

STATISTICAL SUMMARY

By Stephen D. Smith

This annual report summarizes data on crude nonfuel mineral production¹ 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.

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 2004 U.S. Geological Survey (USGS) mineral production data published in this chapter are as of May 2006. 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 are 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). All Mineral Industry Surveys—mineral commodity, State, and country—are also available on the Internet at <http://minerals.usgs.gov/minerals>.

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 2004 increased to \$45.7 billion, which was a increase of more than 15% compared with that of 2003; metals increased to \$12.5 billion, which was a increase of 41%; and industrial minerals increased to \$33.2 billion, slightly more than 8%.

In 2004, the value of nonfuel mineral commodity production for the following nine commodities, in descending order of production value, was greater than \$1 billion: stone (crushed), cement (portland), sand and gravel (construction), copper, gold, iron ore (usable), molybdenum concentrates, lime, and salt. They accounted for more than 79% of the U.S. total production value (table 1).

In 2004, the value of nonfuel mineral commodity production in the following 17 States, in descending order of production value, was greater than \$1 billion: California, Nevada, Arizona, Florida, Texas, Utah, Minnesota, Georgia, Michigan, Missouri, Pennsylvania, Alaska, Ohio, New York, Illinois, Wyoming, and Colorado. They accounted for almost 70% of the U.S. total production value (table 3).

TABLE 1
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES^{1, 2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | | |
|---|-------------|--------------------|---------------------|---------------------|------------------------|-----------|------------|
| | Quantity | Value | Quantity | Value | Quantity | Value | |
| Metals: | | | | | | | |
| Beryllium concentrates | metric tons | 1,970 | NA | 2,100 | NA | 2,210 | NA |
| Copper ³ | | 1,140 | 1,910,000 | 1,120 | 2,100,000 | 1,160 | 3,420,000 |
| Gold ³ | kilograms | 298,000 | 2,980,000 | 277,000 | 3,250,000 | 258,000 | 3,400,000 |
| Iron ore, usable | | 51,500 | 1,340,000 | 46,100 ^r | 1,490,000 ^r | 54,900 | 2,080,000 |
| Iron oxide pigments, crude | metric tons | 53,200 | 1,070 | 50,900 | 814 | W | W |
| Lead ³ | do. | 440,000 | 423,000 | 449,000 | 433,000 | 430,000 | 523,000 |
| Molybdenum concentrates ^{4, 5} | do. | 32,300 | 232,000 | 33,600 | 324,000 | 42,000 | 1,420,000 |
| Palladium ⁴ | kilograms | 14,800 | 162,000 | 14,000 | 91,400 | 13,700 | 102,000 |
| Platinum ⁴ | do. | 4,390 | 76,500 | 4,170 | 93,100 | 4,040 | 110,000 |
| Rare-earth metal concentrates ⁴ | metric tons | 5,000 ^c | 27,600 ^c | -- | -- | -- | -- |
| Silver ³ | kilograms | 1,420,000 | 211,000 | 1,240,000 | 196,000 | 1,250,000 | 268,000 |
| Zinc ³ | metric tons | 780,000 | 664,000 | 738,000 | 661,000 | 715,000 | 827,000 |
| Combined value of magnesium metal, titanium concentrates, zirconium concentrates, and value indicated by symbol W | | | | | | | |
| | | XX | 229,000 | XX | 233,000 | XX | 301,000 |
| Total | | XX | 8,260,000 | XX | 8,860,000 ^r | XX | 12,500,000 |
| Industrial minerals, excluding fuels: | | | | | | | |
| Asbestos | metric tons | 2,720 | 1,380 | -- | -- | -- | -- |
| Barite | | 420 | 12,200 | 468 | 13,900 | 532 | 18,700 |
| Boron | | 1,050 | 513,000 | 1,150 | 591,000 | 1,210 | 626,000 |

See footnotes at end of table.

TABLE 1—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES^{1, 2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | | |
|---|----------------------|-----------|------------------------|------------------|-------------------------|-----------|------------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value | |
| Industrial minerals, excluding fuels—Continued: | | | | | | | |
| Bromine | metric tons | 222,000 | 166,000 | 216,000 | 155,000 | 222,000 | 191,000 |
| Cement: | | | | | | | |
| Masonry | | 4,450 | 480,000 ^e | 4,740 | 468,000 ^e | 5,000 | 585,000 ^e |
| Portland | | 85,300 | 6,350,000 ^e | 88,100 | 6,460,000 ^e | 92,400 | 7,110,000 ^e |
| Clays: | | | | | | | |
| Ball | | 1,120 | 47,000 | 1,310 | 56,200 | 1,220 | 54,100 |
| Bentonite | | 3,970 | 180,000 | 3,940 | 177,000 | 4,060 | 179,000 |
| Common | | 23,000 | 148,000 | 23,100 | 131,000 | 24,600 | 157,000 |
| Fire | | 446 | 10,500 | 400 | 10,200 | 256 | 7,870 |
| Fuller's earth | | 2,730 | 246,000 | 3,600 | 332,000 | 3,260 | 329,000 |
| Kaolin | | 8,010 | 951,000 | 7,680 | 939,000 | 7,760 | 945,000 |
| Diatomite | | 624 | 159,000 | 599 ^r | 159,000 ^r | 620 | 177,000 |
| Feldspar | | 790 | 42,800 | 800 | 43,400 | 770 | 44,200 |
| Garnet, industrial | metric tons | 38,500 | 4,500 | 29,200 | 3,170 | 28,400 | 3,050 |
| Gemstones, natural | | NA | 12,600 | NA | 12,500 | NA | 14,500 |
| Gypsum, crude | | 15,700 | 108,000 | 16,700 | 114,000 | 17,200 | 124,000 |
| Helium: | | | | | | | |
| Crude | million cubic meters | 50 | 63,600 | 49 | 67,000 | 57 | 77,500 |
| Grade-A | do. | 127 | 293,000 | 122 | 282,000 | 130 | 299,000 |
| Iodine | metric tons | 1,420 | 21,600 | 1,090 | 15,900 | W | W |
| Kyanite ^e | | 90 | 13,400 | 90 | 13,400 | 90 | 13,400 |
| Lime | | 17,900 | 1,120,000 | W | W | 20,000 | 1,370,000 |
| Mica, crude | | 81 | 7,340 | 79 | 16,700 | 99,200 | 15,400 |
| Peat | | 728 | 21,000 | 632 | 18,800 | 741,000 | 21,200 |
| Perlite, crude | metric tons | 521,000 | 19,000 | 493,000 | 18,800 | 508,000 | 20,600 |
| Phosphate rock, marketable | | 36,100 | 993,000 | 35,000 | 946,000 | 35,800 | 995,000 |
| Potash | | 2,600 | 280,000 | 2,500 | 280,000 | 2,700 | 340,000 |
| Pumice and pumicite | metric tons | 950,000 | 22,900 | 870,000 | 21,900 | 1,490,000 | 25,000 |
| Salt | | 37,700 | 1,010,000 | 41,100 | 1,130,000 | 45,000 | 1,270,000 |
| Sand and gravel: | | | | | | | |
| Construction | | 1,130,000 | 5,750,000 | 1,160,000 | 5,990,000 | 1,240,000 | 6,590,000 |
| Industrial | | 27,200 | 572,000 | 27,500 | 609,000 | 29,700 | 685,000 |
| Silica stone ⁶ | metric tons | 386 | 3,740 | 513 | 3,630 | 655 | 3,660 |
| Soda ash | | 10,500 | 784,000 | 10,600 | 765,000 | 11,000 | 770,000 |
| Stone, crushed ⁷ | | 1,510,000 | 8,650,000 | 1,530,000 | 9,060,000 ^r | 1,590,000 | 9,590,000 |
| Tripoli | metric tons | 66,600 | 16,600 | 68,800 | 17,700 | 94,000 | 19,400 |
| Zeolites | do. | (8) | NA | (8) | NA | W | W |
| Combined value of brucite, emery (2002), greensand marl, lithium carbonate, magnesite, magnesium compounds, olivine, pyrophyllite (crude), staurolite, stone (dimension), talc (crude), vermiculite (crude), wollastonite, and values indicated by symbol W | | | | | | | |
| | | XX | 523,000 | XX | 1,800,000 | XX | 531,000 |
| Total | | XX | 29,600,000 | XX | 30,700,000 ^r | XX | 33,200,000 |
| Grand total | | XX | 37,900,000 | XX | 39,600,000 ^r | XX | 45,700,000 |

^eEstimated. ^rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined value."

XX Not applicable. -- Zero.

¹Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

²Data are rounded to three significant digits; may not add to totals shown.

³Recoverable content of ores, etc.

⁴Content of ore and concentrate.

⁵Shipments.

⁶Includes grindstones, pulpstones, and sharpening stones; excludes mill liners and grinding pebbles.

⁷Excludes abrasive stone and bituminous limestone and sandstone; all included elsewhere in table.

⁸Withheld to avoid disclosing company proprietary data.

TABLE 2
NONFUEL MINERALS PRODUCED IN THE UNITED STATES, BY COMMODITY AND STATES IN 2004

(Principal States based on quantity unless otherwise noted)

| Mineral | Principal States | Other States (alphabetical order) |
|---------------------------------|--------------------|--|
| Barite | NV and GA | |
| Beryllium concentrates | UT | |
| Boron | CA | |
| Bromine | AR and MI | |
| Brucite | NV and TX | |
| Cement: | | |
| Masonry | FL, CA, SC, IN, AL | AZ, AR, CO, GA, IA, KS, KY, ME, MD, MI, MO, NE, NM, NY, OH, OK, PA, TN, TX, VA, WV. |
| Portland | CA, TX, PA, MI, MO | All other States, except AK, CT, DE, HI, LA, MA, MN, NH, NJ, NC, ND, RI, VT. |
| Clays: | | |
| Ball | TN, TX, MS, KY, IN | |
| Bentonite | WY, MS, MT, AL, UT | AZ, CA, CO, NV, OR, TX, VA. |
| Common | NC, TX, AL, GA, OH | All other States, except AK, DE, HI, ID, NV, NH, RI, VT, WI. |
| Fire | MO, OH, SC | |
| Fuller's earth | GA, MO, MS, VA, FL | CA, IL, KS, NV, TN, TX. |
| Kaolin | GA, AL, SC, AR, TX | CA, FL, NV, NC, TN. |
| Copper ¹ | AZ, UT, NM, MT, NV | ID and MO. |
| Diatomite | CA, NV, OR, WA | |
| Feldspar | NC, VA, CA, OK, GA | ID and SD. |
| Garnet, industrial | NY and ID | |
| Gemstones, natural ² | TN, AZ, OR, CA, ID | All other States. |
| Gold ¹ | NV, AK, UT, CO, CA | AZ, MT, NM, SD, WA. |
| Greensand marl | NJ | |
| Gypsum, crude | OK, TX, NV, IA, CA | AZ, AR, CO, IN, KS, LA, MI, NM, SD, UT, WY. |
| Helium: | | |
| Crude | KS and TX | |
| Grade-A | KS, WY, OK, OH, UT | NM and TX. |
| Iodine, crude | OK | |
| Iron ore, usable | MN, MI, CA | |
| Iron oxide pigments, crude | GA, MI, AL, VA | |
| Kyanite | VA | |
| Lead ¹ | MO, AK, ID, WA, MT | |
| Lime | MO, KY, AL, OH, TX | All other States, except AK, CT, DE, HI, KS, ME, MD, MS, NH, NJ, NY, NC, RI, SC, VT. |
| Lithium carbonate | NV | |
| Magnesite | NV | |
| Magnesium compounds | MI, FL, UT, DE, CA | |
| Magnesium metal | UT | |
| Mica, crude | NC, NM, GA, SD, SC | |
| Molybdenum, concentrates | AZ, CO, UT, ID, MT | NM. |
| Olivine | WA and NC | |
| Palladium ¹ | MT | |
| Peat | FL, MI, MN, IL, PA | IN, IA, ME, MT, NJ, NY, OH, WA, WV, WI. |
| Perlite, crude | NM, OR, AZ, UT, CA | ID and NV. |
| Phosphate rock | FL, ID, NC, UT | |
| Platinum ¹ | MT | |
| Potash | NM, UT, MI | |
| Pumice and pumicite | OR, AZ, ID, NM, CA | KS. |
| Pyrophyllite, crude | NC | |
| Salt | LA, TX, NY, OH, KS | AL, AZ, CA, MI, NV, NM, OK, TN, UT, WV. |
| Sand and gravel: | | |
| Construction | CA, TX, AZ, MI, MN | All other States. |
| Industrial | IL, TX, WI, NJ, CA | All other States, except AK, CT, DE, HI, KY, ME, MA, MT, NH, NM, OR, SD, UT, VT, WY. |
| Silica stone ³ | AR | |
| Silver ¹ | AK, NV, ID, UT, MT | AZ, CA, CO, MO, NM, WA. |
| Soda ash | WY, CA, CO | |
| Staurolite | FL | |

See footnotes at end of table.

TABLE 2—Continued
 NONFUEL MINERALS PRODUCED IN THE UNITED STATES, BY COMMODITY AND STATES IN 2004

(Principal States based upon quantity unless otherwise noted)

| Mineral | Principal States | Other States (alphabetical order) |
|-------------------------------|--------------------|--|
| Stone: | | |
| Crushed | TX, PA, FL, GA, IL | All other States, except DE. |
| Dimension | IN, WI, GA, VT, MA | All other States, except AK, DE, FL, HI, IL, IA, KY, LA, MS, NE, NV, NJ, ND, OR, RI, WY. |
| Talc, crude | MT, TX, VT, NY, CA | OR. |
| Titanium concentrates: | | |
| Ilmenite | FL, VA, GA | |
| Rutile | FL | |
| Tripoli | IL, OK, AR, PA | |
| Vermiculite, crude | SC and VA | |
| Wollastonite | NY | |
| Zeolites | NM, ID, TX, AZ, NV | WY and CA. |
| Zinc ¹ | AK, MO, WA, MT, TN | ID. |
| Zirconium concentrates | FL, VA, GA | |

¹Content of ores, etc.

²Principal producing States based on value.

³Grindstones, 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 2004¹

| State | Value (thousands) | Rank | Percentage of U.S. total | Principal minerals, in order of value |
|-----------------------------|----------------------|------|-----------------------------|--|
| Alabama | \$972,000 | 18 | 2.13 | Cement (portland), stone (crushed), lime, sand and gravel (construction), cement (masonry). |
| Alaska | 1,270,000 | 12 | 2.78 | Zinc, lead, gold, silver, sand and gravel (construction). |
| Arizona | 3,330,000 | 3 | 7.30 | Copper, sand and gravel (construction), molybdenum concentrates, cement (portland), stone (crushed). |
| Arkansas | 518,000 | 29 | 1.13 | Bromine, stone (crushed), cement (portland), sand and gravel (construction), lime. |
| California | 3,760,000 | 1 | 8.23 | Sand and gravel (construction), cement (portland), boron minerals, stone (crushed), diatomite. |
| Colorado | 1,010,000 | 17 | 2.21 | Molybdenum concentrates, sand and gravel (construction), cement (portland), gold, stone (crushed). |
| Connecticut ² | 131,000 | 42 | 0.29 | Stone (crushed), sand and gravel (construction), stone (dimension), clays (common), gemstones (natural). |
| Delaware ² | 21,900 | 50 | 0.05 | Sand and gravel (construction), magnesium compounds, gemstones (natural). |
| Florida | 2,320,000 | 4 | 5.08 | Phosphate rock, stone (crushed), cement (portland), sand and gravel (construction), cement (masonry). |
| Georgia | 1,800,000 | 8 | 3.95 | Clays (kaolin), stone (crushed), clays (fuller's earth), cement (portland), sand and gravel (construction). |
| Hawaii | 71,200 | 46 | 0.16 | Stone (crushed), sand and gravel (construction), gemstones (natural). |
| Idaho | 446,000 | 34 | 0.98 | Molybdenum concentrates, phosphate rock, sand and gravel (construction), silver, cement (portland). |
| Illinois | 1,050,000 | 15 | 2.31 | Stone (crushed), cement (portland), sand and gravel (construction), sand and gravel (industrial), lime. |
| Indiana | 764,000 | 22 | 1.67 | Stone (crushed), cement (portland), sand and gravel (construction), lime, cement (masonry). |
| Iowa | 529,000 | 28 | 1.16 | Stone (crushed), cement (portland), sand and gravel (construction), gypsum (crude), lime. |
| Kansas | 754,000 | 23 | 1.65 | Cement (portland), helium (Grade-A), salt, stone (crushed), helium (crude). |
| Kentucky | 648,000 | 25 | 1.42 | Stone (crushed), lime, cement (portland), sand and gravel (construction), clays (ball). |
| Louisiana | 356,000 | 36 | 0.78 | Salt, sand and gravel (construction), stone (crushed), sand and gravel (industrial), clays (common). |
| Maine | 118,000 | 43 | 0.26 | Sand and gravel (construction), cement (portland), stone (crushed), stone (dimension), cement (masonry). |
| Maryland | 481,000 | 32 | 1.05 | Stone (crushed), cement (portland), sand and gravel (construction), stone (dimension), cement (masonry). |
| Massachusetts ² | 210,000 | 38 | 0.46 | Stone (crushed), sand and gravel (construction), lime, stone (dimension), clays (common). |
| Michigan | 1,670,000 | 9 | 3.66 | Iron ore (usable), cement (portland), sand and gravel (construction), salt, stone (crushed). |
| Minnesota ² | 1,890,000 | 7 | 4.13 | Iron ore (usable), sand and gravel (construction), stone (crushed), sand and gravel (industrial), stone (crushed). |
| Mississippi | 194,000 | 40 | 0.43 | Sand and gravel (construction), clays (fuller's earth), stone (crushed), cement (portland), clays (bentonite). |
| Missouri | 1,470,000 | 10 | 3.23 | Stone (crushed), cement (portland), lead, lime, sand and gravel (construction). |
| Montana | 624,000 | 26 | 1.37 | Platinum metal, palladium metal, copper, molybdenum concentrates, sand and gravel (construction). |
| Nebraska ² | 106,000 | 44 | 0.23 | Cement (portland), sand and gravel (construction), stone (crushed), cement (masonry), lime. |
| Nevada | 3,470,000 | 2 | 7.60 | Gold, sand and gravel (construction), lime, stone (crushed), silver. |
| New Hampshire ² | 70,600 | 47 | 0.16 | Sand and gravel (construction), stone (crushed), stone (dimension), gemstones (natural). |
| New Jersey ² | 341,000 | 37 | 0.75 | Stone (crushed), sand and gravel (construction), sand and gravel (industrial), greensand marl, peat. |
| New Mexico | 866,000 | 20 | 1.90 | Copper, potash, sand and gravel (construction), molybdenum (concentrates), cement (portland). |
| New York | 1,110,000 | 14 | 2.43 | Stone (crushed), salt, cement (portland), sand and gravel (construction), wollastonite. |
| North Carolina | 805,000 | 21 | 1.76 | Stone (crushed), phosphate rock, sand and gravel (construction), sand and gravel (industrial), feldspar. |
| North Dakota | 44,500 | 48 | 0.10 | Sand and gravel (construction), lime, stone (crushed), clays (common), sand and gravel (industrial). |
| Ohio | 1,120,000 | 13 | 2.45 | Stone (crushed), sand and gravel (construction), salt, lime, cement (portland). |
| Oklahoma | 507,000 | 31 | 1.11 | Stone (crushed), cement (portland), sand and gravel (construction), sand and gravel (industrial), gypsum (crude). |
| Oregon | 367,000 | 35 | 0.80 | Stone (crushed), sand and gravel (construction), cement (portland), diatomite, lime. |
| Pennsylvania | 1,400,000 | 11 | 3.08 | Stone (crushed), cement (portland), sand and gravel (construction), lime, cement (masonry). |
| Rhode Island ² | 34,400 | 49 | 0.08 | Sand and gravel (construction), stone (crushed), sand and gravel (industrial), gemstones (natural). |
| South Carolina ² | 532,000 | 27 | 1.17 | Stone (crushed), cement (portland), cement (masonry), sand and gravel (construction), clays (kaolin). |
| South Dakota | 210,000 | 39 | 0.46 | Cement (portland), sand and gravel (construction), gold, stone (crushed), stone (dimension). |
| Tennessee | 653,000 | 24 | 1.43 | Stone (crushed), cement (portland), sand and gravel (construction), clays (ball), sand and gravel (industrial). |
| Texas | 2,290,000 | 5 | 5.01 | Cement (portland), stone (crushed), sand and gravel (construction), salt, lime. |
| Utah | 1,940,000 | 6 | 4.26 | Copper, molybdenum (concentrates), cement (portland), gold, sand and gravel (construction). |
| Vermont ² | 85,400 | 45 | 0.19 | Stone (crushed), stone (dimension), sand and gravel (construction), talc (crude), gemstones (natural). |
| Virginia | 894,000 | 19 | 1.96 | Stone (crushed), cement (portland), sand and gravel (construction), lime, zirconium (concentrates). |
| Washington | 507,000 | 30 | 1.11 | Sand and gravel (construction), cement (portland), stone (crushed), gold, zinc. |
| West Virginia | 167,000 | 41 | 0.37 | Stone (crushed), cement (portland), sand and gravel (industrial), lime, cement (masonry). |
| Wisconsin ² | 470,000 | 33 | 1.03 | Sand and gravel (construction), stone (crushed), lime, sand and gravel (industrial), stone (dimension). |
| Wyoming | 1,040,000 | 16 | 2.29 | Soda ash, clays (bentonite), helium (Grade-A), cement (portland), sand and gravel (construction). |
| Undistributed | 197,000 | XX | 0.43 | |
| Total | 45,700,000 | XX | 100.00 | |

