W	9	1,040
Combined values of cement, clays (fuller's earth), feldspar, gemstones (natural), iron oxide pigments (crude), lime, salt (2007–08), sand and gravel (industrial), talc [crude (2006)], titanium concentrates (ilmenite), vermiculite (crude), zirconium concentrates, and values indicated by symbol W	XX	318,000 r	XX	310,000 r	XX	317,000
Total	XX	1,300,000 r	XX	1,180,000 r	XX	1,130,000
Washington:						
Clays:						
Common	53	149	84	170	88	360
Fire	25	41	--	--	--	--
Gemstones, natural	NA	49	NA	49	NA	50
Gypsum, crude	--	--	--	--	14	150
Peat	(4)	W	(4)	66	(4)	75
Sand and gravel, construction	48,400	315,000	45,500	324,000	39,400	324,000
Stone, crushed	16,800	175,000 r	18,000 r	166,000 r	17,200	165,000
Combined values of cadmium (byproduct from zinc concentrates), cement (portland), diatomite, gold (2008). lead, lime, olivine, sand and gravel (industrial), stone (dimension miscellaneaous), zinc, and value indicated by symbol W	XX	270,000	XX	258,000	XX	228,000
Total	XX	759,000	XX	747,000 r	XX	718,000
West Virginia:						
Gemstones, natural	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	429	3,470	675	5,620	426	3,840
Industrial	333	17,200	345	17,600	338	17,200
Stone:						
Crushed	14,500	120,000	14,600 r	115,000 r	15,000	131,000
Dimension	(4)	W	(4)	W	1	229
Combined values of cement, clays (common), lime, peat, (2006–07), salt, and values indicated by symbol W	XX	89,100	XX	87,400	XX	85,100
Total	XX	230,000	XX	226,000 r	XX	238,000

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE[1, 2, 3]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Wisconsin:						
Gemstones, natural	NA	6	NA	6	NA	7
Lime	922	70,700	959	78,000	852	71,500
Peat	(4)	(7)	(4)	26	(7)	26
Sand and gravel:						
Construction	39,600	182,000	38,200	186,000	35,400	185,000
Industrial	2,450	74,100	2,650	90,100	3,290	120,000
Stone:						
Crushed	41,000 r	231,000 r	32,800 r	191,000 r	25,900	237,000
Dimension	302 r	35,800 r	307 r	35,900 r	250	33,300
Total	XX	594,000 r	XX	581,000 r	XX	647,000
Wyoming:						
Clays:						
Bentonite	4,360	209,000	4,250	227,000	4,520	214,000
Common	53	206	59	226	37	89
Gemstones, natural	NA	14	NA	15	NA	14
Sand and gravel, construction	17,200	74,600	19,100	95,800	17,100	100,000
Stone, crushed	12,500	70,700 r	12,500 r	61,400 r	12,100	57,100
Combined values of cement (portland), gypsum (crude), helium (Grade–A), lime, soda ash, stone [dimension (2008)], zeolites (2006–07)*	XX	1,240,000	XX	1,370,000	XX	1,640,000
Total	XX	1,590,000	XX	1,760,000 r	XX	2,020,000
Undistributed:						
Connecticut, Delaware, Maryland, Massachusetts, Nebraska, New Hampshire, New Jersey (2008), North Carolina (2006), North Dakota, Pennsylvania, Rhode Island, South Carolina, Vermont, Wisconsin, undistributed	XX	404,000 r	XX	190,000 r	XX	449,000

eEstimated. rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data; included in "Combined value" data for each State.
XX Not applicable. -- Zero.

[1]Table includes data available through August 26, 2010.

[2]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

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

[4]Withheld to avoid disclosing company proprietary data.

[5]Recoverable content of ores, etc.

[6]Grindstones, pulpstones, and sharpening stones; excludes mill liners and grinding pebbles.

[7]Withheld to avoid disclosing company proprietary data; value included in "Undistributed."

[8]Excludes attapulgite; included in "Combined values."

[9]Less than ½ unit.

*Correction posted on June 17, 2011.

TABLE 6

NONFUEL RAW MINERAL PRODUCTION IN THE COMMONWEALTH OF PUERTO RICO AND ISLANDS ADMINISTERED BY THE UNITED STATES[1, 2, 3]

(Thousand metric tons and thousand dollars)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Puerto Rico:						
Cement, portland	1,550	W	1,390	W	W	W
Clays, common	111	614	96	547	75	437
Lime[e]	11	2,250	11	2,250	11	998
Salt	45	1,500	45	1,500 [r]	45	1,500
Stone, crushed	12,900 [r]	79,700 [r]	13,400 [r]	100,000 [r]	15,900	161,000
Total	XX	84,100 [r]	XX	105,000 [r]	XX	164,000
Administered Islands:						
American Samoa, stone, crushed	W	W	W	W	W	W
Guam, stone, crushed	900	8,460	329	3,760	325	3,780
Virgin Islands, stone, crushed	W	W	W	W	W	W
Total	XX	8,460 [r]	XX	3,760	XX	3,780

[e]Estimated. [r]Revised. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

[1]Table includes data available through August 26, 2010.

[2]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

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

TABLE 7

U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value	Quantity	Value
Metals:					
Aluminum:					
Crude and semicrude		2,840	8,280,000	3,280	9,020,000
Manufactures		141	623,000	150	683,000
Antimony:					
Metal, alloys, waste and scrap	metric tons	305	1,120	366	1,370
Oxide, antimony content	do.	1,640	8,810	1,830	10,200
Arsenic metal, arsenic content	do.	2,490	5,010	1,050	2,110
Bauxite and alumina:					
Alumina, calcined equivalent		1,160	709,000	1,150	684,000
Bauxite:					
Calcined, refractory and other grade		8	1,540	10	1,600
Crude and dried		15	4,100	14	4,060
Speciality aluminum compounds, sulfate, chloride, fluoride-based	metric tons	46,000	46,700	41,600	50,400
Beryllium, unwrought, and waste and scrap, other including articles not elsewhere specified	do.	101	18,500	113	16,500
Bismuth, metal, alloys, waste and scrap, bismuth content	do.	421	6,230	375	6,730
Cadmium:					
Metal	do.	154	1,310	126	901
Sulfide, gross weight	do.	135	126	241	125
Unwrought and powder	do.	270	1,510	295	1,370
Chromium:					
Ores and concentrate	metric tons	37,600	5,560	7,000	4,370
Metals and alloys:					
Metal, unwrought powders, waste and scrap, other	do.	1,210	23,200	998	20,400
Ferroalloys, high-carbon, low-carbon, ferrochromium-silicon	do.	41,100	51,200	24,500	43,100
Chemicals:					
Oxides, trioxides and other	do.	18,600	31,700	21,000	38,900
Sulfates	do.	23	250	52	362
Salts of oxometallic or peroxometallic acids, zinc and lead chromate, sodium dichromate, potassium dichromate, other	do.	32,000 r	28,400	32,800	31,200
Pigments and preparations	do.	1,410	9,930	1,230	10,600
Cobalt:					
Acetates and chlorides	do.	235	2,660	346	6,320
Oxides and hydroxides	do.	863	28,400	531	19,400
Metal:					
Unwrought, powders, waste and scrap, mattes, other intermediate products of metallurgy	do.	2,420	69,300	2,380	112,000
Wrought and cobalt articles	do.	1,440	89,300	1,370	104,000
Copper:					
Unmanufactured, does not include unalloyed scrap, copper content		263	1,290,000	407	1,920,000
Semimanufactures		254	2,020,000	222	1,870,000
Scrap, alloyed and unalloyed		907	2,840,000	908	2,960,000
Ferroalloys not listed elsewhere:					
Ferrophosphorous	metric tons	815	1,610	2,350	4,590
Other	do.	4,620	7,110	9,360	16,300
Gold:					
Ores and concentrates	kilograms	3,190 r	34,000 r	2,430	52,300
Dore and precipitates	do.	123,000	2,740,000	106,000	3,000,000
Bullion, refined	do.	392,000	8,700,000	460,000	13,100,000
Waste and scrap	do.	616,000	1,480,000	886,000	1,970,000