XX Not applicable.

¹Data are rounded to three significant digits; may not add to totals shown.²Partial total; excludes values that must be withheld to avoid disclosing company proprietary data which are values included with "Undistributed."

TABLE 4
 VALUE OF NONFUEL MINERAL PRODUCTION PER CAPITA AND PER SQUARE KILOMETER IN 2004 BY STATE¹

| State | Area (square kilometers) | Population (thousands) | Total value (thousands) | Per capita | | Per square kilometer | |
|------------------|-----------------------------|---------------------------|----------------------------|------------|------|----------------------|------|
| | | | | Dollars | Rank | Dollars | Rank |
| Alabama | 134,000 | 4,560 | \$972,000 | \$213 | 14 | \$7,260 | 20 |
| Alaska | 1,530,000 | 664 | 1,270,000 | 1,910 | 2 | 828 | 48 |
| Arizona | 295,000 | 5,940 | 3,330,000 | 561 | 6 | 11,300 | 7 |
| Arkansas | 138,000 | 2,780 | 518,000 | 186 | 16 | 3,760 | 29 |
| California | 411,000 | 36,100 | 3,760,000 | 104 | 28 | 9,140 | 13 |
| Colorado | 270,000 | 4,670 | 1,010,000 | 217 | 13 | 3,750 | 30 |
| Connecticut | 13,000 | 3,510 | 131,000 ² | 37 | 47 | 10,100 | 11 |
| Delaware | 5,290 | 844 | 21,900 ² | 26 | 50 | 4,140 | 27 |
| Florida | 152,000 | 17,800 | 2,320,000 | 130 | 22 | 15,300 | 3 |
| Georgia | 153,000 | 9,070 | 1,800,000 | 199 | 15 | 11,800 | 6 |
| Hawaii | 16,800 | 1,280 | 71,200 | 56 | 44 | 4,250 | 26 |
| Idaho | 216,000 | 1,430 | 446,000 | 312 | 9 | 2,060 | 42 |
| Illinois | 146,000 | 12,800 | 1,050,000 | 83 | 37 | 7,220 | 21 |
| Indiana | 93,700 | 6,270 | 764,000 | 122 | 24 | 8,160 | 18 |
| Iowa | 146,000 | 2,970 | 529,000 | 178 | 17 | 3,630 | 31 |
| Kansas | 213,000 | 2,740 | 754,000 | 275 | 10 | 3,540 | 32 |
| Kentucky | 105,000 | 4,170 | 648,000 | 155 | 19 | 6,190 | 23 |
| Louisiana | 124,000 | 4,520 | 356,000 | 79 | 38 | 2,880 | 36 |
| Maine | 86,200 | 1,320 | 118,000 | 89 | 34 | 1,370 | 46 |
| Maryland | 27,100 | 5,600 | 481,000 | 86 | 35 | 17,800 | 1 |
| Massachusetts | 21,500 | 6,400 | 210,000 ² | 33 | 48 | 9,800 | 12 |
| Michigan | 152,000 | 10,100 | 1,670,000 | 165 | 18 | 11,000 | 8 |
| Minnesota | 219,000 | 5,130 | 1,890,000 ² | 367 | 8 | 8,630 | 16 |
| Mississippi | 124,000 | 2,920 | 194,000 | 67 | 41 | 1,570 | 44 |
| Missouri | 181,000 | 5,800 | 1,470,000 | 254 | 12 | 8,170 | 19 |
| Montana | 381,000 | 936 | 624,000 | 667 | 5 | 1,640 | 43 |
| Nebraska | 200,000 | 1,760 | 106,000 ² | 60 | 42 | 529 | 49 |
| Nevada | 286,000 | 2,410 | 3,470,000 | 1,440 | 3 | 12,100 | 4 |
| New Hampshire | 24,000 | 1,310 | 70,600 ² | 54 | 45 | 2,940 | 37 |
| New Jersey | 20,200 | 8,720 | 341,000 ² | 39 | 46 | 16,900 | 2 |
| New Mexico | 315,000 | 1,930 | 866,000 | 449 | 7 | 2,750 | 40 |
| New York | 127,000 | 19,300 | 1,110,000 | 58 | 43 | 8,730 | 15 |
| North Carolina | 136,000 | 8,680 | 805,000 | 93 | 32 | 5,900 | 25 |
| North Dakota | 183,000 | 637 | 44,500 | 70 | 40 | 243 | 50 |
| Ohio | 107,000 | 11,500 | 1,120,000 | 97 | 31 | 10,400 | 10 |
| Oklahoma | 181,000 | 3,550 | 507,000 | 143 | 20 | 2,800 | 39 |
| Oregon | 251,000 | 3,640 | 367,000 | 101 | 29 | 1,460 | 45 |
| Pennsylvania | 117,000 | 12,400 | 1,400,000 | 113 | 26 | 12,000 | 5 |
| Rhode Island | 3,140 | 1,080 | 34,400 ² | 32 | 49 | 11,000 | 9 |
| South Carolina | 80,600 | 4,260 | 532,000 ² | 125 | 23 | 6,610 | 22 |
| South Dakota | 200,000 | 776 | 210,000 | 271 | 11 | 1,050 | 47 |
| Tennessee | 109,000 | 5,960 | 653,000 | 109 | 27 | 5,980 | 24 |
| Texas | 691,000 | 22,900 | 2,290,000 | 100 | 30 | 3,310 | 34 |
| Utah | 220,000 | 2,470 | 1,940,000 | 788 | 4 | 8,840 | 14 |
| Vermont | 24,900 | 623 | 85,400 ² | 137 | 21 | 3,430 | 33 |
| Virginia | 106,000 | 7,570 | 894,000 | 118 | 25 | 8,470 | 17 |
| Washington | 176,000 | 6,290 | 507,000 | 81 | 39 | 2,870 | 38 |
| West Virginia | 62,800 | 1,820 | 167,000 | 92 | 33 | 2,660 | 41 |
| Wisconsin | 145,000 | 5,540 | 470,000 ² | 85 | 36 | 3,230 | 35 |
| Wyoming | 253,000 | 509 | 1,040,000 | 2,050 | 1 | 4,120 | 28 |
| Undistributed | XX | XX | 197,000 | XX | XX | XX | XX |
| Total or average | 9,370,000 ³ | 296,000 ³ | 45,700,000 | 154 | XX | 4,870 | XX |

XX Not applicable.

¹Data are rounded to three significant digits; may not add to totals shown.

²Partial total; excludes values that must be withheld to avoid disclosing company proprietary data, which are included with "Undistributed."

³Excludes Washington, DC (which has no mineral production), with an area of 179 square kilometers and a population of 551,000.

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

TABLE 5
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|--|---------------------|------------------------|---------------------|----------------------|----------|------------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Alabama: | | | | | | |
| Cement: | | | | | | |
| Masonry | 380 | 42,000 ^e | 565 | 55,700 ^e | 430 | 49,400 ^e |
| Portland | 4,540 | 298,000 ^e | 4,330 | 273,000 ^e | 4,800 | 320,000 ^e |
| Clays: | | | | | | |
| Bentonite | 125 | 3,810 | 125 | 3,810 | 100 | 3,050 |
| Common | 2,020 | 24,600 | 1,920 | 24,000 | 2,120 | 29,600 |
| Kaolin | 531 | 14,600 | W | W | W | W |
| Gemstones | NA | 356 | NA | 356 | NA | 356 |
| Lime | 2,040 | 127,000 | 2,290 | 151,000 | 2,280 | 164,000 |
| Sand and gravel: | | | | | | |
| Construction | 12,500 | 56,700 | 14,500 | 67,600 | 14,700 | 65,300 |
| Industrial | 722 | 8,990 | 723 | 9,180 | 643 | 9,800 |
| Stone, crushed | 43,400 | 257,000 ^f | 49,300 | 286,000 | 49,100 | 303,000 |
| Combined values of iron oxide pigments (crude), salt, stone (dimension marble and sandstone), and values indicated by symbol W | XX | 8,850 | XX | 30,000 | XX | 27,000 |
| Total | XX | 843,000 ^f | XX | 900,000 | XX | 972,000 |
| Alaska: | | | | | | |
| Gemstones | NA | 12 | NA | 12 | NA | 12 |
| Gold ³ kilograms | 16,900 | 170,000 | W | W | W | W |
| Sand and gravel, construction | 16,300 | 93,400 | 9,980 | 55,700 | 9,430 | 51,600 |
| Silver ³ kilograms | 559,000 | 83,100 | W | W | W | W |
| Stone, crushed ⁴ | 2,810 ^f | 15,200 ^f | 2,640 | 15,300 | 2,230 | 13,900 |
| Combined values of lead, stone [crushed dolomite, granite, limestone, shell (2002), crushed granite and shell (2003-04)], zinc, and values indicated by symbol W | XX | 695,000 ^f | XX | 1,010,000 | XX | 1,200,000 |
| Total | XX | 1,060,000 ^f | XX | 1,080,000 | XX | 1,270,000 |
| Arizona: | | | | | | |
| Copper ⁵ | 767 | 1,280,000 | 741 | 1,390,000 | 723 | 2,130,000 |
| Gemstones | NA | 1,670 | NA | 1,440 | NA | 1,450 |
| Sand and gravel: | | | | | | |
| Construction | 53,800 | 294,000 | 62,600 | 340,000 | 79,600 | 430,000 |
| Industrial | W | W | W | W | W | 792 |
| Stone, crushed | 8,450 | 51,500 ^f | 9,950 | 49,100 | 11,100 | 57,200 |
| Combined values of cement, clays (bentonite, common), gold, gypsum (crude), lime, mica (2002), molybdenum concentrates, perlite (crude), pumice and pumicite, salt, silver, stone (dimension sandstone), zeolites (2004), and values indicated by symbol W | XX | 318,000 | XX | 394,000 | XX | 709,000 |
| Total | XX | 1,950,000 ^f | XX | 2,180,000 | XX | 3,330,000 |
| Arkansas: | | | | | | |
| Clays, common | 922 | 2,280 | 897 | 1,410 | 1,150 | 1,510 |
| Gemstones | NA | 637 | NA | 477 | NA | 590 |
| Sand and gravel, construction | 8,810 | 45,600 | 9,720 | 52,100 | 9,370 | 53,500 |
| Silica stone ³ metric tons | 386 | 3,740 | 513 | 3,630 | 655 | 3,660 |
| Stone, crushed | 30,600 ^f | 158,000 ^f | 29,700 ^f | 145,000 ^f | 32,900 | 161,000 |
| Combined values of bromine, cement, clays (kaolin), gypsum (crude), lime, sand and gravel (industrial), stone (dimension limestone and sandstone), tripoli | XX | 247,000 | XX | 251,658 | XX | 298,000 |
| Total | XX | 457,000 ^f | XX | 454,000 ^f | XX | 518,000 |
| California: | | | | | | |
| Asbestos metric tons | 2,770 | 1,380 | -- | -- | -- | -- |
| Boron minerals | 1,050 | 513,000 | 1,150 | 591,000 | 1,210 | 626,000 |
| Cement, portland | 11,200 | 853,000 ^e | 11,600 | 887,000 ^e | 11,900 | 1,000,000 ^e |

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|---|----------|------------------------|----------|------------------------|----------|----------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| California—Continued: | | | | | | |
| Clays: | | | | | | |
| Bentonite | 26 | 2,830 | 23 | 2,560 | 24 | 2,640 |
| Common | 1,030 | 21,400 | 1,240 | 19,100 | 1,230 | 20,700 |
| Fuller's earth | W | W | W | W | 197 | W |
| Gemstones | NA | 1,040 | NA | 1,080 | NA | 1,070 |
| Gold ³ kilograms | 9,180 | 91,900 | 4,270 | 50,100 | 3,260 | 43,000 |
| Sand and gravel: | | | | | | |
| Construction | 151,000 | 1,110,000 | 152,000 | 1,150,000 | 166,000 | 1,280,000 |
| Industrial | 1,800 | 48,000 | 1,790 | 50,100 | 1,990 | 55,700 |
| Silver ³ kilograms | 3,400 | 506 | 957 | 151 | 801 | 172 |
| Stone: | | | | | | |
| Crushed | 67,400 | 423,000 | 55,500 | 371,000 ^r | 55,400 | 365,000 |
| Dimension | 41 | 9,870 | 40 | 9,920 | 42 | 10,200 |
| Combined values of cement (masonry), clays [fire (2002), kaolin], diatomite, feldspar, gypsum (crude), iron ore (usable), lime, magnesium compounds, perlite (crude), pumice and pumicite, pyrophyllite [crude (2003)], rare-earth metal concentrates (2002), salt, soda ash, talc (crude), zeolites (2004), and values indicated by symbol W | | | | | | |
| | XX | 340,000 ^r | XX | 308,000 | XX | 349,000 |
| Total | XX | 3,410,000 ^r | XX | 3,440,000 ^r | XX | 3,760,000 |
| Colorado: | | | | | | |
| Clays: | | | | | | |
| Bentonite | W | W | W | W | 5 | W |
| Common | 214 | 1,260 | 259 | 1,580 | 249 | 1,510 |
| Gemstones | NA | 269 | NA | 281 | NA | 360 |
| Lime | 20 | 1,250 | 26 | 2,330 | 26 | 2,570 |
| Sand and gravel: | | | | | | |
| Construction | 40,700 | 222,000 | 37,500 | 213,000 | 40,900 | 235,000 |
| Industrial | 61 | W | 70 | W | W | 3,300 |
| Stone: | | | | | | |
| Crushed | 15,000 | 96,000 | 10,400 | 64,000 ^r | 11,000 | 67,300 |
| Dimension | 18 | 2,400 | 5 | 1,610 | 16 | 1,980 |
| Combined values of cement, gold, gypsum (crude), helium (Grade-A), molybdenum concentrates, silver, soda ash, and values indicated by symbol W | | | | | | |
| | XX | 312,000 ^r | XX | 391,000 | XX | 699,000 |
| Total | XX | 634,000 ^r | XX | 673,000 | XX | 1,010,000 |
| Connecticut: | | | | | | |
| Clays, common | | | | | | |
| | 55 | 183 | 52 | 143 | 87 | (6) |
| Gemstones | NA | 6 | NA | 6 | NA | 6 |
| Sand and gravel, construction | 8,140 | 48,800 | 8,150 | 51,200 | 8,330 | 55,600 |
| Stone: | | | | | | |
| Crushed | 10,200 | 76,500 ^r | 10,400 | 81,800 | 10,000 | 75,700 |
| Dimension | W | (6) | W | (6) | W | (6) |
| Total | XX | 125,000 ^r | XX | 133,000 | XX | 131,000 |
| Delaware: | | | | | | |
| Gemstones | | | | | | |
| | NA | 1 | NA | 1 | NA | 1 |
| Magnesium compounds metric tons | W | (6) | W | (6) | W | (6) |
| Sand and gravel, construction | 2,190 | 17,300 | 2,550 | 17,900 | 2,980 | 21,900 |
| Total | XX | 17,300 | XX | 17,900 | XX | 21,900 |
| Florida: | | | | | | |
| Cement: | | | | | | |
| Masonry | 591 | 64,000 ^e | 674 | 82,900 ^e | 763 | 97,600 ^e |
| Portland | 3,950 | 297,000 ^e | 4,190 | 323,000 ^e | 5,230 | 432,000 ^e |

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|--|---------------------|------------------------|---------------------|----------------------|----------|----------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Florida—Continued: | | | | | | |
| Clays: | | | | | | |
| Common | W | W | 94 ^e | 1,280 ^e | W | W |
| Fuller's earth | W | W | W | W | 234 | W |
| Kaolin | 32 | 3,370 | 31 | 3,250 | 31 | 3,280 |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Lime | -- | -- | -- | -- | 24 | 2,090 |
| Peat | 559 | 11,500 | 373 | 7,440 | 478 | 9,710 |
| Sand and gravel: | | | | | | |
| Construction | 26,400 | 114,000 | 30,900 | 141,000 | 29,300 | 146,000 |
| Industrial | 645 | 8,640 | 624 | 7,270 | 679 | 8,520 |
| Stone, crushed | 97,700 | 573,000 | 97,100 ^r | 587,000 ^r | 105,000 | 675,000 |
| Combined values of magnesium compounds, phosphate rock, staurolite, titanium concentrates, zirconium concentrates, and values indicated by symbol W | XX | 963,000 | XX | 918,000 | XX | 945,000 |
| Total | XX | 2,030,000 | XX | 2,070,000 | XX | 2,320,000 |
| Georgia: | | | | | | |
| Clays: | | | | | | |
| Common | 1,310 | 5,500 | 1,280 | 4,430 | 1,550 | 8,710 |
| Fuller's earth | 979 | 93,800 | 1,570 | 145,000 | 1,400 | 142,000 |
| Kaolin | 6,830 | 893,000 | 6,610 | 884,000 | 6,780 | 898,000 |
| Gemstones | NA | 8 | NA | 8 | NA | 9 |
| Sand and gravel: | | | | | | |
| Construction | 6,600 | 27,200 | 7,690 | 31,800 | 9,270 | 39,400 |
| Industrial | 606 | 12,200 | 590 | 11,900 | 665 | 13,400 |
| Stone: | | | | | | |
| Crushed | 70,500 ^r | 461,000 ^r | 75,200 | 519,000 | 79,500 | 544,000 |
| Dimension | 111 | 18,200 | 114 | 22,700 | 146 | 22,100 |
| Combined values of barite, cement, clays [bentonite (2002)], feldspar, iron oxide pigments (crude), lime, mica (crude) | XX | 129,000 ^r | XX | 117,000 | XX | 134,000 |
| Total | XX | 1,640,000 ^r | XX | 1,740,000 | XX | 1,800,000 |
| Hawaii: | | | | | | |
| Cement, masonry | W | (3) | W | (3) | -- | -- |
| Gemstones | NA | 109 | NA | 119 | NA | 262 |
| Sand and gravel, construction | 610 | 7,010 | 808 ^r | 9,560 | 1,260 | 12,100 |
| Stone, crushed | 6,380 | 65,100 | 5,620 ^r | 65,400 ^r | 5,190 | 58,900 |
| Total | XX | 72,300 | XX | 75,100 ^r | XX | 71,200 |
| Idaho: | | | | | | |
| Gemstones | NA | 460 | NA | 477 | NA | 836 |
| Sand and gravel, construction | 15,700 | 57,700 | 16,500 | 59,300 | 19,600 | 74,300 |
| Stone, crushed | 3,420 | 15,800 | 3,160 | 15,700 | 3,320 | 17,400 |
| Combined values of cement (portland), copper, feldspar, garnet (industrial), gold (2002-03), lead, lime, molybdenum concentrates, perlite (crude), phosphate rock, pumice and pumicite, sand and gravel (industrial), silver, stone [dimension granite, quartz, sandstone (2002), dimension quartzite and sandstone (2003-04), zeolites (2004), zinc | XX | 197,000 | XX | 193,000 | XX | 354,000 |
| Total | XX | 271,000 | XX | 269,000 | XX | 446,000 |
| Illinois: | | | | | | |
| Cement, portland | 2,770 | 204,000 ^e | 2,930 | 210,000 ^e | 3,010 | 233,000 ^e |
| Clays: | | | | | | |
| Common | 181 | 856 | 179 | 1,010 | 247 | 1,390 |
| Fuller's earth | W | W | W | W | 218 | W |
| Gemstones | NA | 28 | NA | 28 | NA | 70 |

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|--|---------------------|----------------------|---------------------|----------------------|----------|----------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Florida—Continued: | | | | | | |
| Sand and gravel: | | | | | | |
| Construction | 32,000 | 146,000 | 34,600 | 161,000 | 38,700 | 203,000 |
| Industrial | 4,510 | 72,800 | 4,440 | 72,600 | 4,950 | 86,200 |
| Stone, crushed ⁴ | 75,200 | 431,000 | 76,000 | 453,000 | 76,500 | 465,000 |
| Combined values of lime, peat, stone (crushed sandstone), tripoli, and values indicated by symbol W | XX | 62,100 | XX | 74,000 | XX | 65,400 |
| Total | XX | 917,000 | XX | 971,000 | XX | 1,050,000 |
| Indiana: | | | | | | |
| Cement, portland | 2,940 | 197,000 ^e | 2,930 | 203,000 ^e | 3,080 | 218,000 ^e |
| Clays, common | 429 ^r | 1,240 ^r | 385 | 767 | 729 | 1,890 |
| Gemstones | NA | 4 | NA | 4 | NA | 4 |
| Sand and gravel, construction | 27,600 | 122,000 | 32,900 | 129,000 | 28,300 | 116,000 |
| Stone: | | | | | | |
| Crushed | 55,500 | 268,000 | 50,500 | 237,000 ^r | 56,800 | 253,000 |
| Dimension | 237 | 39,500 | 242 | 42,100 | 251 | 45,500 |
| Combined values of cement (masonry), clays (ball), gypsum (crude), lime, peat, sand and gravel (industrial) | XX | 104,000 | XX | 104,000 | XX | 130,000 |
| Total | XX | 733,000 ^r | XX | 716,000 ^r | XX | 764,000 |
| Iowa: | | | | | | |
| Clays, common | 256 | 763 | 256 | 763 | 325 | 1,150 |
| Gemstones | NA | 2 | NA | 2 | NA | 2 |
| Sand and gravel, construction | 14,600 | 62,300 | 13,400 | 61,000 | 17,100 | 74,300 |
| Stone, crushed | 35,900 | 194,000 | 35,600 | 207,000 | 36,800 | 215,000 |
| Combined values of cement, gypsum (crude), lime, peat, sand and gravel (industrial) | XX | 231,000 | XX | 235,000 | XX | 239,000 |
| Total | XX | 488,000 | XX | 504,000 | XX | 529,000 |
| Kansas: | | | | | | |
| Cement, portland | 2,350 | 181,000 ^e | 2,270 | 173,000 ^e | 2,690 | 212,000 ^e |
| Clays, common | 642 | 4,280 | 632 | 10,000 | 621 | 7,460 |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Helium, Grade-A million cubic meters | 78 | 181,000 | 77 | 179,000 | 82 | 189,000 |
| Salt | 2,630 | 119,000 | 2,770 | 123,000 | 2,890 | 127,000 |
| Sand and gravel, construction | 9,560 | 28,700 | 10,700 | 34,900 | 9,930 | 32,800 |
| Stone: | | | | | | |
| Crushed | 21,300 ^r | 106,000 ^r | 20,700 ^r | 111,000 | 19,800 | 109,000 |
| Dimension | 15 | 1,900 | 15 | 1,640 | 14 | 1,730 |
| Combined values of cement (masonry), clays (fuller's earth), gypsum (crude), helium (crude), pumice and pumicite, sand and gravel (industrial) | XX | 64,800 | XX | 65,100 | XX | 75,300 |
| Total | XX | 687,000 ^r | XX | 696,000 | XX | 754,000 |
| Kentucky: | | | | | | |
| Clays, common | 925 | 4,740 | 983 | 3,770 | 978 | 4,510 |
| Gemstones | NA | 64 | NA | 22 | NA | 22 |
| Sand and gravel, construction | 9,530 | 37,900 | 10,000 | 46,500 | 10,300 | 49,700 |
| Stone, crushed | 50,600 | 302,000 | 52,400 | 326,000 | 55,600 | 347,000 |
| Combined values of cement, clays (ball), lime | XX | 197,000 | XX | 220,000 | XX | 246,000 |
| Total | XX | 542,000 | XX | 597,000 | XX | 648,000 |
| Louisiana: | | | | | | |
| Clays, common | 667 | 1,680 | 670 | 1,690 | 399 | 1,000 |
| Gemstones | NA | 6 | NA | 6 | NA | 6 |
| Salt | 12,000 | 129,000 | 12,600 | 152,000 | 14,300 | 186,000 |
| Sand and gravel: | | | | | | |
| Construction | 17,900 | 96,800 | 21,200 | 105,000 | 19,400 | 103,000 |
| Industrial | 541 | 12,000 | 499 | 17,200 | 476 | 14,800 |

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|--|-----------------|------------------------|---------------------|------------------------|----------|----------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Louisiana—Continued: | | | | | | |
| Combined values of gypsum (crude), lime, stone (crushed limestone, sandstone, miscellaneous) | XX | 72,400 | XX | 91,000 | XX | 51,200 |
| Total | XX | 312,000 | XX | 367,000 | XX | 356,000 |
| Maine: | | | | | | |
| Clays, common | 49 ^e | 125 ^e | 49 ^e | 125 ^e | 49 | W |
| Gemstones | NA | 257 | NA | 262 | NA | 268 |
| Sand and gravel, construction | 9,680 | 40,400 | 10,400 | 47,600 | 10,800 | 49,100 |
| Stone, crushed | 4,010 | 23,400 | 3,530 | 22,500 | 4,370 | 29,500 |
| Combined values of cement, peat, stone (dimension granite), and values indicated by symbol W | XX | 35,400 | XX | 36,700 | XX | 39,300 |
| Total | XX | 99,700 | XX | 107,000 | XX | 118,000 |
| Maryland: | | | | | | |
| Cement, portland | 1,880 | 140,000 ^e | 2,200 | 147,000 ^e | 2,520 | 175,000 ^e |
| Clays, common | 268 | 550 | 269 | 550 | 262 | 571 |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Sand and gravel, construction | 12,200 | 83,500 | 11,800 | 79,900 | 12,700 | 75,500 |
| Stone: | | | | | | |
| Crushed ⁴ | 22,300 | 141,000 | 26,200 | 165,000 | 29,900 | 185,000 |
| Dimension | 21 | 2,120 | 24 | 2,700 | 27 | 9,580 |
| Combined values of cement (masonry), sand and gravel (industrial), stone (crushed marble, shell, traprock) | XX | 33,500 | XX | 31,700 | XX | 35,400 |
| Total | XX | 400,000 | XX | 427,000 | XX | 481,000 |
| Massachusetts: | | | | | | |
| Clays, common | 36 | 321 | 36 | 321 | 36 | (6) |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Lime | W | (6) | W | (6) | W | (6) |
| Sand and gravel, construction | 12,200 | 75,300 | 12,900 | 80,800 | 14,400 | 90,000 |
| Stone: | | | | | | |
| Crushed | 13,800 | 111,000 ^r | 13,000 | 111,000 | 13,600 | 109,000 |
| Dimension | 81 | 11,300 | 81 | 11,300 | 82 | 11,600 |
| Total | XX | 198,000 | XX | 204,000 | XX | 210,000 |
| Michigan: | | | | | | |
| Cement, masonry | 292 | 30,000 ^e | 237 | 24,300 ^e | 231 | 27,100 ^e |
| Clays, common | 499 | 884 | 588 | 3,050 | 605 | 3,070 |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Gypsum, crude | 1,020 | 10,800 | 500 | 6,130 | 452 | 5,660 |
| Peat | 131 | 3,790 | 125 | 3,460 | 122 | 3,360 |
| Sand and gravel: | | | | | | |
| Construction | 77,300 | 267,000 | 71,000 | 253,000 | 69,500 | 254,000 |
| Industrial | 2,210 | 31,000 | 2,130 | 31,400 | 1,690 | 25,200 |
| Stone, crushed ⁴ | 41,100 | 171,000 ^r | 33,600 | 123,000 ^r | 35,800 | 140,000 |
| Combined values of bromine, cement (portland), iron ore (usable), iron oxide pigments (crude), lime, magnesium compounds, potash, salt, stone (crushed marl and miscellaneous, dimension dolomite and sandstone) | XX | 962,000 | XX | 1,140,000 ^r | XX | 1,210,000 |
| Total | XX | 1,480,000 ^r | XX | 1,580,000 ^r | XX | 1,670,000 |
| Minnesota: | | | | | | |
| Clays, common | 14 | 15 | 20 | 22 | 20 | 22 |
| Gemstones | NA | 6 | NA | 6 | NA | 6 |
| Iron ore, usable | 39,600 | 1,050,000 | 34,000 ^r | 1,030,000 ^r | 41,400 | 1,560,000 |
| Lime | W | (6) | W | (6) | W | (6) |
| Peat | 64 | 5,320 | 60 | 5,070 | 63 | 5,210 |

See footnotes at end of table.

TABLE 5—Continued
 NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|--|---------------------|----------------------|----------|------------------------|----------|----------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Minnesota—Continued: | | | | | | |
| Sand and gravel: | | | | | | |
| Construction | 43,700 | 175,000 | 48,900 | 212,000 | 54,900 | 235,000 |
| Industrial | W | (6) | W | (6) | W | (6) |
| Stone: | | | | | | |
| Crushed | 9,960 | 57,600 | 9,880 | 61,800 | 10,900 | 68,300 |
| Dimension | 22 | 12,400 | 16 | 11,900 | 22 | 12,400 |
| Total | XX | 1,300,000 | XX | 1,320,000 ^r | XX | 1,890,000 |
| Mississippi: | | | | | | |
| Clays: | | | | | | |
| Common | 496 | 2,210 | 524 | 2,050 | 610 | 2,700 |
| Fuller's earth | 411 | 29,900 | 534 | 42,700 | 381 | 35,200 |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Sand and gravel, construction | 13,600 | 73,200 | 14,600 | 82,600 | 14,100 | 80,700 |
| Stone, crushed | 2,620 | 27,900 | 2,850 | 33,900 | 2,760 | 34,200 |
| Combined values of cement (portland), clays (ball, bentonite), sand and gravel (industrial) | XX | 44,600 | XX | 31,400 | XX | 41,500 |
| Total | XX | 178,000 | XX | 193,000 | XX | 194,000 |
| Missouri: | | | | | | |
| Cement, portland | 4,820 | 333,000 ^e | 5,180 | 352,000 ^e | 5,260 | 388,000 ^e |
| Clays: | | | | | | |
| Common | 1,050 | 3,930 | 970 | 3,660 | 911 | 3,290 |
| Fire | 340 | 7,360 | 307 | 7,230 | W | W |
| Sand and gravel: | | | | | | |
| Construction | 10,000 | 42,300 | 10,600 | 49,400 | 12,200 | 60,000 |
| Industrial | W | W | 586 | 12,800 | 589 | 14,200 |
| Stone, crushed | 73,200 ^r | 376,000 ^r | 71,500 | 426,000 | 69,100 | 415,000 |
| Combined values of cement (masonry), clays (fuller's earth), copper, gemstones (natural), lead, lime, silver, stone (dimension granite), zinc, and values indicated by symbol W | XX | 494,000 | XX | 488,000 | XX | 593,000 |
| Total | XX | 1,260,000 | XX | 1,340,000 | XX | 1,470,000 |
| Montana: | | | | | | |
| Clays, bentonite | 181 | 14,900 | 181 | 14,900 | 102 | 8,400 |
| Gemstones | NA | 424 | NA | 707 | NA | 653 |
| Palladium ⁴ kilograms | 14,800 | 162,000 | 14,000 | 91,400 | 13,700 | 102,000 |
| Platinum ⁴ do. | 4,390 | 76,500 | 4,170 | 93,100 | 4,040 | 110,000 |
| Sand and gravel, construction | 16,700 | 76,000 | 15,200 | 74,200 | 14,400 | 80,000 |
| Stone: | | | | | | |
| Crushed | 2,370 | 10,000 | 3,060 | 12,200 | 4,090 | 17,500 |
| Dimension | 12 | 2,620 | 14 | 2,590 | 14 | 2,550 |
| Combined values of cement [masonry (2002-03), portland], clays (common), copper (2003-04), garnet [industrial (2002)], gold, lead, lime, molybdenum concentrates (2003-04), peat, silver, talc (crude), zinc | XX | 129,000 | XX | 205,000 | XX | 303,000 |
| Total | XX | 471,000 | XX | 494,000 | XX | 624,000 |
| Nebraska: | | | | | | |
| Cement: | | | | | | |
| Masonry | W | (6) | W | (6) | W | (6) |
| Portland | W | (6) | W | (6) | W | (6) |
| Clays, commone | 133 | 338 | 133 | 338 | 133 | 338 |
| Gemstones | NA | 4 | NA | 4 | NA | 4 |
| Lime | 8 | 692 | 8 | 692 | 11 | 514 |