See footnotes at end of table.

TABLE 7—Continued

U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value	Quantity	Value
Metals—Continued:					
Gold—Continued:					
Metal powder	do.	2,840	48,900	1,210	25,300
Compounds	do.	2,150,000	40,100	2,920,000	67,900
Iron and steel:					
Steel mill products		10,100	NA	12,200	NA
Fabricated steel products		1,570	NA	1,900	NA
Cast iron and steel products		215 r	NA	304	NA
Iron and steel scrap:					
Ferrous, includes tinplate and terneplate, excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping		16,500	6,890,000	21,500	10,400,000
Pig iron, all grades		71	4,610	51	11,400
Direct-reduced iron, steelmaking grade	metric tons	219 r	23	804	97
Ships, boats, and other vessels for scrapping		143	23,700	4	354
Used rails for rerolling and other uses, includes mixed (used plus new) rails		97	69,600	76	54,900
Iron ore		9,310	718,000 r	11,100	1,240,000
Lead:					
Base bullion, Pb content	metric tons	170	868	614	2,040
Ore and concentrates, Pb content	do.	300,000	504,000	277,000	243,000
Unwrought and alloys, Pb content	do.	51,800	81,000	68,100	119,000
Wrought and alloys, Pb content	do.	4,610	7,530	6,150	9,880
Scrap, gross weight	do.	129,000	55,400	175,000	92,800
Magnesium:					
Waste and scrap, Mg content	do.	1,800	4,000	2,600	5,420
Metal, Mg content	do.	4,290	10,300	3,100	9,770
Alloys, gross weight	do.	7,570	23,600	6,760	29,900
Powder, sheets, tubing, ribbons, wire, other forms, gross weight	do.	1,170	22,800	1,950	30,200
Manganese, gross weight:					
Ores and concentrates with 20% or more manganese	do.	28,700	5,200	48,300	10,700
Ferromanganese, all grades	do.	29,100	25,000	23,400	20,600
Silicomanganese	do.	3,310	3,230	7,140	9,020
Metal, including alloys and waste and scrap	do.	3,280	8,880	4,580	11,600
Dioxide	do.	9,330 r	8,640	11,000	14,600
Mercury:					
Metal	do.	84	1,430	732	10,100
Amalgams of precious metals whether or not chemically defined	do.	498	528,000 r	925	564,000
Molybdenum:					
Ore and concentrates, including roasted and other, Mo content	do.	33,800	1,640,000	32,700	1,810,000
Chemicals:					
Oxides and hydroxides, gross weight	do.	14,900	378,000	16,700	428,000
Molybdates, all, gross weight	do.	1,440	42,500	1,540	46,700
Ferromolybdenum, Mo content	do.	1,220	67,900	1,290	62,400
Other, includes powders, unwrought, bars and rods, waste and scrap, wire, other, gross weight	do.	2,140	156,000	2,190	192,000
Nickel, Ni content:					
Primary, unwrought and chemicals	do.	13,100	356,000	11,600	345,000
Secondary, stainless steel scrap and waste and scrap	do.	103,000	1,920,000	94,600	1,340,000
Wrought, not alloyed, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes	do.	1,590	41,600	1,700	45,500
Alloyed, unwrought ingot, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes, other alloyed articles, gross weight	do.	35,500	1,450,000	42,100	1,730,000

See footnotes at end of table.

TABLE 7—Continued

U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value	Quantity	Value
Metals—Continued:					
Niobium (columbium) and tantalum:					
Niobium:					
Ores and concentrates	kilograms	163,000	3,670	62,800	2,010
Ferroniobium	do.	1,580,000	17,200	1,130,000	12,500
Tantalum:					
Ores and concentrates, includes synthetic	do.	360,000	1,590	277,000	2,790
Unwrought powders, waste and scrap, unwrought alloys and metal	do.	269,000	62,200	462,000	89,800
Wrought	do.	95,900	43,100	104,000	49,300
Platinum-group metals:					
Palladium, Pd content	do.	41,800	298,000	26,400	197,000
Platinum, includes waste and scrap and metal, Pt content	do.	83,300	1,690,000	70,300	1,760,000
Iridium, osmium, ruthenium, gross weight	do.	8,190	145,000	6,450	80,600
Rhodium, Rh content	do.	2,210	401,000	1,980	302,000
Rare earths, estimated rare-earth oxide content:					
Cerium compounds	metric tons	1,470	11,100	1,380	12,200
Compounds, inorganic and organic	do.	1,300	13,800	663	7,610
Metals, including scandium and yttrium	do.	1,470	20,200	1,390	18,600
Ferrocerium and other pyrophoric alloys	do.	3,210	16,200	4,490	21,200
Selenium and tellurium:					
Selenium, Se content	do.	562,000	9,500	545,000	8,920
Tellurium, Te content	do.	15,100	1,530	50,000	3,030
Silicon, gross weight:					
Ferrosilicon	do.	11,600	14,100	17,700	10,000
Metal	do.	28,600	1,870,000	35,400	2,260,000
Silver:					
Bullion, Ag content	kilograms	660,000	274,000	413,000	203,000
Dore, Ag content	do.	51,500	21,700	94,800	36,200
Metal powder, gross weight	do.	1,500,000	302,000	890,000	473,000
Nitrate, gross weight	do.	47,100	4,930	34,900	3,260
Ores and concentrates, Ag content	do.	15,800	7,020	130,000	50,300
Semimanufactured forms containing 99.5% or more by weight of silver, gross weight	do.	659,000	150,000	720,000	199,000
Waste and scrap, gross weight	do.	238,000	233,000	2,570,000	4,290,000
Unwrought, other, gross weight	do.	70,000	22,400	47,700	15,700
Thorium and thorium-bearing materials, compounds	do.	1,630	500	12,700	1,250
Tin:					
Ingots and pigs	metric tons	6,410	46,400	9,800	62,000
Tin scrap and other tin bearing material, except tinplate scrap, includes rods, profiles, wire, powders, flakes, tubes, pipes	do.	13,000	53,300	14,500	65,600
Tinplate and terneplate	do.	194,000	118,000	247,000	192,000
Titanium:					
Metal, waste and scrap, unwrought, wrought products and castings, ferrotitanium and ferrosilicon titanium	do.	32,400	1,200,000	34,600	1,290,000
Ores and concentrates	do.	9,730	5,140	14,900	8,590
Pigment, dioxide and oxide	do.	682,000	1,280,000	733,000	1,470,000
Tungsten, W content:					
Ammonium paratungstate	do.	731	11,700	621	10,100
Carbide powder	do.	1,280	43,700	1,340	53,300
Metal powders	do.	1,050 [e]	51,900	981 [e]	57,100
Miscellaneous tungsten-bearing materials, ferrotungsten, ferrosilicon tungsten, unwrought, waste and scrap, wrought, compounds	do.	2,890	77,800	2,540	84,200
Ores and concentrates	do.	109 [e]	2,720	496 [e]	14,500

See footnotes at end of table.

TABLE 7—Continued

U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value	Quantity	Value
Metals—Continued:					
Vanadium:					
Aluminum-vanadium master alloy, gross weight	kilograms	21,100,000	72,700	21,900,000	76,200
Ferrovanadium, V content	do.	154,000	5,810	281,000	12,600
Metal, including waste and scrap, gross weight	do.	49,400	2,690	57,100	3,740
Pentoxide, anhydride, V content	do.	327,000	5,460	249,000	5,650
Other oxides and hydroxides, V content	do.	626,000	7,530	1,040,000	11,300
Zinc:					
Compounds, chloride, chromates of zinc or of lead, compounds n.s.p.f., lithopone, oxide, sulfate, sulfide, gross weight	metric tons	42,800	77,000	49,500	76,500
Ores and concentrates, Zn content	do.	816,000	1,170,000	725,000	598,000
Rolled	do.	4,310	20,600	4,970	20,900
Slab	do.	8,070	6,420	3,250	3,260
Zirconium:					
Ferrozirconium	do.	259	414	316	574
Ores and concentrates	do.	66,200	65,400	40,800	51,100
Oxide, includes germanium oxides and zirconium dioxides	do.	2,400	30,900	2,970	42,400
Unwrought powders	do.	228	7,930	344	10,400
Waste and scrap	do.	1,930	150,000	2,330	180,000
Total		XX	54,400,000 r	XX	69,200,000
Industrial Minerals:					
Abrasives, manufactured:					
Aluminum oxide, crude	metric tons	18,200	47,200	21,900	59,000
Metallic abrasives	do.	26,800	40,100	34,400	48,500
Silicon carbide, crude, ground and refined	do.	19,300	40,200	17,000	46,600
Asbestos, includes reexports:					
Manufactured		NA	29,200	NA	33,200
Unmanufactured	metric tons	815	421	368	345
Barite, natural barium sulfate	do.	15,000	6,300	61,600	10,500
Boron minerals and compounds:					
Boric acid, includes orthoboric and anhydrous		248	124,000	303	165,000
Sodium borates		446	146,000	519	192,000
Bromine:					
Compounds, includes methyl bromine and ethylene dibromide, Br content	metric tons	5,280 r	13,600	3,910	11,600
Elemental, gross weight	do.	5,660	6,090	6,140	7,100
Cement, hydraulic and clinker		886	94,300	823	102,000
Clays:					
Ball		83	5,610	65	4,580
Bentonite		1,430	158,000	1,090	161,000
Fire		425	47,700	393	49,600
Fuller's earth		134	37,700	127	44,100
Kaolin		3,300	615,000	2,960	606,000
Other, n.e.c., includes chamotte or dinas earth, activated clays and earths, artifically activated clays		279	63,600	153	112,000
Diamond:					
Gemstones, natural, including reexports	thousand carats	36,100	11,800,000	34,000	14,700,000
Industrial including exports and reexports:					
Unworked	do.	2,120	32,400	1,280	28,000
Powder, dust and grit, natural and synthetic	do.	113,000 r	62,600	125,000	61,700
Diatomite		143	60,000	151	67,700
Feldspar	metric tons	9,980	1,950	14,600	2,390
Fluorspar	do.	13,600	2,650	18,800	3,340

See footnotes at end of table.

TABLE 7—Continued

U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value	Quantity	Value
Industrial minerals—Continued:					
Garnet, industrial[e]	do.	12,000	9,620	12,500	9,050
Graphite, natural and artificial	do.	59,800	147,000	62,800	182,000
Gypsum and gypsum products:					
Crude		147	23,500	149	20,500
Plasters		201	43,600	135	47,400
Boards		100	99,500	98	133,000
Other		XX	49,000 r	XX	55,400
Helium, Grade–A	million cubic meters	64	136,000	70	152,000
Iodine:					
Crude, resublimed	metric tons	1,060	19,300	950	17,400
Potassium iodide	do.	136 r	2,620 r	568	11,300
Iron oxide pigments and hydroxides:					
Pigment grade	do.	5,410	15,900	4,740	12,100
Other grade	do.	63,100	33,500	46,900	31,800
Kyanite, andalusite, sillimanite[e]		36	8,650	36	10,400
Lime		144	24,800	174	27,100
Lithium chemicals:					
Carbonate	metric tons	2,550	11,700	2,720	15,700
Hydroxide	do.	5,840	40,700	5,680	10,700
Magnesium compounds:					
Compounds, chlorides, hydroxide and peroxide, sulfates	do.	34,100	22,900	38,000	29,100
Magnesite, crude and processed:					
Caustic-calcined magnesia	do.	4,420	2,780	890	779
Dead-burned and fused magnesia	do.	22,400	12,000	22,100	13,100
Other magnesia	do.	15,500	16,500	18,100	18,900
Crude	do.	11,700	1,550	21,000	3,350
Mica:					
Scrap and flake:					
Powder	metric tons	5,170	6,040 r	6,630	7,810
Waste	do.	2,530 r	799 r	2,430	731
Sheet:					
Unworked	do.	122	397	105	238
Worked	do.	1,180 r	18,800	1,920	18,600
Nitrogen, major compounds, gross weight		8,160	NA	9,370	NA
Peat		56	6,140	186	17,800
Perlite, crude[e]	metric tons	28,000	1,260		
Potash:					
Potassium chloride	do.	181,000	NA	104,000	NA
Potassium sulfates, all grades	do.	324,000	NA	585,000	NA
Potassium nitrate	do.	4,670	3,870	5,090	6,050
Pumice and pumicite		9	4,260 r	15	7,220
Salt		833	59,600	1,030	65,900
Sand and gravel:					
Construction:					
Sand		107	23,000	98	18,000
Gravel		258	5,740	294	4,380
Industrial		3,020	242,000	3,100	260,000
Silica, special stone products		NA	8,600	NA	8,700
Soda ash		5,130	734,000	5,370	939,000

See footnotes at end of table.