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|---|--------------------|----------------------|--------------------|----------------------|----------|-----------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Nebraska—Continued: | | | | | | |
| Sand and gravel: | | | | | | |
| Construction | 12,900 | 44,200 | 13,300 | 45,000 | 15,100 | 53,200 |
| Industrial | W | (6) | W | (6) | W | (6) |
| Stone, crushed | 7,220 | 53,200 | 6,960 | 49,200 | 6,900 | 51,900 |
| Total | XX | 98,400 | XX | 95,300 | XX | 106,000 |
| Nevada: | | | | | | |
| Clays: | | | | | | |
| Bentonite | 6 | W | 6 | 817 | 7 | W |
| Fuller's earth | 28 | 3,870 | 28 | 3,870 | W | W |
| Gold ⁴ kilograms | 240,000 | 2,410,000 | 227,000 | 2,660,000 | 216,000 | 2,850,000 |
| Sand and gravel: | | | | | | |
| Construction | 35,400 | 159,000 | 37,100 | 174,000 | 43,100 | 197,000 |
| Industrial | 615 | 11,000 | W | W | W | W |
| Silver ⁴ kilograms | 424,000 | 63,000 | 322,000 | 50,900 | 302,000 | 65,000 |
| Stone, crushed | 8,010 | 41,900 | 7,830 | 48,500 | 9,760 | 72,800 |
| Combined values of barite, brucite, cement (portland), clays (kaolin), copper (2004), diatomite, gemstones, gypsum (crude), lead (2002), lime, lithium carbonate, magnesite, perlite (crude), salt, zeolites (2004), and values indicated by symbol W | XX | 228,000 | XX | 252,000 | XX | 286,000 |
| Total | XX | 2,910,000 | XX | 3,190,000 | XX | 3,470,000 |
| New Hampshire: | | | | | | |
| Gemstones | NA | 6 | NA | 6 | NA | 6 |
| Sand and gravel, construction | 8,640 | 41,600 | 8,470 | 41,200 | 8,940 | 46,600 |
| Stone: | | | | | | |
| Crushed | 4,810 ^r | 24,500 ^r | 4,110 | 21,400 | 4,750 | 24,000 |
| Dimension, granite | W | (6) | W | (6) | W | (6) |
| Total | XX | 66,100 ^r | XX | 62,500 | XX | 70,600 |
| New Jersey: | | | | | | |
| Clays, common | W | W | W | W | W | 122 |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Sand and gravel: | | | | | | |
| Construction | 16,000 | 96,300 | 18,200 | 105,000 | 20,100 | 120,000 |
| Industrial | 1,420 | 32,700 | 1,570 | 32,700 | 2,020 | 35,800 |
| Stone, crushed | 20,500 | 118,000 ^r | 24,800 | 179,000 ^r | 25,500 | 186,000 |
| Combined values of greensand marl, peat, and values indicated by symbol W | XX | 3,910 | XX | 4,190 | XX | (6) |
| Total | XX | 251,000 ^r | XX | 321,000 ^r | XX | 341,000 |
| New Mexico: | | | | | | |
| Clays, common | 33 | 175 | 36 | 209 | 34 | 177 |
| Copper ³ | 112 | 187,000 | 88 | 165,000 | 122 | 362,000 |
| Gemstones | NA | 19 | NA | 20 | NA | 20 |
| Sand and gravel, construction | 12,800 | 62,600 | 13,300 | 65,300 | 13,600 | 89,500 |
| Silver kilograms | -- | -- | -- | -- | 3,570 | 767 |
| Stone: | | | | | | |
| Crushed | 3,680 | 23,300 | 3,730 ^r | 26,000 ^r | 3,430 | 24,400 |
| Dimension | 20 | 1,370 | 57 | 2,590 | 57 | 2,430 |
| Combined values of cement, gold (2004), gypsum (crude), helium (Grade-A), iron ore [usable (2002)], lime, mica [crude (2003-04)], molybdenum concentrates, perlite (crude), potash, pumice and pumicite, salt, zeolites (2004) | XX | 282,000 ^r | XX | 310,000 | XX | 387,000 |
| Total | XX | 557,000 ^r | XX | 569,000 | XX | 866,000 |
| New York: | | | | | | |
| Clays, common | 641 | 7,990 | 644 | 8,050 | 756 | 10,900 |

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|--|---------------------|----------------------|----------|----------------------|----------|---------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| New York—Continued: | | | | | | |
| Gemstones | NA | 65 | NA | 65 | NA | 74 |
| Salt | 4,610 | 185,000 | 5,230 | 225,000 | 6,430 | 301,000 |
| Sand and gravel, construction | 29,800 | 158,000 | 30,200 | 172,000 | 33,100 | 189,000 |
| Stone: | | | | | | |
| Crushed | 56,500 | 391,000 | 53,700 | 352,000 | 52,700 | 349,000 |
| Dimension | 46 | 5,990 | 65 | 6,110 | 44 | 4,560 |
| Combined values of cement, garnet (industrial), peat, sand and gravel (industrial), talc (crude), wollastonite | XX | 243,000 | XX | 235,000 | XX | 256,000 |
| Total | XX | 991,000 | XX | 998,000 | XX | 1,110,000 |
| North Carolina: | | | | | | |
| Clays: | | | | | | |
| Common | 2,420 | 11,900 | 2,190 | 10,900 | 2,260 | 12,900 |
| Kaolin | W | W | W | 4,500 | 34 | 764 |
| Feldspar | 330 ^r | 17,100 | 362 | 18,900 | 351 | 20,500 |
| Gemstones | NA | 280 | NA | 279 | NA | 280 |
| Mica, crude | 40 ^r | 3,100 | 39 | 9,580 | 40 | 9,600 |
| Sand and gravel: | | | | | | |
| Construction | 10,000 | 50,700 | 10,500 | 55,600 | 11,500 | 59,700 |
| Industrial | 1,320 | 25,600 | 1,530 | 26,700 | 1,630 | 29,000 |
| Stone: | | | | | | |
| Crushed | 62,900 | 451,000 | 67,100 | 505,000 ^r | 72,300 | 548,000 |
| Dimension | 41 | 17,900 | 47 | 18,700 | 43 | 18,200 |
| Combined values of olivine, phosphate rock, pyrophyllite (crude), and value indicated by symbol W | XX | 111,000 | XX | 84,500 | XX | 105,000 |
| Total | XX | 689,000 | XX | 734,000 ^r | XX | 805,000 |
| North Dakota: | | | | | | |
| Clays, common | 57 | W | W | W | W | 186 |
| Gemstones | NA | 4 | NA | 4 | NA | 4 |
| Sand and gravel, construction | 10,700 | 27,900 | 13,500 | 35,900 | 11,700 | 32,800 |
| Combined values of lime, sand and gravel (industrial), stone [crushed granite, limestone, volcanic cinder, and miscellaneous (2002), crushed limestone, volcanic cinder, miscellaneous (2003), crushed granite, scoria, traprock, volcanic cinder, miscellaneous (2004)], and values indicated by symbol W | XX | 8,540 | XX | 10,600 | XX | 11,500 |
| Total | XX | 36,500 | XX | 46,500 | XX | 44,500 |
| Ohio: | | | | | | |
| Cement: | | | | | | |
| Portland | 1,020 | 78,000 ^e | 1,030 | 82,200 ^e | 98 | 13,000 ^e |
| Masonry | W | W | W | W | 1,020 | 85,700 ^e |
| Clays: | | | | | | |
| Common | 1,310 | 7,820 | 1,440 | 7,430 | 1,360 | 7,480 |
| Fire | W | W | W | W | 42 | W |
| Gemstones | NA | 4 | NA | 4 | NA | 4 |
| Lime | 1,630 | 98,100 | 1,880 | 114,000 | 1,880 | 127,000 |
| Sand and gravel: | | | | | | |
| Construction | 48,700 | 250,000 | 47,300 | 242,000 | 50,800 | 263,000 |
| Industrial | 1,000 | 28,900 | 1,120 | 32,100 | 1,180 | 34,200 |
| Stone: | | | | | | |
| Crushed | 72,000 ^r | 326,000 ^r | 70,500 | 339,000 | 76,400 | 385,000 |
| Dimension | 30 | 4,990 | 30 | 5,090 | 38 | 5,100 |
| Combined values of gypsum [crude (2002)], peat, salt, and values indicated by symbol W | XX | 176,000 | XX | 188,000 | XX | 197,000 |
| Total | XX | 970,000 ^r | XX | 1,010,000 | XX | 1,120,000 |

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|--|----------|----------------------|----------------------|----------------------|----------|----------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Oklahoma: | | | | | | |
| Clays, common | 1,030 | 2,250 | 1,160 | 2,390 | 1,150 | 2,410 |
| Gemstones | NA | 197 | NA | 197 | NA | 4 |
| Gypsum, crude | 2,520 | 18,500 | 2,250 | 14,100 | 3,250 | 20,800 |
| Iodine, crude metric tons | 1,420 | 21,600 | 1,090 | 15,900 | 1,130 | 15,900 |
| Sand and gravel: | | | | | | |
| Construction | 10,200 | 41,300 | 11,000 | 48,500 | 12,000 | 53,700 |
| Industrial | 1,320 | 28,400 | 1,360 | 29,700 | 1,390 | 31,600 |
| Stone: | | | | | | |
| Crushed | 45,000 | 196,000 | 40,100 ^r | 193,000 | 40,200 | 195,000 |
| Dimension | 17 | 2,100 | 17 | 2,100 | 17 | 2,100 |
| Tripoli metric tons | 12,700 | 2,290 | 10,600 | 1,960 | 32,100 | 2,120 |
| Combined values of cement, feldspar, helium [crude (2002), Grade-A], lime, salt | | | | | | |
| Total | XX | 160,000 | XX | 163,000 | XX | 183,000 |
| Total | XX | 473,000 | XX | 470,000 | XX | 507,000 |
| Oregon: | | | | | | |
| Clays: | | | | | | |
| Bentonite | W | W | W | W | 10 | W |
| Common | 237 | 662 | W | W | W | W |
| Gemstones | NA | 1,340 | NA | 1,200 | NA | 1,210 |
| Sand and gravel, construction | 19,500 | 116,000 | 18,500 | 110,000 | 21,000 | 125,000 |
| Stone, crushed | 19,800 | 101,000 | 21,800 | 117,000 | 22,800 | 126,000 |
| Zeolites metric tons | W | NA | W | NA | -- | -- |
| Combined value of cement (portland), diatomite, emery (2002), lime, perlite (crude), pumice and pumicite, talc (crude), and values indicated by symbol W | | | | | | |
| Total | XX | 101,000 | XX | 92,700 | XX | 114,000 |
| Total | XX | 320,000 | XX | 320,000 | XX | 367,000 |
| Pennsylvania: | | | | | | |
| Cement: | | | | | | |
| Masonry | 341 | 38,000 ^e | 342 | 35,900 ^e | W | W |
| Portland | 6,130 | 456,000 ^e | 5,720 | 421,000 ^e | 6,230 | 473,000 ^e |
| Clays, common | 779 | 2,560 | 750 | 2,240 | 822 | 3,270 |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Lime | 1,230 | 87,600 | 1,190 | 90,100 | 1,220 | 100,000 |
| Peat | 3 | 132 | 8 | 219 | 11 | 307 |
| Sand and gravel, construction | 18,100 | 115,000 | 18,400 | 115,000 | 20,000 | 127,000 |
| Stone: | | | | | | |
| Crushed | 102,000 | 578,000 ^r | 104,000 ^r | 597,000 | 112,000 | 635,000 |
| Dimension | 37 | 11,900 | 32 | 10,400 | 33 | 10,100 |
| Combined values of sand and gravel (industrial), tripoli, and value indicated by symbol W | | | | | | |
| Total | XX | (6) | XX | (6) | XX | 55,800 |
| Total | XX | 1,290,000 | XX | 1,270,000 | XX | 1,400,000 |
| Rhode Island: | | | | | | |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Sand and gravel: | | | | | | |
| Construction | 1,760 | 14,100 | 2,450 | 21,000 | 2,490 | 22,000 |
| Industrial | 157 | (6) | W | (6) | W | (6) |
| Stone, crushed | 1,780 | 11,400 | 1,340 | 10,700 | 1,600 | 12,400 |
| Total | XX | 25,500 | XX | 31,700 | XX | 34,400 |
| South Carolina: | | | | | | |
| Cement: | | | | | | |
| Masonry | 426 | 41,000 ^e | 425 | 43,700 ^e | 453 | 49,900 ^e |
| Portland | 2,510 | 176,000 ^e | 3,150 | 194,000 ^e | 3,110 | 196,000 ^e |

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|---|----------------------|----------------------|-----------------|----------------------|----------|----------------------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| South Carolina—Continued: | | | | | | |
| Clays: | | | | | | |
| Common | 1,020 | 3,360 | 1,060 | 2,660 | 1,050 | 3,350 |
| Fire | 53 | 739 | W | W | 1 | 64 |
| Kaolin | 374 | 21,400 | 355 | 21,700 | 296 | 19,600 |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Sand and gravel: | | | | | | |
| Construction | 10,300 | 35,500 | 10,100 | 34,700 | 9,960 | 35,100 |
| Industrial | 831 | 16,400 | 655 | 16,700 | 719 | 17,600 |
| Stone: | | | | | | |
| Crushed | 25,700 | 165,000 | 27,300 | 184,000 | 31,300 | 210,000 |
| Dimension | 9 | 850 | 9 | 850 | 9 | 850 |
| Combined values of mica (crude), vermiculite (crude), and value indicated by symbol W | XX | (6) | XX | 10,100 | XX | (6) |
| Total | XX | 460,000 | XX | 508,000 | XX | 532,000 |
| South Dakota: | | | | | | |
| Clays, common | | | | | | |
| | 208 | W | 213 | W | 188 | W |
| Sand and gravel, construction | | | | | | |
| | 11,900 | 47,500 | 11,800 | 44,800 | 14,000 | 51,700 |
| Stone, crushed | | | | | | |
| | 6,780 | 33,600 | 6,880 | 24,700 | 5,370 | 27,000 |
| Combined values of cement (portland), feldspar, gemstones, gold, gypsum (crude), iron ore [usable (2002)], lime, mica (crude), silver (2002), stone (dimension granite), and values indicated by symbol W | | | | | | |
| | XX | 135,000 | XX | 130,000 | XX | 131,000 |
| Total | XX | 216,000 | XX | 199,000 | XX | 210,000 |
| Tennessee: | | | | | | |
| Clays: | | | | | | |
| Ball | 660 | 28,100 | 766 | 33,400 | 762 | 34,300 |
| Common | 262 | 1,540 | 304 | 585 | 365 | 3,140 |
| Fuller's earth | W | W | 92 ^e | 5,000 ^e | W | W |
| Sand and gravel: | | | | | | |
| Construction | 9,220 | 51,900 | 7,550 | 44,100 | 7,830 | 47,500 |
| Industrial | 1,070 | 25,700 | 961 | 21,800 | 975 | 26,100 |
| Stone, crushed | 54,900 | 330,000 | 55,100 | 354,000 | 57,900 | 382,000 |
| Combined values of cement, clays [kaolin (2002, 2004)], gemstones, lime, salt, stone (dimension marble), zinc, and values indicated by symbol W | | | | | | |
| | XX | 212,000 | XX | 164,000 | XX | 160,000 |
| Total | XX | 648,000 | XX | 623,000 | XX | 653,000 |
| Texas: | | | | | | |
| Cement: | | | | | | |
| Masonry | 294 | 36,000 ^e | 307 | 36,100 ^e | 319 | 38,000 ^e |
| Portland | 10,500 | 740,000 ^e | 11,100 | 747,000 ^e | 11,200 | 800,000 ^e |
| Clays: | | | | | | |
| Common | 2,160 | 21,200 | 2,110 | 8,890 | 2,160 | 8,890 |
| Fuller's earth | W | W | 27 | 2,400 | W | W |
| Kaolin | 39 | 8,420 | 33 | 7,150 | W | W |
| Gemstones | NA | 12 | NA | 201 | NA | 201 |
| Gypsum, crude | 2,060 | 13,400 | 1,810 | 12,300 | 2,450 | 18,800 |
| Lime | 1,530 | 98,400 | 1,630 | 110,000 | 1,630 | 115,000 |
| Salt | 9,100 | 103,000 | 9,640 | 116,000 | 9,870 | 118,000 |
| Sand and gravel: | | | | | | |
| Construction | 82,600 | 413,000 | 86,200 | 425,000 | 81,700 | 436,000 |
| Industrial | 1,670 | 62,200 | 1,930 | 81,700 | 2,790 | 109,000 |
| Stone: | | | | | | |
| Crushed | 109,000 ^r | 528,000 ^r | 126,000 | 595,000 | 122,000 | 582,000 |
| Dimension | 65 | 12,200 | 87 | 16,400 | 64 | 15,200 |

See footnotes at end of table.