TABLE 7—Continued

U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value	Quantity	Value
Industrial minerals—Continued:					
Stone:					
Crushed		1,020	62,500	1,240	61,600
Dimension		XX	74,300	XX	65,700
Strontium compounds:					
Carbonate, precipitated	metric tons	116	173	118	114
Oxide, hydroxide, peroxide	do.	897 r	809 r	964	948
Sulfur:					
Elemental		922	84,800	952	272,000
Sulfuric acid, 100% H_2SO_4		336	34,300	262	42,700
Talc, excludes powders–talcum (in package), face, compact		271 r	50,600 r	244	46,000
Vermiculite[e]		5	985	5	985
Wollastonite[e]		30 r	9,000 r	30	9,000
Zeolites[e]	metric tons	250	56	200	46
Total		XX	15,600,000 r	XX	19,000,000
Grand total		XX	70,100,000 r	XX	88,200,000

[e]Estimated. [r]Revised. do. Ditto. NA Not available. XX Not applicable.

[1]Table includes data available through August 26, 2010.

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

TABLE 8

U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value[3]	Quantity	Value[3]
Metals:					
Aluminum:					
Crude and semicrude		4,490	13,400,000	4,200	12,500,000
Manufactures		330	1,230,000	325	1,210,000
Antimony:					
Metal	metric tons	5,920	28,300	7,050	29,700
Ore and concentrate, antimony content	do.	226	1,110	164	828
Oxide, antimony content	do.	21,700	117,000 r	21,800	124,000
Arsenic:					
Acid	do.	12	28	115	682
Metal	do.	759 r	3,410	376	2,610
Sulfide	do.	103	241	(4)	11
Trioxide	do.	9,220	4,140	6,320	2,920
Bauxite and alumina:					
Alumina, calcined equivalent		2,440	1,040,000	2,530	1,100,000
Bauxite:					
Calcined, refractory and other grade		807	99,300 r	1,110	178,000
Crude and dried		9,840	307,000 r	10,500	277,000
Speciality aluminum compounds, sulfate, chloride, fluoride-based	metric tons	42,800	36,400	62,000	72,400
Beryllium, ore, concentrates, oxide, hydroxide, unwrought including powders, waste and scrap, other, beryllium-copper master alloys, beryllium-copper plates, sheets, strip	do.	1,190	17,300	1,190	20,500
Bismuth, metallic	do.	3,070	58,000	1,930	44,700
Cadmium:					
Metal	do.	1,300	237	44,000	565
Sulfide, gross weight	do.	245,000	1,150	439,000	3,040
Unwrought and powder	do.	315,000	1,880	153,000	5,090
Chromium:					
Chromite ore	metric tons	145,000	22,700	197,000	44,800
Metals and alloys:					
Ferroalloys, high-carbon, low-carbon, ferrochromium-silicon	do.	466,000	515,000	533,000	1,170,000
Metal, unwrought powders, waste and scrap, other	do.	11,700	97,400	13,100	145,000
Chemicals:					
Oxides, hydroxides, trioxides and other	do.	10,500	26,200	11,400	32,300
Sulfates	do.	186	546	56	92
Salts of oxometallic or peroxometallic acids, zinc and lead chromate, sodium dichromate, potassium dichromate, other	do.	14,600	19,900	33,600	30,800
Carbide	do.	143	1,800	129	2,460
Pigments and preparations based on chromium	do.	3,430	14,700	2,100	10,700
Cobalt:					
Metal:					
Alloys, unwrought, waste and scrap, wrought, cobalt articles	do.	1,450	40,000	1,570	59,400
Unwrought, excluding alloys and waste and scrap, includes cathode and metal powder, may include intermediate products of cobalt metallurgy	do.	8,960	487,000	8,430	618,000
Oxide and hydroxides	do.	1,020	44,400	1,110	63,400
Other forms, includes acetates, carbonates, chlorides, sulfates	do.	1,950	31,100	4,710	49,900
Copper:					
Unmanufactured, does not include unalloyed scrap, copper content	do.	985,000	7,040,000	848,000	6,210,000
Semimanufactures	do.	372,000	2,490,000	301,000	2,080,000
Scrap, alloyed and unalloyed	do.	112,000 r	665,000	85,700	485,000

See footnotes at end of table.

TABLE 8—Continued

U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value[3]	Quantity	Value[3]
Metals—Continued:					
Ferroalloys not listed elsewhere:					
Ferrophosphorus	metric tons	6,890	4,000	10,200	7,530
Other	do.	6,740	14,100	12,900	36,700
Gallium:					
Unwrought and waste and scrap	kilograms	37,100	15,500	41,100	18,500
Gallium arsenide wafers, doped and undoped	do.	182,000	176,000	166,000	155,000
Germanium, wrought, unwrought, waste and scrap, gross weight	do.	25,400	27,200	40,200	39,600
Gold:					
Ores and concentrates	kilograms	846 r	7,420	27,500	15,700
Dore and precipitates	do.	56,000	1,040,000	85,100	1,830,000
Bullion, refined	do.	113,000	2,440,000	118,000	3,190,000
Waste and scrap	do.	42,600	490,000	36,500	485,000
Metal powder	do.	1,120	12,300	324	6,620
Compounds	do.	162,000	3,170	102,000	2,210
Indium, unwrought and waste and scrap	do.	147,000	56,400	144,000	69,500
Iron and steel:					
Steel mill products		30,200	NA	29,000	NA
Fabricated steel products		5,760	NA	5,530	NA
Cast iron and steel products		781	NA	777	NA
Stainless steel	metric tons	669,000	NA	586,000	NA
Iron and steel scrap:					
Ferrous, includes tinplate and terneplate, excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping		3,700	1,040,000	3,600	1,450,000
Pig iron, all grades		5,220	1,660,000	4,980	2,800,000
Direct-reduced iron, steelmaking grade		2,330	519,000	2,340	971,000
Ships, boats, and other vessels for scrapping		(4)	157	1	18
Used rails for rerolling and other uses, includes mixed (used plus new) rails		83	40,400	151	80,600
Iron ore		9,400	543,000	9,250	918,000
Lead:					
Pigs and bars, Pb content	metric tons	263,000	571,000	309,000	660,000
Pigments and compounds, Pb content	do.	21,200	51,100	26,200	62,400
Scrap, reclaimed, includes ash and residues, Pb content	do.	2,430	2,740	1,290	2,040
Wrought, all forms, including wire and powders, gross weight	do.	4,180	13,600	3,250	14,000
Magnesium:					
Waste and scrap, gross weight	do.	21,200	34,500	24,100	58,800
Metal, gross weight	do.	27,200	73,500	44,300	190,000
Alloys, Mg content	do.	21,900	79,600	13,000	74,100
Powder, sheets, tubing, ribbons, wire, other forms, Mg content	do.	1,490	9,650	1,970	14,700
Manganese:					
Ores and concentrates with 20% or more manganese, Mn content	do.	298,000	57,600	289,000	154,000
Ferromanganese, all grades, Mn content	do.	247,000	358,000	351,000	1,130,000
Silicomanganese, Mn content	do.	278,000	489,000	245,000	682,000
Metal, unwrought, other wrought, waste and scrap, gross weight	do.	38,000	95,700	31,700	116,000
Chemicals, manganese dioxide and potassium permanganate, gross weight	do.	31,300	41,100	23,600	39,600
Mercury:					
Metal	do.	67	1,360	155	1,700
Amalgams of precious metals whether or not chemically defined	do.	19 r	47,000 r	15	66,800