TABLE 5—Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|---|----------|------------------------|----------|-----------|----------|-----------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Texas—Continued: | | | | | | |
| Talc, crude | W | W | 246 | W | 258 | W |
| Combined values of brucite, clays (ball, bentonite), helium, zeolites (2004), and values indicated by symbol W | XX | 40,900 | XX | 33,300 | XX | 46,300 |
| Total | XX | 2,080,000 ^r | XX | 2,190,000 | XX | 2,290,000 |
| Utah: | | | | | | |
| Beryllium concentrates | | metric tons | 1,970 | NA | 2,100 | NA |
| Clays: | | | | | | |
| Bentonite | W | W | W | W | 73 | W |
| Common | 349 | 5,010 | 300 | 3,270 | 443 | 5,600 |
| Gemstones | NA | 230 | NA | 233 | NA | 235 |
| Salt | 2,090 | 113,000 | 2,200 | 119,000 | 2,250 | 107,000 |
| Sand and gravel, construction | 27,600 | 104,000 | 27,400 | 113,000 | 29,800 | 125,000 |
| Stone, crushed | 7,640 | 38,100 | 7,820 | 40,100 | 8,020 | 44,900 |
| Combined values of cement (portland), copper, gold, gypsum (crude), helium (Grade-A), lime, magnesium compounds, magnesium metal, molybdenum concentrates, perlite (crude), phosphate rock, potash, silver, stone (dimension sandstone), and values indicated by symbol W | XX | 980,000 | XX | 1,080,000 | XX | 1,660,000 |
| Total | XX | 1,240,000 | XX | 1,360,000 | XX | 1,940,000 |
| Vermont: | | | | | | |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Sand and gravel, construction | 4,990 | 22,200 | 4,520 | 21,100 | 4,970 | 24,000 |
| Stone: | | | | | | |
| Crushed | 4,360 | 21,300 | 4,290 | 23,900 | 5,110 | 30,800 |
| Dimension | 101 | 27,000 | 102 | 26,700 | 100 | 30,600 |
| Talc, crude | W | (6) | W | (6) | W | (6) |
| Total | XX | 70,600 | XX | 71,800 | XX | 85,400 |
| Virginia: | | | | | | |
| Clays: | | | | | | |
| Bentonite | -- | -- | -- | -- | 5 | W |
| Common | 827 | 3,320 | 958 | 2,530 | 994 | 4,640 |
| Kyanite ^e | 90 | 13,400 | 90 | 13,400 | 90 | 13,400 |
| Sand and gravel, construction | 10,500 | 60,000 | 11,300 | 65,500 | 12,800 | 75,800 |
| Stone: | | | | | | |
| Crushed | 58,900 | 395,000 | 66,500 | 481,000 | 72,500 | 546,000 |
| Dimension | 6 | 651 | 6 | 651 | 5 | 594 |
| Combined values of cement, clays (fuller's earth), feldspar, gemstones, iron oxide pigments (crude), lime, sand and gravel (industrial), talc (crude), titanium concentrates (ilmenite), vermiculite (crude), zirconium concentrates, and value indicated by symbol W | XX | 218,000 | XX | 223,000 | XX | 253,000 |
| Total | XX | 690,000 | XX | 786,000 | XX | 894,000 |
| Washington: | | | | | | |
| Clays, common | 89 | 169 | 83 | 204 | W | W |
| Gemstones | NA | 29 | NA | 44 | NA | 44 |
| Gold ⁴ | 980 | 9,810 | -- | -- | W | W |
| Sand and gravel, construction | 43,200 | 223,000 | 40,700 | 216,000 | 41,500 | 227,000 |
| Silver ⁴ | 729 | 108 | -- | -- | W | W |
| Stone, crushed | 13,700 | 79,900 | 12,000 | 73,700 | 12,300 | 76,100 |
| Combined values of cement (portland), diatomite, lead (2004), lime, olivine, peat, sand and gravel (industrial), stone [dimension miscellaneous (2004)], zinc (2004), and values indicated by symbol W | XX | 124,000 | XX | 107,000 | XX | 205,000 |
| Total | XX | 437,000 | XX | 396,000 | XX | 507,000 |

See footnotes at end of table.

TABLE 5—Continued
 NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral | 2002 | | 2003 | | 2004 | |
|--|--------------------|------------------------|----------|---------------------|----------|-----------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| West Virginia: | | | | | | |
| Clays, common | 151 | 407 | 142 | 376 | 161 | 441 |
| Gemstones | NA | 1 | NA | 1 | NA | 1 |
| Sand and gravel: | | | | | | |
| Construction | 1,700 | 8,450 | 971 | 4,750 | 524 | 2,500 |
| Industrial | W | W | W | W | 343 | 17,300 |
| Stone, crushed | 14,400 | 63,400 | 14,100 | 69,100 [†] | 14,700 | 73,100 |
| Combined values of cement, lime, peat, salt, stone (dimension sandstone), and values indicated by symbol W | | | | | | |
| | XX | 94,900 | XX | 90,100 | XX | 73,500 |
| Total | XX | 167,000 | XX | 164,000 | XX | 167,000 |
| Wisconsin: | | | | | | |
| Cement, portland | W | (6) | W | (6) | W | (6) |
| Gemstones | NA | 6 | NA | 6 | NA | 6 |
| Lime | 603 | 35,600 | 757 | 46,000 | 850 | 53,900 |
| Peat | W | (6) | W | (6) | W | (6) |
| Sand and gravel: | | | | | | |
| Construction | 39,000 | 154,000 | 38,500 | 150,000 | 43,400 | 178,000 |
| Industrial | 1,740 | 32,700 | 1,930 | 40,200 | 2,140 | 47,000 |
| Stone: | | | | | | |
| Crushed | 36,200 | 151,000 | 35,900 | 160,000 | 38,600 | 167,000 |
| Dimension | 100 | 19,300 | 101 | 19,700 | 232 | 23,800 |
| Total | XX | 392,000 | XX | 417,000 | XX | 470,000 |
| Wyoming: | | | | | | |
| Clays: | | | | | | |
| Bentonite | 3,340 | 145,000 | 3,420 | 148,000 | 3,510 | 151,000 |
| Common | 33 | 446 | 25 | 55 | 49 | 107 |
| Gemstones | NA | 12 | NA | 13 | NA | 13 |
| Sand and gravel, construction | 7,710 | 32,100 | 8,290 | 36,400 | 10,200 | 40,100 |
| Stone, crushed | 4,450 [†] | 20,500 [†] | 5,020 | 22,600 | 7,150 | 34,500 |
| Combined values of cement (portland), gypsum (crude), helium (Grade-A), lime, soda ash, zeolites (2004) | | | | | | |
| | XX | 806,000 | XX | 792,000 | XX | 819,000 |
| Total | XX | 1,000,000 [†] | XX | 999,000 | XX | 1,040,000 |
| Undistributed: | | | | | | |
| Connecticut, Delaware, Hawaii (2002-03), Massachusetts, Minnesota, Nebraska, New Hampshire, Pennsylvania (2002-03), Rhode Island, South Carolina (2002, 2004), Vermont, Wisconsin, undistributed | | | | | | |
| | XX | 202,000 | XX | 220,000 | XX | 197,000 |

⁶Estimated. [†]Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; included in "Combined values" data for each State. XX Not applicable. -- Zero.

¹Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

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

³Recoverable content of ores, etc.

⁴Excludes certain stones; kind and value included in "Combined value."

⁵Grindstones, pulpstones, and sharpening stones; excludes mill liners and grinding pebbles.

⁶Withheld to avoid disclosing company proprietary data; values included in "Undistributed."

TABLE 6
NONFUEL RAW MINERAL PRODUCTION IN THE COMMONWEALTH OF PUERTO RICO AND ISLANDS
ADMINISTERED BY THE UNITED STATES^{1, 2}

(Thousand metric tons and thousand dollars)

| Mineral | 2002 | | 2003 | | 2004 | |
|--|------------------|---------|----------|---------|----------|---------|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Puerto Rico: | | | | | | |
| Cement, portland | 1,530 | W | 1,490 | W | 1,580 | W |
| Clays, common | 114 ^r | 585 | 114 | 585 | 114 | 585 |
| Lime | W | W | W | W | 11 | 2,250 |
| Salt | 45 | 1,500 | 45 | 1,500 | 45 | 1,500 |
| Stone, crushed | 7,940 | 40,600 | 9,130 | 60,000 | 8,660 | 57,600 |
| Combined values of sand and gravel (industrial), stone (dimension marble), and values indicated by symbol W | XX | 144,000 | XX | 119,000 | XX | 125,000 |
| Total | XX | 187,000 | XX | 181,000 | XX | 187,000 |
| Administered Islands: | | | | | | |
| American Samoa, stone (crushed traprock) | (3) | (3) | (3) | (3) | (3) | (3) |
| Guam, stone, crushed | 846 | 8,370 | 728 | 7,670 | 1,410 | 13,000 |
| Virgin Islands, stone (crushed limestone and traprock) | (3) | (3) | (3) | (3) | (3) | (3) |
| Total | XX | 8,370 | XX | 7,670 | XX | 13,000 |

^eEstimated. NA Not available. W Withheld to avoid disclosing company proprietary data; included in "Combined values" data.

XX Not applicable.

¹Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

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

³Withheld to avoid disclosing company proprietary data.

TABLE 7
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|--|-------------|-----------|-----------|-----------|-----------|
| | Quantity | Value | Quantity | Value | |
| Metals: | | | | | |
| Aluminum: | | | | | |
| Crude and semicrude | metric tons | 1,540,000 | 3,220,000 | 1,820,000 | 4,130,000 |
| Manufactures | do. | 115,000 | 365,000 | 129,000 | 437,000 |
| Antimony: | | | | | |
| Metal, alloys, waste and scrap | do. | 771 | 3,010 | 566 | 2,280 |
| Oxide, antimony content | do. | 2,910 | 11,600 | 3,240 | 13,200 |
| Arsenic metal, arsenic content | do. | 173 | 15,200 | 220 | 20,700 |
| Bauxite and alumina: | | | | | |
| Alumina, calcined equivalent | | 1,090 | 368,000 | 1,230 | 439,000 |
| Bauxite: | | | | | |
| Calcined, refractory and other grade | | 22 | 3,420 | 21 | 2,950 |
| Crude and dried | | 55 | 8,270 | 42 | 7,910 |
| Speciality aluminum compounds, sulfate, chloride, fluoride-based | metric tons | 36,200 | 27,200 | 28,100 | 21,300 |
| Beryllium, unwrought, and waste and scrap, other including articles not elsewhere specified | kilograms | 269,000 | 18,800 | 217,000 | 19,600 |
| Bismuth, metal, alloys, waste and scrap, bismuth content | do. | 108,000 | 3,130 | 109,000 | 2,500 |
| Cadmium: | | | | | |
| Metal, includes cadmium in alloys and scrap | do. | 558,000 | 1,060 | 132,000 | 861 |
| Sulfide, gross weight | do. | 184,000 | 97 | 160,000 | 76 |
| Chromium: | | | | | |
| Ores and concentrate | do. | 103,000 | 7,410 | 43,100 | 10,400 |
| Metals and alloys: | | | | | |
| Metal, unwrought powders, waste and scrap, other | do. | 941 | 11,900 | 931 | 17,600 |
| Ferroalloys, high-carbon, low-carbon, ferrochromium-silicon | do. | 4,890 | 5,240 | 9,140 | 12,000 |
| Chemicals: | | | | | |
| Oxides, trioxides and other | do. | 10,100 | 20,600 | 12,900 | 22,200 |
| Sulfates | do. | 5 | 62 | 39 | 417 |
| Salts of oxometallic or peroxometallic acids, zinc and lead chromate, sodium dichromate, potassium dichromate, other | do. | 12,200 | 8,590 | 21,800 | 14,400 |
| Pigments and preparations | do. | 867 | 4,610 | 671 | 3,780 |
| Cobalt: | | | | | |
| Acetates and chlorides | do. | 616 | 3,370 | 666 | 5,490 |
| Oxides and hydroxides | do. | 375 | 6,110 | 324 | 13,800 |
| Metal: | | | | | |
| Unwrought, powders, waste and scrap, mattes, other intermediate products of metallurgy | do. | 2,290 | 48,600 | 2,110 | 79,400 |
| Wrought and cobalt articles | do. | 1,010 | 31,300 | 1,150 | 48,400 |
| Columbium (niobium) and tantalum: | | | | | |
| Columbium: | | | | | |
| Ores and concentrates | do. | 170 | 1,270 | 16 | 108 |
| Ferrocolumbium | do. | 143 | 1,430 | 294 | 2,920 |
| Tantalum: | | | | | |
| Ores and concentrates, includes synthetic | do. | 365 | 4,360 | 723 | 19,300 |
| Unwrought, waste and scrap, powders, alloys, metal | do. | 348 | 163,000 | 598 | 173,000 |
| Wrought | do. | 119 | 62,200 | 162 | 83,400 |
| Copper: | | | | | |
| Unmanufactured, does not include unalloyed scrap, copper content | do. | 145,000 | 265,000 | 211,000 | 429,000 |
| Semimanufactures | do. | 189,000 | 537,000 | 236,000 | 863,000 |
| Scrap, alloyed and unalloyed | do. | 689,000 | 664,000 | 714,000 | 882,000 |
| Ferroalloys not listed elsewhere: | | | | | |
| Ferrophosphorous | do. | 787 | 511 | 388 | 335 |
| Other | do. | 1,350 | 2,470 | 1,620 | 2,670 |

See footnotes at end of table.

TABLE 7—Continued
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|--|-------------|---------------------|------------------------|-----------|-----------|
| | Quantity | Value | Quantity | Value | |
| Metals—Continued: | | | | | |
| Gold: | | | | | |
| Ores and concentrates | kilograms | 826 | 7,870 | 1,150 | 10,200 |
| Dore and precipitates | do. | 131,000 | 1,550,000 | 142,000 | 1,860,000 |
| Bullion, refined | do. | 220,000 | 2,500,000 | 114,000 | 1,500,000 |
| Waste and scrap | do. | 159,000 | 559,000 | 726,000 | 815,000 |
| Metal powder | do. | 874 | 9,590 | 647 | 8,670 |
| Compounds | do. | 565,000 | 10,600 | 1,170,000 | 29,000 |
| Indium ^e | metric tons | 10 | 1,740 | NA | NA |
| Iron and steel: | | | | | |
| Steel mill products | | 7,460 | 5,490,000 | 7,200 | 9,280,000 |
| Fabricated steel products | | 963 | 3,170,000 | 1,410 | 4,340,000 |
| Cast iron and steel products | | 206 | 374,000 | 234 | 661,000 |
| Iron and steel scrap: | | | | | |
| Ferrous, includes tinplate and ternplate, excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping | | 10,800 ^r | 1,940,000 ^r | 11,800 | 2,910,000 |
| Pig iron, all grades | | 86 ^r | 8,850 ^r | 48 | 6,690 |
| Direct-reduced iron, steelmaking grade | | 5 ^r | 525 ^r | 13 | 1,360 |
| Ships, boats, and other vessels for scrapping | | 48 | 2,580 | 16 | 2,680 |
| Used rails for rerolling and other uses, includes mixed (used plus new) rails | | 49 | 16,100 | 42 | 18,100 |
| Iron ore | | 6,770 | 248,000 | 8,400 | 334,000 |
| Lead: | | | | | |
| Ore and concentrates, Pb content | metric tons | 253,000 | 97,700 | 292,000 | 157,000 |
| Base bullion, Pb content | do. | 593 | 885 | 129 | 841 |
| Unwrought and alloys, Pb content | do. | 92,100 | 58,500 | 58,600 | 50,100 |
| Wrought and alloys, Pb content | do. | 30,500 | 34,500 | 23,800 | 42,300 |
| Scrap, gross weight | do. | 92,800 | 23,300 | 56,300 | 14,800 |
| Magnesium: | | | | | |
| Waste and scrap, Mg content | do. | 5,030 | 11,800 | 4,790 | 11,300 |
| Metal, Mg content | do. | 8,770 | 15,700 | 1,760 | 3,830 |
| Alloys, gross weight | do. | 2,330 | 8,330 | 1,750 | 7,780 |
| Powder, sheets, tubing, ribbons, wire, other forms, gross weight | do. | 4,260 | 28,300 | 3,530 | 25,800 |
| Manganese, gross weight: | | | | | |
| Ores and concentrates with 20% or more manganese | do. | 18,200 | 3,580 | 123,000 | 12,400 |
| Ferromanganese, all grades | do. | 10,600 | 8,840 | 9,120 | 10,600 |
| Silicomanganese | do. | 606 | 554 | 502 | 632 |
| Metal, including alloys and waste and scrap | do. | 2,340 | 4,790 | 2,790 | 6,090 |
| Dioxide | do. | 4,470 | 4,590 | 4,000 | 3,680 |
| Mercury: | | | | | |
| Metal | do. | 287 | 1,690 | 278 | 2,310 |
| Amalgams of precious metals whether or not chemically defined | do. | 1,660 | 119,000 | 603 | 155,000 |
| Molybdenum: | | | | | |
| Ore and concentrates, including roasted and other, Mo content | do. | 29,500 | 195,000 | 46,200 | 358,000 |
| Chemicals: | | | | | |
| Oxides and hydroxides, gross weight | do. | 2,580 | 20,000 | 5,280 | 80,300 |
| Molybdates, all, gross weight | do. | 2,270 | 16,700 | 2,680 | 28,500 |
| Ferromolybdenum, Mo content | do. | 617 | 8,660 | 925 | 21,200 |
| Other, includes powders, unwrought, bars and rods, waste and scrap, wire, other, gross weight | do. | 1,060 | 28,400 | 1,520 | 66,000 |
| Nickel, Ni content: | | | | | |
| Primary, unwrought and chemicals | do. | 6,330 | 132,000 | 8,000 | 186,000 |
| Secondary, stainless steel scrap and waste and scrap | do. | 47,300 | 424,000 | 48,300 | 609,000 |
| Wrought, not alloyed, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes | do. | 2,890 | 34,400 | 1,120 | 16,400 |
| Alloyed, unwrought ingot, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes, other alloyed articles, gross weight | do. | 25,900 | 427,000 | 29,700 | 566,000 |

See footnotes at end of table.

TABLE 7—Continued
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|--|-------------|------------------------|----------------------|--------------------|-----------|
| | Quantity | Value | Quantity | Value | |
| Metals—Continued: | | | | | |
| Platinum-group metals: | | | | | |
| Palladium, Pd content | kilograms | 22,300 | 110,000 | 31,400 | 142,000 |
| Platinum, includes waste and scrap, Pt content | do. | 45,900 | 722,000 | 43,300 | 825,000 |
| Iridium, osmium, ruthenium, gross weight | do. | 145 | 2,110 | 629 | 3,190 |
| Rhodium, Rh content | do. | 479 | 15,100 | 311 | 7,800 |
| Rare earths, estimated rare-earth oxide content: | | | | | |
| Cerium compounds | do. | 1,910,000 | 10,100 | 2,280,000 | 12,600 |
| Compounds, inorganic and organic | do. | 1,790,000 | 19,900 | 4,800,000 | 18,900 |
| Metals, including scandium and yttrium | do. | 730,000 | 3,250 | 1,010,000 | 6,050 |
| Ferrocerium and other pyrophoric alloys | do. | 2,880,000 | 10,700 | 3,720,000 | 16,800 |
| Selenium, Se content | do. | 249,000 ^r | 2,450 ^r | 160,000 | 2,810 |
| Silicon, gross weight: | | | | | |
| Ferrosilicon | metric tons | 11,600 | 10,400 | 11,500 | 11,700 |
| Metal | do. | 20,100 | 368,000 | 18,600 | 489,000 |
| Silver: | | | | | |
| Bullion, Ag content | kilograms | 135,000 | 20,700 | 302,000 | 64,500 |
| Dore, Ag content | do. | 19,800 | 3,190 | 79,800 | 18,800 |
| Metal powder, gross weight | do. | 473,000 | 81,500 | 708,000 | 122,000 |
| Nitrate, gross weight | do. | 69,200 | 9,120 | 61,500 | 5,720 |
| Ores and concentrates, Ag content | do. | 57,900 | 16,200 | 1,560 | 306 |
| Semimanufactured forms containing 99.5% or more by weight of silver, gross weight | do. | 344,000 | 59,400 | 269,000 | 48,300 |
| Waste and scrap, gross weight | do. | 2,380,000 ^r | 555,000 ^r | 2,240,000 | 424,000 |
| Unwrought, other, gross weight | do. | 26,000 | 5,470 | 39,600 | 8,690 |
| Thallium, unwrought powders, waste and scrap, others | do. | 2,090 | 203 | 1,190 | 276 |
| Thorium and thorium-bearing materials, thorium ore, monazite concentrate, compounds | do. | 23,600 ^r | 171 ^r | 731 | 298 |
| Tin: | | | | | |
| Ingot and pigs | metric tons | 3,690 | 18,500 | 3,650 | 25,700 |
| Tin scrap and other tin bearing material, except tinplate scrap, includes rods, profiles, wire, powders, flakes, tubes, pipes | do. | 24,500 | 32,600 | 16,800 | 42,900 |
| Tinplate and terneplate | do. | 263,000 | 154,000 | 262,000 | 169,000 |
| Titanium: | | | | | |
| Metal, waste and scrap, unwrought, wrought products and castings, ferrotitanium and ferrosilicon titanium | do. | 19,500 | 382,000 | 25,200 | 421,000 |
| Ores and concentrates | do. | 10,300 | 2,720 | 8,690 | 3,370 |
| Pigment, dioxide and oxide | do. | 584,000 | 958,000 | 635,000 | 1,090,000 |
| Tungsten, W content: | | | | | |
| Ammonium paratungstate | do. | 99 | 543 | 125 | 722 |
| Carbide powder | do. | 1,690 ^e | 19,700 | 1,440 ^e | 24,200 |
| Metal powders | do. | 1,130 ^e | 24,100 | 433 ^e | 18,700 |
| Miscellaneous tungsten-bearing materials, ferrotungsten, ferrosilicon tungsten, unwrought, waste and scrap, wrought, compounds | do. | 2,150 | 34,700 | 1,730 | 43,700 |
| Ores and concentrates | do. | 20 ^e | 630 | 43 ^e | 959 |
| Vanadium: | | | | | |
| Aluminum-vanadium master alloy, gross weight | kilograms | 9,590,000 ^r | 22,800 ^r | 14,600,000 | 32,100 |
| Ferrovandium, V content | do. | 424,000 | 5,740 | 285,000 | 9,210 |
| Metal, including waste and scrap, gross weight | do. | 201,000 | 3,910 | 522,000 | 7,760 |
| Pentoxide, anhydride, V content | do. | 791,000 | 4,720 | 598,000 | 4,270 |
| Other oxides and hydroxides, V content | do. | 438,000 | 3,810 | 823,000 | 6,230 |
| Zinc: | | | | | |
| Compounds, chloride, compounds, n.s.p.f., oxide, sulfate | do. | 22,600 | 27,900 | 27,200 | 38,100 |
| Ores and concentrates, Zn content | do. | 841,000 | 377,000 | 744,000 | 413,000 |
| Rolled | do. | 9,430 | 9,880 | 9,770 | 12,700 |
| Slab | do. | 1,680 | 1,760 | 3,300 | 5,330 |

See footnotes at end of table.

TABLE 7—Continued
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | |
|---|----------|------------------------|----------|------------|
| | Quantity | Value | Quantity | Value |
| Metals—Continued: | | | | |
| Zirconium: | | | | |
| Ferrozirconium kilograms | 1,930 | 2,030 | 913 | 1,310 |
| Ores and concentrates do. | 70,600 | 37,600 | 68,800 | 45,500 |
| Oxide, includes germanium oxides and zirconium dioxides do. | 1,520 | 15,900 | 1,600 | 18,100 |
| Unwrought powders do. | 101 | 2,400 | 138 | 2,600 |
| Waste and scrap do. | 1,590 | 94,000 | 1,560 | 92,400 |
| Total | XX | 27,800,000 | XX | 36,700,000 |
| Industrial minerals: | | | | |
| Abrasives, manufactured: | | | | |
| Aluminum oxide, crude do. | 11,800 | 34,600 | 13,900 | 41,200 |
| Metallic abrasives do. | 22,000 | 14,600 | 26,500 | 20,600 |
| Silicon carbide, crude, ground and refined do. | 13,200 | 12,100 | 13,900 | 14,600 |
| Asbestos, includes reexports: | | | | |
| Manufactured | NA | 290,000 | NA | 341,000 |
| Unmanufactured metric tons | 2,820 | 920 | 1,580 | 333,000 |
| Barite, natural barium sulfate do. | 44,400 | 4,620 | 69,900 | 6,400 |
| Boron minerals and compounds: | | | | |
| Boric acid, includes orthoboric and anhydrous | 70 | 36,400 | 61 | 35,000 |
| Sodium borates | 131 | 55,400 | 135 | 60,200 |
| Bromine: | | | | |
| Compounds, includes methyl bromine and ethylene dibromide, Br content metric tons | 6,040 | 11,800 | 6,600 | 13,800 |
| Elemental, gross weight do. | 2,280 | 3,090 | 2,840 | 2,070 |
| Cement, hydraulic and clinker | 837 | 61,600 | 818 | 63,000 |
| Clays: | | | | |
| Ball | 139 | 8,430 | 107 | 8,200 |
| Bentonite | 721 | 88,100 | 915 | 105,000 |
| Fire | 285 | 27,400 | 332 | 32,300 |
| Fuller's earth | 48 | 8,830 | 49 | 10,300 |
| Kaolin | 3,520 | 574,000 | 3,640 | 600,000 |
| Other, n.e.c., includes chamotte or dinas earth, activated clays and earths, artificially activated clays | 416 | 153,000 | 586 | 181,000 |
| Diamond: | | | | |
| Gemstones, natural, including reexports thousand carats | 16,500 | 5,010,000 [†] | 19,800 | 6,600,000 |
| Industrial including exports and reexports: | | | | |
| Unworked do. | 2,710 | 23,100 | 2,340 | 21,700 |
| Powder, dust and grit, natural and synthetic do. | 81,100 | 46,700 | 97,900 | 51,600 |
| Diatomite | 136 | 43,300 | 143 | 53,700 |
| Feldspar metric tons | 8,950 | 1,310 | 9,630 | 1,420 |
| Fluorspar do. | 30,700 | 4,610 | 20,600 | 3,200 |
| Garnet, industrial [¢] | 11 | 7,460 | 11 | 8,990 |
| Graphite, natural and artificial metric tons | 91,900 | 97,500 | 94,900 | 117,000 |
| Gypsum and gypsum products: | | | | |
| Crude | 166 | 18,600 | 149 | 15,000 |
| Plasters | 161 | 31,000 | 332 | 31,800 |
| Boards | 50 | 39,300 | 83 | 51,100 |
| Other | XX | 21,800 | XX | 29,300 |
| Helium, Grade-A million cubic meters | 41 | 78,200 | 45 | 87,400 |
| Iodine: | | | | |
| Crude/resublimed metric tons | 1,590 | 19,600 | 1,270 | 11,800 |
| Potassium iodide do. | 51 | 1,010 | 101 | 1,970 |
| Iron oxide pigments and hydroxides: | | | | |
| Pigment grade do. | 4,500 | 11,000 | 3,120 | 7,380 |
| Other grade do. | 48,800 | 32,700 | 72,700 | 41,800 |
| Kyanite, andalusite, sillimanite | 28 | 4,930 | 32 | 5,880 |

See footnotes at end of table.

TABLE 7—Continued
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|--|-------------|------------------|---------------------|---------|------------|
| | Quantity | Value | Quantity | Value | |
| Industrial minerals—Continued: | | | | | |
| Lime | 98 | 13,700 | 100 | 14,200 | |
| Lithium chemicals: | | | | | |
| Carbonate | metric tons | 2,980 | 9,910 | 3,910 | 12,200 |
| Hydroxide | do. | 5,830 | 21,400 | 5,780 | 20,000 |
| Magnesium compounds: | | | | | |
| Compounds, chlorides, hydroxide and peroxide, sulfates | do. | 31,300 | 17,000 | 41,100 | 18,100 |
| Magnesite, crude and processed: | | | | | |
| Caustic-calcined magnesia | do. | 4,060 | 2,330 | 3,720 | 2,200 |
| Dead-burned and fused magnesia | do. | 56,500 | 20,900 | 29,900 | 17,300 |
| Other magnesia | do. | 27,500 | 18,800 | 23,800 | 18,200 |
| Crude | do. | 18,000 | 2,030 | 19,500 | 2,250 |
| Mica: | | | | | |
| Scrap and flake: | | | | | |
| Powder | do. | 8,020 | 5,190 | 7,200 | 4,780 |
| Waste | do. | 2,350 | 794 | 2,730 | 731 |
| Sheet: | | | | | |
| Unworked | do. | 33 ^r | 99 | 29 | 58 |
| Worked | do. | 821 | 12,300 | 935 | 11,100 |
| Peat | | 29 | 3,090 | 29 | 3,390 |
| Perlite, crude and expanded ^c | metric tons | 37,000 | 1,410 | 37,000 | 1,500 |
| Pumice and pumicite | | 26 | 11,000 | 27 | 7,000 |
| Salt | | 718 | 37,500 | 1,110 | 47,600 |
| Sand and gravel: | | | | | |
| Construction: | | | | | |
| Sand | | 1,180 | 20,700 | 124 | 27,500 |
| Gravel | | 593 | 4,180 | 553 | 4,610 |
| Industrial | | 2,620 | 155,000 | 1,790 | 174,000 |
| Silica, special stone products | | NA | 7,800 | NA | 8,900 |
| Soda ash | | 4,450 | 515,000 | 4,670 | 514,000 |
| Stone: | | | | | |
| Crushed | | 1,010 | 45,600 | 1,280 | 54,500 |
| Dimension | | XX | 63,500 | XX | 63,700 |
| Strontium compounds: | | | | | |
| Carbonate, precipitated | metric tons | 375 | 452 | 360 | 266 |
| Oxide, hydroxide, peroxide | do. | 653 | 374 | 469 | 477 |
| Sulfur: | | | | | |
| Elemental | | 840 ^r | 54,400 ^r | 949 | 63,300 |
| Sulfuric acid, 100% H ₂ SO ₄ | metric tons | 205,000 | 18,900 ^r | 204,000 | 21,300 |
| Talc, excludes powders, talcum (in package), face, compact | | 192 | 39,100 | 202 | 39,600 |
| Vermiculite ^c | | 15 | 2,050 | 10 | 1,600 |
| Wollastonite ^c | | 4,000 | 1,600 | 12,500 | 3,750 |
| Zeolites ^c | metric tons | 1,000 | 200 | 1,000 | 200 |
| Total | | XX | 7,980,000 | XX | 10,200,000 |
| Grand total | | XX | 35,700,000 | XX | 46,900,000 |

^cEstimated. ^rRevised. NA Not available. XX Not applicable.

¹Data 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 FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|--|-------------|------------------|----------------|-----------|-----------|
| | Quantity | Value | Quantity | Value | |
| Metals: | | | | | |
| Aluminum: | | | | | |
| Crude and semicrude | metric tons | 4,130,000 | 6,840,000 | 4,720,000 | 9,240,000 |
| Manufactures | do. | 271,000 | 642,000 | 288,000 | 756,000 |
| Antimony: | | | | | |
| Metal | do. | 4,670 | 10,800 | 8,270 | 19,100 |
| Ore and concentrate, antimony content | do. | 412 | 1,010 | 1,750 | 4,900 |
| Oxide, antimony content | do. | 21,600 | 54,400 | 23,500 | 67,200 |
| Arsenic: | | | | | |
| Acid | do. | 1 ^r | 6 ^r | 22 | 32 |
| Metal | do. | 990 | 3,040 | 872 | 3,030 |
| Sulfide | do. | (2) ^r | 5 ^r | (2) | 2 |
| Trioxide | do. | 27,300 | 13,800 | 8,090 | 4,080 |
| Bauxite and alumina: | | | | | |
| Alumina, calcined equivalent | | 2,310 | 571,000 | 1,650 | 533,000 |
| Bauxite: | | | | | |
| Calcined, refractory and other grade | | 307 | 25,700 | 341 | 36,900 |
| Crude and dried | | 8,390 | 137,000 | 10,000 | 186,000 |
| Speciality aluminum compounds, sulfate, chloride, fluoride-based | metric tons | 16,300 | 9,360 | 11,900 | 6,360 |
| Beryllium, ore, concentrates, oxide, hydroxide, unwrought including powders, waste and scrap, other, beryllium-copper master alloys, beryllium-copper plates, sheets, strip ³ | kilograms | 767,000 | 6,060 | 1,280,000 | 14,200 |
| Bismuth, metallic | do. | 2,320,000 | 14,400 | 1,980,000 | 14,500 |
| Cadmium: | | | | | |
| Metal | do. | 18,000 | 383 | 38,000 | 127 |
| Sulfide, gross weight | do. | 7,470 | 53 | 1,810 | 23 |
| Chromium: | | | | | |
| Chromite ore | metric tons | 173,000 | 9,290 | 153,000 | 17,500 |
| Metals and alloys: | | | | | |
| Ferrochromium-silicon | do. | 38,700 | 24,900 | 30,600 | 31,500 |
| Metal, unwrought powders, waste and scrap, other | do. | 8,570 | 45,200 | 9,630 | 56,000 |
| Chemicals: | | | | | |
| Oxides, hydroxides, trioxides and other | do. | 16,600 | 26,500 | 9,960 | 18,900 |
| Sulfates | do. | 162 | 194 | 111 | 161 |
| Salts of oxometallic or peroxometallic acids, zinc and lead chromate, sodium dichromate, potassium dichromate, other | do. | 3,650 | 2,750 | 1,880 | 3,430 |
| Carbide | do. | 203 | 2,340 | 138 | 1,630 |
| Pigments and preparations based on chromium | do. | 8,290 | 21,700 | 7,540 | 20,200 |
| Cobalt: | | | | | |
| Metal: | | | | | |
| Alloys, unwrought, waste and scrap, wrought, cobalt articles | do. | 678 | 15,400 | 1,330 | 29,500 |
| Unwrought, excluding alloys and waste and scrap, includes cathode and metal powder, may include intermediate products of cobalt metallurgy | do. | 6,700 | 135,000 | 7,250 | 311,000 |
| Oxide and hydroxides | do. | 1,370 | 23,000 | 1,300 | 45,100 |
| Other forms, includes acetates, carbonates, chlorides, sulfates | do. | 1,350 | 8,350 | 1,720 | 22,100 |
| Columbium (niobium) and tantalum: | | | | | |
| Columbium: | | | | | |
| Ores and concentrates | do. | 23 | 610 | 5 | 41 |
| Oxide | do. | 837 | 12,200 | 906 | 13,900 |
| Ferrocolumbium | do. | 6,280 | 54,700 | 7,950 | 69,000 |
| Unwrought, alloys, metal, powder | do. | 743 | 16,400 | 940 | 18,500 |
| Tantalum: | | | | | |
| Ores and concentrates, includes synthetic concentrates | do. | 1,580 | 60,100 | -- | -- |
| Unwrought, waste and scrap, powders, alloys, metal | do. | 441 | 57,700 | 1,060 | 138,000 |
| Wrought | do. | 32 | 7,760 | 38 | 10,000 |

See footnotes at end of table.