See footnotes at end of table.

TABLE 8—Continued

U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value[3]	Quantity	Value[3]
Metals—Continued:					
Molybdenum:					
Ores and concentrates, including roasted and other, Mo content	do.	12,400	553,000	10,200	512,000
Chemicals, gross weight:					
Oxides and hydroxides	do.	211	8,020	335	12,900
Molybdates, all	do.	1,090	32,500	452	15,300
Orange	do.	600	4,040	373	3,110
Ferromolybdenum, Mo content	do.	4,100	270,000	2,320	166,000
Other, includes powders, unwrought, bars and rods, waste and scrap, wire, other, gross weight	do.	946	70,900	1,420	105,000
Nickel, Ni content:					
Primary, chemicals and unwrought	do.	125,000	4,780,000	129,000	3,200,000
Secondary, stainless steel scrap and waste and scrap	do.	16,200	349,000	20,100	427,000
Wrought, not alloyed, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes	do.	932	36,900	935	32,900
Alloyed, unwrought ingot, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes, other alloyed articles	do.	24,100	871,000	23,600	745,000
Niobium (columbium) and tantalum:					
Niobium:					
Ores and concentrates	kilograms	800 r	26	15,600	87
Oxide	do.	1,060,000	18,800	1,220,000	31,300
Ferroniobium	do.	12,900,000	184,000	11,000,000	245,000
Unwrought and powder	do.	864,000	26,100	1,130,000	47,500
Tantalum:					
Ores and concentrates, includes synthetic concentrates	do.	969,000	49,700	1,170,000	63,100
Unwrought powders, waste and scrap, unwrought alloys and metal	do.	781,000	94,800	833,000	113,000
Wrought	do.	80,800	17,900	101,000	23,200
Platinum-group metals, metal content:					
Platinum, grains and nuggets, sponge, other unwrought, other, waste and scrap, coins	do.	181,000	3,570,000	150,000	3,420,000
Palladium, unwrought and other	do.	113,000	1,250,000	120,000	1,350,000
Iridium, unwrought and other forms	do.	3,410	41,900	2,550	36,600
Osmium, unwrought	do.	23	192	11	101
Ruthenium, unwrought	do.	48,700	655,000	49,800	426,000
Rhodium, unwrought and other forms	do.	16,600	2,650,000	12,600	2,470,000
Rare earths, estimated equivalent rare-earth oxide (REO) content:					
Cerium compounds, including oxides, hydroxides, nitrates, sulfate chlorides, oxalates	do.	2,680,000	12,100	2,080,000	12,800
Yttrium compounds content by weight greater than 19% but less than 85% oxide equivalent	do.	21,400	1,860	9,920	6,770
Compounds, including oxides, hydroxides, nitrates, other compounds except chlorides	do.	9,900,000	78,100	8,810,000	119,000
Mixtures of REOs except cerium oxide	do.	2,570,000	14,900	2,390,000	22,600
Metals, whether intermixed or alloyed	do.	784,000	6,470	679,000	4,940
Mixtures of rare-earth chlorides, except cerium chloride	do.	1,610,000	11,700	1,310,000	17,600
Ferrocerium and other pyrophoric alloys	do.	123,000	2,320	125,000	2,380
Rhenium:					
Metal	do.	30,500	49,600	35,900	72,800
Ammonium perrhenate	do.	15,100	41,400	11,000	24,200
Selenium and tellurium:					
Selenium, Se content:					
Selenium	do.	536,000	26,000	508,000	26,400
Dioxide	do.	8,170 r	658	11,000	958
Tellurium, Te content	do.	43,700	4,980	102,000	17,700

See footnotes at end of table.

TABLE 8—Continued

U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value[3]	Quantity	Value[3]
Metals—Continued:					
Silicon, gross weight:					
Ferrosilicon	metric tons	309,000	282,000	281,000	395,000
Metal	do.	149,000	529,000	172,000	678,000
Silver:					
Ash and residues, Ag content	kilograms	7,260	1,630	4,850	1,280
Bullion, Ag content	do.	4,210,000	1,720,000	3,860,000	1,850,000
Dore, Ag content	do.	551,000	324,000	574,000	717,000
Metal powder, gross weight	do.	47,000	6,590	61,000	8,870
Nitrate, gross weight	do.	496	128	10,700	4,280
Ores and concentrates, Ag content	do.	381	130	32	32
Semimanufactured forms containing 99.5% or more by weight of silver, gross weight	do.	397,000	138,000	418,000	134,000
Waste and scrap, gross weight	do.	3,420,000	482,000	5,190,000	681,000
Unwrought, other, gross weight	do.	222,000	82,800	245,000	88,000
Thallium, unwrought powders, waste and scrap, other	do.	1,000	234	1,770	311
Thorium and thorium-bearing materials, compounds	do.	6,370	318	692	121
Tin, gross weight:					
Compounds	metric tons	448	6,260	800	15,800
Dross, skimmings, scrap, residues, alloys, n.s.p.f.	do.	11,700	25,800	24,200	33,300
Metal, unwrought	do.	34,600	473,000	36,300	636,000
Miscellaneous, includes tinfoil, tin powder, flitters, metallics, manufactures, n.s.p.f.	do.	XX	38,400	XX	71,100
Tinplate and terneplate, gross weight	metric tons	471,000	369,000	292,000	271,000
Tinplate scrap, gross weight	do.	6,690	2,050	25,900	7,040
Titanium:					
Concentrate:					
Ilmenite		246	26,900	433	68,600
Rutile, natural and synthetic		464	201,000	487	232,000
Metal:					
Waste and scrap	metric tons	12,200	133,000	10,400	68,900
Unwrought	do.	12,100 r	321,000	23,900	278,000
Ingots	do.	2,270	53,500	1,340	36,800
Powder	do.	246	9,790	134	7,710
Other	do.	101	1,630	59	1,570
Wrought products and castings, includes bar, castings, foil, pipe, plate, profile, rod, sheet, strip, tube, wire, other	do.	5,350	229,000	8,350	349,000
Ferrotitanium and ferrosilicon titanium	do.	7,620	35,300	2,830	14,900
Pigment, dioxide and oxide	do.	221,000	432,000	183,000	393,000
Titaniferous iron ore	do.	72	8	140,000	44,600
Titaniferous slag	do.	749,000	302,000	461,000	187,000
Tungsten, W content:					
Ammonium paratungstate	do.	2,700	69,400	2,510	66,700
Ferrotungsten and ferrosilicon tungsten	do.	357	9,580	309	10,500
Miscellaneous tungsten-bearing materials, metal powders, carbide powder, unwrought, waste and scrap, wrought, oxides, calcium tungstate, other tungstates, other compounds	do.	5,990	218,000	6,230	242,000
Ores and concentrates	do.	3,880	87,000	3,990	95,900

See footnotes at end of table.

TABLE 8—Continued

U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value[3]	Quantity	Value[3]
Vanadium:					
Aluminum-vanadium master alloy, gross weight	kilograms	1,110,000	2,110	618,000	2,760
Ferrovanadium, V content	do.	2,220,000	81,300	2,800,000	158,000
Metal, including waste and scrap, gross weight	do.	3,620	198	4,600	409
Miscellaneous chemicals, sulfates and vanadates, V content	do.	291,000	4,340	189,000	4,350
Pentoxide, anhydride, V content	do.	2,390,000	46,800	3,700,000	115,000
Vanadium-bearing ash, residues, slag from the manufacture of iron and steel, V_2O_5 content	do.	1,640,000 r	10,900 r	1,640,000	18,800
Other oxides and hydroxides, V content	do.	41,900	1,400	144,000	4,320
Zinc:					
Compounds, chloride, chromates of zinc or of lead, compounds n.s.p.f., lithopone, oxide, sulfate, sulfide, gross weight	metric tons	157,000 r	347,000 r	161,000	248,000
Ores and concentrates, Zn content	do.	271,000	170,000	63,200	73,200
Rolled	do.	2,160	12,700	3,330	17,100
Slab, refined	do.	758,000	2,400,000	752,000	1,480,000
Zirconium and hafnium:					
Hafnium, unwrought, including powders	do.	4	951	12	3,850
Zirconium:					
Ferrozirconium	do.	400	1,070	129	594
Ores and concentrates	do.	20,000	17,400	34,400	30,200
Oxide, includes germanium oxides and zirconium oxides	do.	3,740	57,700	5,060	77,400
Unwrought powder	do.	263	6,190	94	2,790
Waste and scrap	do.	521	52,500	939	59,200
Total		XX	63,500,000 r	XX	65,700,000
Industrial minerals:					
Abrasives, manufactured:					
Aluminum oxide, crude, ground and refined	do.	237,000	118,000	285,000	175,000
Metallic abrasives	do.	22,400	17,400	36,600	28,300
Silicon carbide, crude, ground and refined	do.	164,000	135,000	127,000	149,000
Asbestos:					
Chrysotile and other unspecified type	metric tons	1,730	819	1,460	1,090
Products with basis of asbestos, cellulose, or other minerals		NA	37,200	NA	19,500
Barite:					
Chloride, oxide, hydroxide, peroxide, precipitated carbonate	metric tons	7,030 r	10,000	9,950	12,600
Crude	do.	2,540,000	178,000	1,920,000	160,000
Ground	do.	35,500	3,230	688,000	35,000
Other sulfates	do.	15,900	12,700	13,900	12,900
Boron minerals and compounds:					
Borax		1	647	1	566
Boric acid		67	27,500	50	26,200
Colemanite		26	7,640	30	8,880
Ulexite		92	27,600	75	22,600
Bromine:					
Compounds, contained bromine	metric tons	29,200 r	69,700	38,700	84,600
Elemental	do.	2,270	3,440	1,950	2,280
Cement, hydraulic and clinker		22,500	1,310,000	11,400	779,000

See footnotes at end of table.

TABLE 8—Continued

U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value[3]	Quantity	Value[3]
Industrial minerals—Continued:					
Clays:					
China clay or kaolin		194	48,500	194	46,100
Fire clay		2	584	1	94
Decolorizing earths and fuller's earth		--	--	1	100
Bentonite		11	2,390	7	3,100
Common blue clay and other ball clay		--	--	2	358
Other clay		--	--	4	3,230
Chamotte or dina's earth		--	--	1	42,400
Artifically activated clay and activated earth		23	22,400	29	23,400
Diamond, industrial:					
Diamond stones, natural and miners'	thousand carats	3,060	35,300	3,220	41,500
Powder, dust and grit, natural and synthetic	do.	411,000	76,400	492,000	75,400
Diatomite	metric tons	3,570	1,540	2,890	1,140
Feldspar and nepheline syenite:					
Feldspar	do.	3,570	642	2,030	646
Nepheline syenite	do.	391,000	38,900	321,000	35,000
Fluorspar:					
Aluminum fluoride	do.	27,600	33,300	47,600	69,400
Cryolite	do.	4,470	4,200	7,650	8,180
Fluorspar	do.	620,000	111,000	572,000	133,000
Hydrofluoric acid, HF	do.	152,000	176,000 r	133,000	172,000
Garnet, industrial[e]	do.	52,300	8,010	49,200	11,500
Gemstones		XX	20,100,000	XX	20,900,000
Graphite:					
Natural	metric tons	58,600	37,300	58,300	48,100
Electric furnace electrodes	do.	97,600	257,000	98,100	303,000
Gypsum:					
Crude		9,390	105,000	7,330	93,400
Plasters		14	6,700	13	7,240
Boards		438	85,200	306	50,600
Other		XX	42,200	XX	43,400
Iodine:					
Crude	metric tons	6,060	129,000 r	6,300	144,000
Potassium iodide	do.	649	13,600 r	564	12,100
Iron oxide pigments:					
Natural	do.	4,720 r	2,440 r	4,700	2,640
Synthetic	do.	173,000	152,000	151,000	161,000
Kyanite, andalusite, sillimanite	do.	1,760	646	5,580	1,930
Lime		375	49,600 r	307	39,400
Lithium chemicals:					
Carbonate	metric tons	15,500 r	54,900 r	15,800	70,100
Hydroxide	do.	1,310	8,050	1,160	7,400
Magnesium compounds:					
Compounds, chlorides, hydroxide, peroxide, sulfates	do.	92,200	33,900	162,000	48,600
Magnesite, crude and processed:					
Caustic-calcined magnesia	do.	134,000	20,100	167,000	40,400
Dead-burned and fused magnesia	do.	437,000	125,000	386,000	190,000
Other magnesia	do.	20,900	11,500	13,900	14,000
Crude	do.	9,000	2,220	15,800	5,720

See footnotes at end of table.