TABLE 8—Continued
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|---|-------------|----------------------|----------------------|---------|------------|
| | Quantity | Value | Quantity | Value | |
| Metals—Continued: | | | | | |
| Copper: | | | | | |
| Unmanufactured, does not include unalloyed scrap, copper content | metric tons | 1,070,000 | 1,990,000 | 983,000 | 2,650,000 |
| Semimanufactures | do. | 427,000 | 939,000 | 390,000 | 1,270,000 |
| Scrap, alloyed and unalloyed | do. | 90,600 [†] | 124,000 | 102,000 | 187,000 |
| Ferrous alloys not listed elsewhere: | | | | | |
| Ferrophosphorus | do. | 11,700 | 2,250 | 7,280 | 1,840 |
| Other | do. | 16,200 | 19,000 | 8,520 | 12,700 |
| Gallium: | | | | | |
| Unwrought and waste and scrap | kilograms | 14,300 | 3,520 | 19,400 | 4,130 |
| Gallium arsenide wafers, doped and undoped | do. | 142,000 [†] | 108,000 [†] | 230,000 | 154,000 |
| Germanium, wrought, unwrought, waste and scrap, gross weight | do. | 8,380 | 6,310 | 9,130 | 7,260 |
| Gold: | | | | | |
| Ores and concentrates | do. | 1,960 | 23,300 | 1,860 | 19,200 |
| Dore and precipitates | do. | 95,200 | 832,000 | 142,000 | 1,590,000 |
| Bullion, refined | do. | 152,000 | 1,810,000 | 139,000 | 1,830,000 |
| Waste and scrap | do. | 15,000 | 133,000 | 20,500 | 161,000 |
| Metal powder | do. | 4,080 | 43,000 | 10,900 | 59,400 |
| Compounds | do. | 31,800 | 785 | 60,000 | 1,530 |
| Indium, unwrought and waste and scrap | do. | 123,000 | 16,600 | 143,000 | 58,800 |
| Iron and steel: | | | | | |
| Steel mill products | | 21,000 | 10,400,000 | 32,500 | 21,400,000 |
| Fabricated steel products | | 4,300 | 6,770,000 | 4,740 | 8,260,000 |
| Cast iron and steel products | | 545 | 445,000 | 611 | 638,000 |
| Stainless steel | metric tons | 526,000 | 2,040,000 | 560,000 | 2,490,000 |
| Iron and steel scrap: | | | | | |
| Ferrous, includes tinplate and terplate, excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping | | 3,480 [†] | 511,000 [†] | 4,660 | 1,230,000 |
| Pig iron, all grades | | 3,890 [†] | 571,000 [†] | 6,400 | 1,360,000 |
| Direct-reduced iron, steelmaking grade | | 1,940 [†] | 242,000 [†] | 2,450 | 463,000 |
| Ships, boats, and other vessels for scrapping | | 3 | 583 | (2) | 128 |
| Used rails for rerolling and other uses, includes mixed (used plus new) rails | | 207 | 45,600 | 132 | 44,100 |
| Iron ore | | 12,600 | 328,000 | 11,800 | 371,000 |
| Lead: | | | | | |
| Pigs and bars, Pb content | metric tons | 175,000 | 92,400 | 197,000 | 175,000 |
| Pigments and compounds, Pb content | do. | 36,000 | 50,100 | 33,200 | 48,000 |
| Scrap, reclaimed, includes ash and residues, Pb content | do. | 4,150 | 2,360 | 4,780 | 3,510 |
| Wrought, all forms, including wire and powders, gross weight | do. | 7,780 | 17,800 | 11,000 | 25,200 |
| Magnesium: | | | | | |
| Waste and scrap, gross weight | do. | 16,200 | 22,000 | 11,700 | 17,600 |
| Metal, gross weight | do. | 27,300 | 53,600 | 34,300 | 78,200 |
| Alloys, Mg content | do. | 38,800 | 98,900 | 51,500 | 152,000 |
| Powder, sheets, tubing, ribbons, wire, other forms, Mg content | do. | 1,160 | 10,300 [†] | 1,200 | 10,200 |
| Manganese: | | | | | |
| Ores and concentrates with 20% or manganese, all grades, Mn content | do. | 175,000 | 27,000 | 234,000 | 37,700 |
| Ferromanganese, all grades, Mn content | do. | 187,000 | 117,000 | 403,000 | 418,000 |
| Silicomanganese, Mn content | do. | 182,000 | 133,000 | 269,000 | 386,000 |
| Metal, unwrought, other wrought, waste and scrap, gross weight | do. | 19,800 | 20,800 | 34,700 | 49,900 |
| Chemicals, manganese dioxide and potassium permanganate, gross weight | do. | 50,900 | 64,700 | 27,600 | 33,000 |
| Mercury: | | | | | |
| Metal | do. | 46 | 914 | 92 | 1,350 |
| Amalgams of precious metals whether or not chemically defined | do. | 42 | 28,200 | 78 | 100,000 |

See footnotes at end of table.

TABLE 8—Continued
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|---|-------------|-----------|-----------|------------|-----------|
| | Quantity | Value | Quantity | Value | |
| Metals—Continued: | | | | | |
| Molybdenum: | | | | | |
| Ores and concentrates, including roasted and other, Mo content | metric tons | 5,190 | 51,400 | 8,780 | 268,000 |
| Chemicals, gross weight: | | | | | |
| Oxides and hydroxides | do. | 1,300 | 9,600 | 822 | 15,800 |
| Molybdates, all | do. | 1,940 | 12,600 | 2,200 | 19,800 |
| Orange | do. | 987 | 4,310 | 1,030 | 4,760 |
| Ferromolybdenum, Mo content | do. | 3,690 | 37,500 | 5,310 | 158,000 |
| Other, includes powders, unwrought, bars and rods, waste and scrap, wire, other, gross weight | do. | 712 | 15,400 | 896 | 34,300 |
| Nickel, Ni content: | | | | | |
| Primary, chemicals and unwrought | do. | 125,000 | 1,150,000 | 136,000 | 1,890,000 |
| Secondary, stainless steel scrap and waste and scrap | do. | 11,500 | 108,000 | 18,800 | 250,000 |
| Wrought, not alloyed, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes | do. | 659 | 13,400 | 797 | 20,300 |
| Alloyed, unwrought ingot, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes, other alloyed articles | do. | 18,300 | 277,000 | 19,900 | 349,000 |
| Platinum-group metals, metal content: | | | | | |
| Platinum, grains and nuggets, sponge, other unwrought, other, waste and scrap, coins | do. | 88,400 | 1,770,000 | 86,400 | 2,200,000 |
| Palladium, unwrought and other | do. | 105,000 | 663,000 | 127,000 | 931,000 |
| Iridium, unwrought and other forms | kilograms | 2,200 | 6,090 | 3,230 | 18,000 |
| Osmium, unwrought | do. | 53 | 430 | 75 | 421 |
| Ruthenium, unwrought | do. | 15,900 | 16,700 | 18,800 | 35,900 |
| Rhodium, unwrought and other forms | do. | 12,000 | 202,000 | 13,200 | 397,000 |
| Rare earths, estimated equivalent rare-earth oxide (REO) content: | | | | | |
| Cerium compounds, including oxides, hydroxides, nitrates, sulfate chlorides, oxalates | do. | 2,430,000 | 15,100 | 1,880,000 | 25,900 |
| Yttrium compounds content by weight greater than 19% but less than 85% oxide equivalent | do. | 51,900 | 4,330 | 136,000 | 3,510 |
| Compounds, including oxides, hydroxides, nitrates, other compounds except chlorides | do. | 9,580,000 | 55,500 | 11,400,000 | 64,100 |
| Mixtures of REO's except cerium oxide | do. | 1,710,000 | 6,100 | 1,660,000 | 4,930 |
| Metals, whether intermixed or alloyed | do. | 884,000 | 5,140 | 804,000 | 3,500 |
| Mixtures of rare-earth chlorides, except cerium chloride | do. | 1,910,000 | 6,210 | 1,310,000 | 6,870 |
| Ferrocerium and other pyrophoric alloys | do. | 102,000 | 1,650 | 105,000 | 1,770 |
| Rhenium: | | | | | |
| Metal | do. | 13,200 | 14,400 | 11,800 | 12,900 |
| Ammonium perrhenate | do. | 1,990 | 1,560 | 12,100 | 7,560 |
| Selenium and tellurium: | | | | | |
| Selenium, Se content: | | | | | |
| Selenium | do. | 353,000 | 4,410 | 402,000 | 16,000 |
| Dioxide | do. | 14,500 | 169 | 10,300 | 293 |
| Tellurium, Te content | do. | 48,900 | 1,610 | 62,800 | 2,620 |
| Silicon, gross weight: | | | | | |
| Ferrosilicon | metric tons | 270,000 | 183,000 | 247,000 | 201,000 |
| Metal | do. | 128,000 | 220,000 | 167,000 | 314,000 |
| Silver: | | | | | |
| Ash and residues, Ag content | kilograms | 1,340 | 266 | 6,710 | 1,530 |
| Bullion, Ag content | do. | 4,000,000 | 630,000 | 3,410,000 | 728,000 |
| Dore, Ag content | do. | 233,000 | 72,200 | 346,000 | 117,000 |
| Metal powder, gross weight | do. | 20,800 | 4,160 | 27,400 | 6,920 |
| Nitrate, gross weight | do. | 661 | 96 | -- | -- |
| Ores and concentrates, Ag content | do. | 2,540 | 1,370 | 2,220 | 1,410 |
| Semimanufactured forms containing 99.5% or more by weight of silver, gross weight | do. | 17,000 | 2,700 | 52,300 | 11,900 |
| Waste and scrap, gross weight | do. | 886,000 | 107,000 | 2,020,000 | 160,000 |
| Unwrought, other, gross weight | do. | 281,000 | 42,200 | 342,000 | 69,600 |
| Thallium, unwrought powders, waste and scrap, other | do. | 81 | 20 | 325 | 117 |
| Thorium and thorium-bearing materials, compounds | do. | 4,140 | 149 | 5,320 | 170 |

See footnotes at end of table.

TABLE 8—Continued
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|--|-------------|----------------------|----------|------------|---------|
| | Quantity | Value | Quantity | Value | |
| Metals—Continued: | | | | | |
| Tin, gross weight: | | | | | |
| Compounds | metric tons | 443 | 3,000 | 635 | 6,030 |
| Dross, skimmings, scrap, residues, alloys, n.s.p.f. | do. | 3,290 | 10,500 | 5,790 | 24,500 |
| Metal, unwrought | do. | 37,000 | 169,000 | 47,600 | 390,000 |
| Miscellaneous, includes tinfoil, tin powder, flitters, metallics, manufactures, n.s.p.f. | do. | NA | 3,510 | NA | 7,080 |
| Tinplate and terneplate | do. | 282,000 | 173,000 | 328,000 | 215,000 |
| Tinplate scrap | do. | 20,100 | 3,390 | 9,650 | 2,020 |
| Titanium: | | | | | |
| Concentrate: | | | | | |
| Ilmenite | metric tons | 395,000 | 39,500 | 244,000 | 40,900 |
| Rutile, natural and synthetic | do. | 427,000 | 162,000 | 360,000 | 165,000 |
| Metal:³ | | | | | |
| Waste and scrap | do. | 5,550 | 19,700 | 8,830 | 53,600 |
| Unwrought | do. | 9,590 | 63,500 | 11,900 | 79,500 |
| Ingots | do. | 663 | 6,710 | 1,530 | 14,800 |
| Billets, bloom, sheet, bar, slab | do. | 113 | 3,860 | XX | XX |
| Powder | do. | 129 | 1,890 | 142 | 2,840 |
| Other | do. | 669 | 3,370 | 959 | 8,350 |
| Wrought products and castings, includes bar, castings, foil, pipe, plate, profile, rod, sheet, strip, tube, wire, other | do. | 3,640 | 82,600 | 3,590 | 91,500 |
| Ferrotitanium and ferrosilicon titanium | do. | 3,160 | 9,670 | 6,940 | 21,200 |
| Pigment, dioxide and oxide | do. | 240,000 | 397,000 | 264,000 | 413,000 |
| Titaniferous iron ore | do. | 18,900 | 1,390 | 68,700 | 3,650 |
| Titaniferous slag | do. | 409,000 | 163,000 | 457,000 | 192,000 |
| Tungsten, W content: | | | | | |
| Ammonium paratungstate | do. | 2,640 | 16,300 | 2,090 | 16,500 |
| Ferrotungsten and ferrosilicon tungsten | do. | 377 | 2,380 | 392 | 3,510 |
| Miscellaneous tungsten-bearing materials, metal powders, carbide powder, unwrought, waste and scrap, wrought, oxides, calcium tungstate, other tungstates, other compounds | do. | 4,600 | 64,100 | 5,750 | 92,400 |
| Ores and concentrates | do. | 4,690 | 26,200 | 2,310 | 14,600 |
| Vanadium: | | | | | |
| Aluminum-vanadium master alloy, gross weight | kilograms | 232,000 | 425 | 19,100 | 67 |
| Ferrovandium, V content | do. | 1,690,000 | 14,300 | 3,740,000 | 62,100 |
| Metal, including waste and scrap, gross weight | do. | 186,000 | 2,850 | 31,200 | 1,710 |
| Miscellaneous chemicals, sulfates and vanadates, V content | do. | 72,900 | 902 | 197,000 | 1,170 |
| Pentoxide, anhydride, V content | do. | 679,000 ^f | 3,610 | 1,230,000 | 8,600 |
| Vanadium-bearing ash, residues, slag from the manufacture of iron and steel, V ₂ O ₅ content | do. | 3,960,000 | 5,760 | 16,400,000 | 11,800 |
| Other oxides and hydroxides, V content | do. | 74,300 | 769 | 133,000 | 1,650 |
| Zinc: | | | | | |
| Compounds, lithopone, chloride, compounds n.s.p.f., hydrosulfite, oxide, sulfate oxide, sulfate | metric tons | 126,000 | 85,800 | 137,000 | 107,000 |
| Ores and concentrates, Zn content | do. | 164,000 | 60,000 | 231,000 | 98,700 |
| Rolled | do. | 1,790 | 5,500 | 2,500 | 9,250 |
| Slab, refined | do. | 758,000 ^f | 647,000 | 812,000 | 888,000 |
| Zirconium and hafnium: | | | | | |
| Hafnium, unwrought, including powders | do. | 5 | 911 | 4 | 895 |
| Zirconium: | | | | | |
| Ferrozirconium | do. | 154 | 245 | 165 | 318 |
| Ores and concentrates | do. | 37,400 | 14,800 | 35,200 | 16,800 |
| Oxide, includes germanium oxides and zirconium oxides | do. | 2,350 | 22,300 | 3,690 | 33,000 |

See footnotes at end of table.

TABLE 8—Continued
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|--|-----------------|-----------|------------|-----------|------------|
| | Quantity | Value | Quantity | Value | |
| Metals—Continued: | | | | | |
| Zirconium and hafnium—Continued: | | | | | |
| Zirconium—Continued: | | | | | |
| Unwrought powder | metric tons | 52 | 2,260 | 74 | 2,320 |
| Waste and scrap | do. | 491 | 42,200 | 722 | 45,600 |
| Total | | XX | 45,000,000 | XX | 69,000,000 |
| Industrial minerals: | | | | | |
| Abrasives, manufactured: | | | | | |
| Aluminum oxide, crude, ground and refined | metric tons | 164,000 | 67,000 | 232,000 | 98,100 |
| Metallic abrasives | do. | 16,500 | 9,650 | 15,900 | 9,520 |
| Silicon carbide, crude, ground and refined | do. | 170,000 | 78,900 | 209,000 | 119,000 |
| Asbestos: | | | | | |
| Chrysotile and other unspecified type | do. | 4,650 | 5,840 | 3,450 | 806 |
| Products with basis of asbestos, cellulose, or other minerals | | NA | 577,000 | NA | 616,000 |
| Barite: | | | | | |
| Chemicals; chloride, oxide, hydroxide, peroxide, nitrate, precipitated carbonate | metric tons | 18,300 | 16,000 | 18,200 | 14,600 |
| Crude | do. | 1,620,000 | 68,200 | 1,960,000 | 90,600 |
| Ground | do. | 174 | 15 | 5,100 | 700 |
| Other sulfates | do. | 32,800 | 17,300 | 33,800 | 17,800 |
| Boron minerals and compounds: | | | | | |
| Borax | | (2) | 19 | (2) | 62 |
| Boric acid | | 47 | 19,000 | 49 | 20,300 |
| Colemanite | | 24 | 6,960 | 21 | 6,070 |
| Ulexite | | 80 | 16,000 | 110 | 21,900 |
| Bromine: | | | | | |
| Compounds, contained bromine | metric tons | 7,900 | 49,500 | 7,580 | 30,100 |
| Elemental | do. | 1,920 | 1,450 | 2,650 | 2,000 |
| Cement, hydraulic and clinker | | 24,000 † | 940,000 † | 27,300 | 1,140,000 |
| Clays: | | | | | |
| China clay or kaolin | do. | 224,000 | 34,700 | 205,000 | 38,600 |
| Fire clay | do. | 482 | 245 | 5,920 | 1,680 |
| Decolorizing earths and fuller's earth | do. | 2,590 | 28 | 227 | 48 |
| Bentonite | do. | 12,700 | 3,010 | 9,340 | 3,360 |
| Common blue clay and other ball clay | do. | 13,300 | 1,220 | 520 | 218 |
| Other clay | do. | 5,060 | 2,580 | 5,430 | 3,650 |
| Chamotte or dina's earth | do. | 3 | 5 | 2 | 2 |
| Artificially activated clay and activated earth | do. | 21,000 | 9,430 | 24,900 | 14,200 |
| Diamond, industrial: | | | | | |
| Diamond stones, natural and miners' | thousand carats | 1,820 | 5,640 | 1,780 | 13,800 |
| Powder, dust and grit, natural and synthetic | do. | 250,000 | 64,600 | 240,000 | 61,200 |
| Diatomite | metric tons | 1,710 | 675 | 1,710 | 488 |
| Feldspar and nepheline syenite: | | | | | |
| Feldspar | do. | 7,980 | 1,010 | 20,600 | 944 |
| Nepheline syenite | do. | 307,000 | 28,200 | 350,000 | 29,000 |
| Fluorspar: | | | | | |
| Aluminum fluoride | do. | 10,100 | 7,640 | 4,700 | 3,750 |
| Cryolite | do. | 8,120 | 6,120 | 3,860 | 3,660 |
| Fluorspar | do. | 567,000 | 76,300 | 599,000 | 95,300 |
| Hydrofluoric acid, HF | do. | 111,000 | 115,000 | 128,000 | 131,000 |
| Garnet, industrial ^o | | 31 | 3,190 | 37 | 4,260 |
| Gemstones | | XX | 13,600,000 | XX | 15,500,000 |
| Graphite: | | | | | |
| Natural | metric tons | 52,300 | 24,400 | 63,700 | 29,900 |
| Electric furnace electrodes | do. | 85,300 | 139,000 | 86,400 | 144,000 |

See footnotes at end of table.