TABLE 8—Continued

U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product		2007		2008	
		Quantity	Value[3]	Quantity	Value[3]
Industrial minerals—Continued:					
Mica:					
Scrap and flake:					
Powder	do.	26,500	11,300	23,400	12,300
Waste	do.	14,500 r	3,830 r	3,560	1,470
Sheet:					
Unworked	do.	114	217	130	465
Worked	do.	1,840	14,500	1,750	17,900
Nitrogen, major compounds, gross weight		19,800	6,180,000	21,500	8,810,000
Peat moss	metric tons	977,000	240,000	936,000	228,000
Perlite, processed crude	do.	229,000	12,200		
Phosphate rock and phosphatic materials		4,670 r	372,000 r	4,860	692,000
Potash, chloride, sulfate, nitrate, sodium nitrate mixtures	metric tons	8,190,000	1,310,000	9,560,000	3,260,000
Pumice:					
Crude or unmanufactured	do.	35,300 r	2,490	65,000	2,890
Wholly or partially manufactured	do.	1,610 r	2,150	436	1,890
Salt		8,640	171,000	13,800	282,000
Sand and gravel:					
Construction		4,420	87,700	5,430	114,000
Industrial		511	24,000	355	23,500
Silica, special stone products		NA	9,100 r	NA	9,300
Soda ash		9	2,760	13	3,820
Stone:					
Crushed, chips, calcium carbonate fines, excludes precipitated carbonates		19,500	212,000	20,900	232,000
Dimension		NA	2,540,000	NA	2,150,000
Strontium:					
Carbonate	kilograms	11,300,000	6,480	12,700,000	8,560
Celestite	do.	1,230,000	83	4,620,000	295
Metal	do.	454,000	1,430	170,000	791
Nitrate	do.	3,170,000	3,280	3,890,000	4,430
Oxide, hydroxide, peroxide	do.	86,300 r	122	106,000	152
Sulfur:					
Elemental		2,930 e	79,400	3,000 e	753,000
Sulfuric acid, 100% H_2SO_4		2,600 r	112,000 r	3,480	457,000
Talc, unmanufactured		221	64,100	193	56,400
Vermiculite[e]		51	8,810	73	12,600
Wollastonite[e]	metric tons	2,000	250	5,000	650
Zeolites[e]	do.	350	70	200	42
Total		XX	35,200,000	XX	41,400,000
Grand total		XX	98,700,000 r	XX	107,000,000

[e]Estimated. [r]Revised. do. Ditto. NA Not available. XX Not applicable. -- Zero.

[1]Table includes data available through August 26, 2010.

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

[3]Customs value.

[4]Less than ½ unit.

TABLE 9

WORLD AND U.S. PRODUCTION OF SELECTED NONFUEL MINERAL COMMODITIES[1]

(Thousand metric tons unless otherwise specified)

Mineral or product		World total					United States	
		2004	2005	2006	2007	2008	2008	Percentage of world total
Metals:								
Alumina		61,700	64,400	71,500	77,000	81,600	4,300	5.3
Aluminum[2]		29,900	31,900	33,900	38,000	39,000	2,660	6.8
Antimony	metric tons	142,000	172,000	174,000	180,000	197,000	--	--
Arsenic trioxide[3]	do.	57,800	60,000	61,100	55,700	52,700	--	--
Bauxite[3, 4, 5]		164,000	179,000	192,000	201,000	205,000	NA	NA
Beryl[3]	metric tons	2,780	3,450	4,360	4,360	4,960	4,410	89.0
Bismuth, refinery	do.	15,200	13,900	15,300	15,500	15,400	--	--
Cadmium, refinery	do.	18,600	20,100	19,900	19,400	19,600	777	4.0
Chromite[3]		17,900	19,200	19,700	23,000	23,800	--	--
Cobalt, Co content:								
Mine	metric tons	60,300	66,200	69,800	72,600	75,900	--	--
Refinery	do.	48,500	54,100	53,800	53,300	57,600	--	--
Copper:								
Mine		14,700	15,000	15,000	15,500	15,400	1,310	8.5
Smelter		12,900	13,600	14,200	14,300	14,700	574	3.9
Refinery		15,900	16,500	17,300	17,800	18,200	1,270	7.0
Gold	kilograms	2,420,000	2,470,000	2,370,000	2,370,000	2,280,000	233,000	10.2
Indium, refinery	do.	392,000	538,000 r	588,000 r	573,000 r	573,000	--	--
Iron ore[3]		1,360,000	1,550,000	1,840,000	2,040,000	2,220,000	53,600	2.4
Iron and steel:								
Direct-reduced iron[2]		53,000	56,300	58,700	64,600	66,400	260	0.4
Pig iron[2]		720,000	802,000	881,000	954,000	932,000	33,700	3.6
Raw steel		1,060,000	1,140,000	1,250,000	1,350,000	1,330,000	91,900	6.9
Lead:								
Mine, Pb content	metric tons	3,150,000	3,480,000	3,600,000	3,680,000	3,840,000	410,000	10.7
Refinery	do.	7,040,000	7,580,000	7,890,000	8,230,000	8,620,000	1,280,000	14.9
Magnesium[5]	do.	595	622	675	751	671	W	NA
Manganese ore[3]		27,900	31,000	32,900	35,400	38,300	--	--
Mercury[5]	metric tons	1,900	1,520	1,150	1,200	1,320	NA [6]	NA
Molybdenum, Mo content	do.	159,000	186,000	186,000	213,000	218,000	55,900 [7]	25.7
Nickel, Ni content:								
Mine	do.	1,360,000	1,470,000	1,560,000	1,650,000	1,580,000	--	--
Refinery	do.	1,260,000	1,290,000	1,350,000	1,410,000	1,380,000	--	--
Niobium (columbium)-tantalum concentrates[3]	do.	184,700	263,900	223,400	262,700	263,800	--	--
Platinum-group metals	kilograms	472,000	505,000	514,000	512,000	465,000	15,500	3.3
Rhenium	do.	42,900	46,300	46,700	50,600	56,500	7,910	14.0
Selenium[2, 5]	do.	1,440,000	1,340,000	1,440,000	1,540,000	1,510,000	W	NA
Silver	metric tons	20,000	20,800	20,300	21,100	21,300	1,250	5.9
Tellurium[2, 5]	kilograms	110,000	77,900	78,000	88,000	89,000	W	NA
Tin:								
Mine	metric tons	302,000	297,000	290,000	303,000	299,000	--	--
Smelter[8]	do.	306,000	344,000	339,000	342,000	325,000	11,500	3.5
Tungsten, W content	do.	66,300	59,000	56,300	54,100	55,900	W	NA
Vanadium	do.	51,900	56,400	57,900	58,500	56,100	--	--
Zinc:								
Mine, Zn content of concentrate and direct shipping ore		9,610	10,000	10,300	11,000	11,500	778	6.7
Smelter		10,600	10,400	10,900	11,500	11,800	286	2.4

See footnotes at end of table.