TABLE 8—Continued
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | | |
|---|-------------|------------------|--------------------|-----------|-----------|
| | Quantity | Value | Quantity | Value | |
| Industrial minerals—Continued: | | | | | |
| Gypsum: | | | | | |
| Crude | 8,300 | 75,500 | 10,100 | 97,200 | |
| Plasters | 6 | 3,040 | 5 | 3,420 | |
| Boards | 484 | 59,600 | 617 | 87,100 | |
| Other | XX | 45,800 | XX | 43,200 | |
| Iodine: | | | | | |
| Crude | metric tons | 5,750 | 68,300 | 5,700 | 75,300 |
| Potassium iodide | do. | 863 ^r | 9,760 | 892 | 11,500 |
| Iron oxide pigments: | | | | | |
| Natural | do. | 4,000 | 2,150 | 4,100 | 2,100 |
| Synthetic | do. | 136,000 | 94,500 | 166,000 | 114,000 |
| Kyanite, andalusite, sillimanite | do. | 4,480 | 1,090 | 4,010 | 1,420 |
| Lime | | 202 | 22,500 | 232 | 25,900 |
| Lithium chemicals: | | | | | |
| Carbonate | metric tons | 11,600 | 18,000 | 15,400 | 26,500 |
| Hydroxide | do. | 111 | 601 | 64 | 233 |
| Magnesium compounds: | | | | | |
| Compounds, chlorides, hydroxide, peroxide, sulfates | do. | 112,000 | 35,700 | 132,000 | 40,600 |
| Magnesite, crude and processed: | | | | | |
| Caustic-calcined magnesia | do. | 150,000 | 22,600 | 157,000 | 22,200 |
| Dead-burned and fused magnesia | do. | 379,000 | 78,500 | 418,000 | 109,000 |
| Other magnesia | do. | 21,000 | 10,300 | 15,700 | 10,800 |
| Crude | do. | 14,300 | 1,740 | 15,900 | 1,980 |
| Mica: | | | | | |
| Scrap and flake: | | | | | |
| Powder | do. | 20,600 | 10,600 | 22,300 | 10,800 |
| Waste | do. | 14,300 | 3,360 ^r | 20,100 | 4,410 |
| Sheet: | | | | | |
| Unworked, excludes unworked sheet mica valued at less than \$1 per kilogram | do. | 134 | 350 | 124 | 358 |
| Worked | do. | 1,000 | 11,100 | 1,280 | 11,800 |
| Nitrogen, major compounds, gross weight ³ | | 15,800 | 2,920,000 | 16,000 | 3,580,000 |
| Peat moss | metric tons | 767,000 | 148,000 | 786,000 | 159,000 |
| Perlite, processed crude | do. | 245,000 | 9,310 | 238,000 | 9,660 |
| Phosphate rock and phosphatic materials | | 2,680 | 176,000 | 2,690 | 178,000 |
| Potash, chloride, sulfate, nitrate, sodium nitrate mixtures | metric tons | 7,810,000 | 646,000 | 8,140,000 | 763,000 |
| Pumice: | | | | | |
| Crude or unmanufactured | | 366 | 32,800 | 401 | 31,400 |
| Wholly or partially manufactured | | 1 | 3,460 | 1 | 3,660 |
| Salt | | 12,900 | 196,000 | 11,900 | 159,000 |
| Sand and gravel: | | | | | |
| Construction | | 4,410 | 57,700 | 4,760 | 56,900 |
| Industrial | | 440 | 9,210 | 490 | 12,400 |
| Silica, special stone products | | NA | 6,300 | NA | 6,800 |
| Soda ash | | 5 | 1,510 | 6 | 1,880 |
| Stone: | | | | | |
| Crushed, chips, calcium carbonate fines, excludes precipitated carbonates | | 15,300 | 143,000 | 16,000 | 149,000 |
| Dimension | | NA | 1,390,000 | NA | 1,790,000 |
| Strontium: | | | | | |
| Carbonate | metric tons | 38,200 | 18,200 | 23,600 | 8,430 |
| Celestite | do. | 2,320 | 132 ^r | 6,290 | 332 |
| Metal | do. | 283 | 1,090 | 217 | 1,070 |
| Nitrate | do. | 705 | 2,080 | 527 | 798 |
| Oxide, hydroxide, peroxide | do. | -- | -- | 98 | 76 |

See footnotes at end of table.

TABLE 8—Continued
 U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS¹

(Thousand metric tons and thousand dollars unless otherwise specified)

| Mineral or product | 2003 | | 2004 | |
|--|--------------------|------------|--------------------|------------|
| | Quantity | Value | Quantity | Value |
| Industrial minerals—Continued: | | | | |
| Sulfur: | | | | |
| Elemental | 2,870 ^e | 70,600 | 2,850 ^e | 76,800 |
| Sulfuric acid, 100% H ₂ SO ₄ metric tons | 908,000 | 39,200 | 2,400,000 | 104,000 |
| Talc | 237 | 53,500 | 226 | 58,400 |
| Vermiculite ^c | 37 | 6,200 | 69 | 10,000 |
| Wollastonite ^c | 3,500 | 525 | 4,500 | 563 |
| Total | XX | 22,500,000 | XX | 26,100,000 |
| Grand total | XX | 67,500,000 | XX | 95,100,000 |

^eEstimated. ^rRevised. NA Not available. XX Not applicable. -- Zero.

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

²Less than ½ unit.

³Category regrouped in 2004, see commodity chapter for details.

TABLE 9
WORLD AND U.S. PRODUCTION OF SELECTED NONFUEL MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

| Mineral or product | | World total | | | | United States | | |
|--|--------------------|------------------------|------------------------|------------------------|------------------------|---------------|---------------------------|------|
| | | 2000 | 2001 | 2002 | 2003 | 2004 | Percentage of world total | |
| Metals: | | | | | | | | |
| Aluminum ² | | 24,300 | 24,300 | 26,100 ^r | 27,900 ^r | 29,800 | 2,520 | 8.4 |
| Antimony | metric tons | 126,000 | 157,000 | 113,000 | 112,000 ^r | 113,000 | -- | -- |
| Arsenic trioxide ³ | do. | 62,800 ^r | 59,500 ^r | 59,100 ^r | 58,900 ^r | 49,500 | -- | -- |
| Bauxite ^{3,4,5} | | 136,000 | 137,000 ^r | 144,000 ^r | 155,000 ^r | 159,000 | NA | NA |
| Beryl ³ | metric tons | 5,060 ^r | 2,990 ^r | 2,540 ^r | 2,700 ^r | 2,810 | 2,210 | 78.7 |
| Bismuth, refinery | do. | 4,230 | 5,050 | 6,330 ^r | 8,540 ^r | 7,980 | -- | -- |
| Cadmium, refinery | do. | 20,300 ^r | 19,000 ^r | 17,500 ^r | 18,500 ^r | 18,800 | 550 | 2.9 |
| Chromite ³ | | 14,700 ^r | 12,100 | 14,200 | 15,500 | 17,500 | -- | -- |
| Cobalt, Co content: | | | | | | | | |
| Mine | metric tons | 37,900 ^r | 47,900 ^r | 50,700 ^r | 48,700 ^r | 52,400 | -- | -- |
| Refinery | do. | 36,000 ^r | 39,600 ^r | 41,700 ^r | 43,800 ^r | 49,100 | -- | -- |
| Columbium (niobium)-tantalum concentrates ³ | do. | 61,100 | 76,600 | 81,200 ^r | 80,800 ^r | 68,000 | -- | -- |
| Copper: | | | | | | | | |
| Mine | | 13,300 ^r | 13,700 | 13,700 ^r | 13,700 ^r | 14,600 | 1,160 | 8.0 |
| Refinery | | 14,900 | 15,600 ^r | 15,400 ^r | 15,200 | 15,800 | 1,310 | 8.3 |
| Gold | kilograms | 2,570,000 ^r | 2,560,000 ^r | 2,550,000 ^r | 2,550,000 ^r | 2,430,000 | 258,000 | 10.6 |
| Iron ore ³ | | 1,080,000 | 1,040,000 ^r | 1,090,000 ^r | 1,190,000 ^r | 1,340,000 | 54,700 | 4.1 |
| Iron and steel: | | | | | | | | |
| Direct-reduced iron ² | | 42,400 | 39,300 | 43,600 ^r | 45,200 ^r | 48,100 | 180 | 0.4 |
| Pig iron ² | | 573,000 | 585,000 | 610,000 ^r | 663,000 ^r | 712,000 | 42,300 | 5.9 |
| Raw steel | | 850,000 | 853,000 ^r | 906,000 | 972,000 ^r | 1,050,000 | 100,000 | 9.5 |
| Lead: | | | | | | | | |
| Mine | metric tons | 3,170,000 | 3,120,000 ^r | 2,870,000 ^r | 3,140,000 ^r | 3,110,000 | 445,000 | 14.3 |
| Refinery | do. | 6,650,000 ^r | 6,570,000 ^r | 6,630,000 | 6,800,000 ^r | 6,740,000 | 1,260,000 | 18.7 |
| Magnesium ⁵ | do. | 422,000 ^r | 428,000 ^r | 452,000 ^r | 496,000 ^r | 584,000 | W | NA |
| Manganese ore ³ | | 19,600 | 20,900 ^r | 22,200 | 24,100 ^r | 26,300 | -- | -- |
| Mercury ⁵ | metric tons | 1,360 | 1,500 | 1,490 ^r | 1,410 ^r | 1,260 | NA | NA |
| Molybdenum, Mo content | do. | 135,000 ^r | 132,000 ^r | 121,000 | 130,000 ^r | 141,000 | 41,500 | 29.5 |
| Nickel, Ni content: | | | | | | | | |
| Mine | do. | 1,290,000 | 1,340,000 ^r | 3,150,000 ^r | 1,390,000 ^r | 1,390,000 | -- | -- |
| Refinery | do. | 1,120,000 | 1,170,000 ^r | 1,180,000 ^r | 1,220,000 ^r | 1,260,000 | -- | -- |
| Platinum-group metals | kilograms | 364,000 | 395,000 | 414,000 | 452,000 ^r | 467,000 | 17,700 | 3.8 |
| Selenium ^{2,5} | do. | 1,460,000 | 1,460,000 | 1,410,000 ^r | 1,470,000 ^r | 1,330,000 | W | NA |
| Silver | metric tons | 18,100 ^r | 18,900 ^r | 18,500 ^r | 18,400 ^r | 19,700 | 1,250 | 6.3 |
| Tellurium ^{2,5} | kilograms | 111,000 | 109,000 | 89,000 ^r | 95,000 ^r | 95,000 | W | NA |
| Tin: | | | | | | | | |
| Mine | metric tons | 278,000 ^r | 249,000 ^r | 238,000 ^r | 263,000 ^r | 262,000 | -- | -- |
| Smelter ⁶ | do. | 288,000 | 288,000 ^r | 280,000 | 280,000 ^r | 309,000 | 4,850 | 1.6 |
| Tungsten, W content | do. | 44,000 | 48,900 ^r | 64,200 ^r | 66,700 ^r | 73,700 | -- | -- |
| Zinc: | | | | | | | | |
| Mine | do. | 8,770,000 | 8,910,000 | 8,520,000 ^r | 9,600,000 ^r | 9,600,000 | 739,000 | 7.7 |
| Smelter | | 9,020 ^r | 9,270 ^r | 9,690 ^r | 9,860 ^r | 10,000 | 305 | 3.0 |
| Industrial minerals: | | | | | | | | |
| Asbestos | metric tons | 2,110,000 | 2,080,000 ^r | 2,050,000 | 2,230,000 ^r | 2,230,000 | -- | -- |
| Barite | do. | 6,560,000 ^r | 6,740,000 ^r | 6,440,000 ^r | 6,650,000 ^r | 7,240,000 | 532,000 ⁷ | 7.3 |
| Boron minerals | do. | 4,550,000 | 4,730,000 | 4,560,000 ^r | 4,750,000 ^r | 4,410,000 | 1,210,000 ⁷ | 27.4 |
| Bromine | thousand kilograms | 542,000 | 523,000 | 540,000 | 548,000 | 556,000 | 222,000 ⁷ | 40.0 |
| Celesite | metric tons | 396,000 ^r | 398,000 ^r | 435,000 ^r | 471,000 ^r | 551,000 | -- | -- |
| Cement, hydraulic | | 1,660,000 | 1,750,000 ^r | 1,850,000 ^r | 2,020,000 ^r | 2,130,000 | 99,000 ⁸ | 4.6 |
| Clays: | | | | | | | | |
| Bentonite | | 10,300 | 10,400 | 10,300 | 10,300 ^r | 10,500 | 4,060 | 38.7 |
| Fuller's earth | metric tons | 4,470,000 ^r | 4,600,000 ^r | 4,520,000 ^r | 5,390,000 ^r | 5,060,000 | 3,260,000 | 64.4 |
| Kaolin | | 44,700 ^r | 45,100 ^r | 43,300 ^r | 44,400 ^r | 44,400 | 7,760 | 17.5 |

See footnotes at end of table.

TABLE 9—Continued
WORLD AND U.S. PRODUCTION OF SELECTED NONFUEL MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

| Mineral or product | | World total | | | | | United States | |
|--|--------------------|------------------------|------------------------|------------------------|------------------------|-----------|-----------------------|---------------------------|
| | | 2000 | 2001 | 2002 | 2003 | 2004 | 2004 | Percentage of world total |
| Industrial minerals—Continued: | | | | | | | | |
| Diamond, natural | thousand carats | 122,000 ^r | 127,000 ^r | 140,000 ^r | 159,000 ^r | 156,000 | -- | -- |
| Diatomite | metric tons | 1,970,000 ^r | 1,950,000 ^r | 1,880,000 ^r | 1,910,000 ^r | 1,930,000 | 620,000 ⁷ | 32.1 |
| Feldspar | | 9,540 | 10,400 | 10,800 ^r | 11,200 ^r | 11,100 | 770 | 6.9 |
| Fluorspar | metric tons | 4,450,000 ^r | 4,590,000 ^r | 4,440,000 ^r | 4,860,000 ^r | 5,060,000 | -- | -- |
| Graphite, natural | do. | 846,000 | 803,000 | 929,000 ^r | 974,000 ^r | 982,000 | -- | -- |
| Gypsum | | 108,000 ^r | 105,000 ^r | 104,000 ^r | 107,000 ^r | 111,000 | 17,200 | 15.5 |
| Iodine, crude | thousand kilograms | 19,500 | 20,700 | 21,000 | 24,600 ^r | 24,700 | 1,130 | 4.6 |
| Lime | | 121,000 ^r | 121,000 ^r | 119,000 ^r | 124,000 ^r | 126,000 | 20,000 ^{7,8} | 16.0 |
| Magnesite, crude ⁵ | | 12,700 | 11,100 | 13,600 ^r | 14,000 ^r | 14,500 | W | NA |
| Mica, including scrap and flake ⁹ | metric tons | 328,000 ^r | 368,000 ^r | 269,000 ^r | 267,000 ^r | 288,000 | 99,200 | 34.5 |
| Nitrogen, N content of ammonia | | 108,000 | 105,000 | 109,000 ^r | 110,000 ^r | 117,000 | 8,850 ¹⁰ | 7.6 |
| Peat | | 24,700 | 25,700 | 28,500 ^r | 26,000 ^r | 27,600 | 696 | 2.5 |
| Perlite | metric tons | 1,940,000 ^r | 1,730,000 ^r | 1,820,000 ^r | 1,880,000 ^r | 1,950,000 | 508,000 ⁷ | 26.1 |
| Phosphate rock ³ | | 132,000 | 126,000 | 135,000 | 137,000 | 141,000 | 35,800 | 25.4 |
| Potash, K ₂ O equivalent | | 27,000 | 26,400 ^r | 26,600 ^r | 28,400 ^r | 28,900 | 1,300 | 4.5 |
| Pumice | | 13,700 | 14,400 ^r | 15,100 ^r | 15,600 ^r | 16,100 | 1,491 ⁷ | 9.3 |
| Salt | | 195,000 ^r | 199,000 ^r | 195,000 ^r | 199,000 ^r | 208,000 | 46,500 ⁸ | 22.3 |
| Sand and gravel, industrial, silica | | 114,000 ^r | 114,000 ^r | 113,000 ^r | 113,000 ^r | 115,000 | 29,700 ⁷ | 25.8 |
| Soda ash, natural and manufactured | | 34,300 ^r | 35,500 ^r | 36,800 ^r | 38,000 ^r | 40,300 | 11,000 ¹¹ | 27.2 |
| Sulfur, all forms | | 59,300 ^r | 59,500 ^r | 60,600 ^r | 61,900 ^r | 64,100 | 10,110 | 15.8 |
| Talc and pyrophyllite ¹² | metric tons | 8,730,000 ^r | 9,060,000 ^r | 7,810,000 ^r | 8,320,000 ^r | 8,320,000 | 857,000 | 10.3 |
| Titanium concentrates: ³ | | | | | | | | |
| Ilmenite and leucoxene | do. | 4,940,000 ^r | 5,110,000 ^r | 5,420,000 ^r | 5,690,000 ^r | 5,640,000 | 500,000 ¹³ | 8.9 |
| Rutile ⁵ | do. | 409,000 ^r | 421,000 ^r | 446,000 ^r | 361,000 ^r | 353,000 | (14) | NA |
| Vermiculite | do. | 521,000 ^r | 431,000 ^r | 498,000 ^r | 491,000 ^r | 510,000 | 100,000 | 19.6 |

^rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in "World" total. -- Zero.

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

²Primary.

³Gross weight.

⁴Individual 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.

⁶Includes tin content of alloys made directly from ore.

⁷Quantity sold or used by producers.

⁸Includes Puerto Rico.

⁹Excludes, if any, U.S. production of low-quality sericite and sheet mica.

¹⁰Synthetic anhydrous ammonia; excludes coke oven byproduct ammonia.

¹¹U.S. production is natural only.

¹²Data for the United States exclude proprietary pyrophyllite production.

¹³Includes rutile to avoid disclosing company proprietary data. Rounded to one significant digit.

¹⁴Included with ilmenite to avoid disclosing company proprietary data; not included in "Total."