TABLE 9—Continued

WORLD AND U.S. PRODUCTION OF SELECTED NONFUEL MINERAL COMMODITIES[1]

(Thousand metric tons unless otherwise specified)

Mineral or product		World total					United States	
		2004	2005	2006	2007	2008	2008	Percentage of world total
Industrial minerals:								
Asbestos	metric tons	2,340,000	2,270,000	2,210,000	2,300,000	2,090,000	--	--
Barite	do.	7,670,000	7,770,000	7,920,000	7,710,000	8,050,000	648,000 [9]	8.0
Boron minerals	do.	4,960,000	4,950,000	3,760,000	4,220,000	4,350,000	W	NA
Bromine	do.	577,000	655,000	689,000	403,000	413,000	W [9]	NA
Celesite	do.	525,000	509,000	523,000	516,000	496,000	--	--
Cement, hydraulic		2,190,000	2,350,000	2,610,000	2,810,000	2,840,000	87,600 [10]	3.1
Clays:								
Bentonite		11,600	11,700	11,900	12,200	12,100	5,030	41.6
Fuller's earth	metric tons	4,670,000	3,980,000	3,700,000	3,720,000	3,520,000	2,350,000	66.7
Kaolin		37,800	37,900	37,500	38,500	36,100	6,740	18.7
Diamond:								
Natural	thousand carats	165,000	183,000	174,000	168,000	159,000	--	--
Synthetic	do.	4,340,000	4,350,000	4,450,000	4,550,000	4,550,000	261,000	5.7
Diatomite	metric tons	1,950,000	2,030,000	2,210,000	2,050,000	2,170,000	764,000 [9]	35.3
Feldspar		15,100	16,700	20,500	21,400	21,900	650	3.0
Fluorspar	metric tons	5,220,000	5,410,000	5,730,000	5,750,000	6,040,000	--	--
Graphite, natural	do.	1,010,000	1,030,000	1,020,000	1,100,000	1,120,000	--	--
Gypsum		145,000	148,000	159,000	167,000	159,000	14,400	9.1
Iodine, crude	metric tons	24,800	26,500	26,700	26,300	26,500	W	NA
Iron oxide pigments	do.	1,040,000	1,080,000	1,010,000	1,060,000	1,030,000	W	NA
Kyanite and related minerals	do.	475,000	472,000	466,000	516,000	509,000	155,000 [11]	30.4
Lime		251,000	262,000	276,000	287,000	296,000	19,900 [9,]	6.7
Lithium	metric tons	262,000	344,000	394,000	381,000	382,000	W	NA
Magnesite, crude[5]		16,500	15,200	15,200	16,300	18,300	W	NA
Mica, including scrap and flake[12]	metric tons	400,000	359,000	390,000	389,000	374,000	84,000	22.4
Monazite[13]	do.	7,400	6,300	6,900	6,900	6,900	--	--
Nitrogen, N content of ammonia		117,000	122,000	126,000	132,000	133,000	7,850 [14]	5.9
Peat		25,600	26,000	25,800	25,700	25,000	615 [15]	2.5
Perlite	metric tons	1,870,000	1,790,000	1,810,000	1,750,000	1,790,000	434,000 [9]	24.3
Phosphate rock[3]		143,000	150,000	150,000	157,000	161,000	30,200	18.8
Potash, K_2O equivalent		32,200	33,800	31,200	35,800	34,700	1,100	3.2
Pumice		17,700	18,200	20,200	20,700	19,300	790 [9]	4.1
Rare earths	metric tons	102,000	122,000	137,000	124,000	134,000	--	--
Salt		235,000	250,000	261,000	250,000	258,000	47,300	18.3
Sand and gravel, industrial, silica		113,000	118,000	117,000	121,000	121,000	30,400 [9]	25.0
Soda ash, natural and manufactured		39,700	41,100	42,600	44,900	45,500	11,300 [16]	24.8
Sulfur, all forms		66,400	67,200	67,000	67,500	68,800	9,430	13.7
Talc and pyrophyllite[17]	metric tons	7,850,000	7,960,000	7,790,000	7,680,000	7,510,000	706,000	9.4
Titanium concentrates:[3]								
Ilmenite and leucoxene	do.	5,850,000	6,050,000	6,790,000	6,940,000	6,790,000	300,000 [18]	4.4
Rutile[5]	do.	354,000	375,000	512,000	601,000	621,000	(19)	NA
Vermiculite	do.	513,000	521,000	513,000	508,000	528,000	100,000 [20]	20.6
Zirconium	do.	1,070,000	1,060,000	1,210,000	1,380,000	1,280,000	W	NA

[r]Revised. do. Ditto. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in "World total." -- Zero.

[1]Data are rounded to no more than three significant digits.

[2]Primary.

[3]Gross weight.

[4]Individual country figures that are included in the world total represent dried bauxite equivalent of crude ore, but for some countries available data are insufficient to permit this adjustment.

[5]"World total" for years listed does not include U.S. production.

[6]U.S. production of mercury is byproduct only.

[7]Listed in Molybdenum chapter (table 1) as production.

[8]Includes tin content of alloys made directly from ore.
[9]Quantity sold or used by producers.
[10]Includes Puerto Rico.
[11]Includes synthetic mullite.
[12]Excludes, if any, U.S. production of low-quality sericite and sheet mica.
[13]Monazite totals are rounded to two significant digits.
[14]Synthetic anhydrous ammonia; excludes coke oven byproduct ammonia.
[15]Horticultural use.
[16]U.S. production is natural only.
[17]Data for the United States exclude proprietary pyrophyllite production.
[18]Includes rutile to avoid disclosing company proprietary data. Rounded to one significant digit.
[19]Included with ilmenite to avoid disclosing company proprietary data; not included in "Total."
[20]Rounded to one significant digit.