



2005 Minerals Yearbook

ITALY

THE MINERAL INDUSTRY OF ITALY

By Harold R. Newman

Although Italy has been a significant processor and consumer of imported raw materials, the country is relatively poor in mineral resources. Deposits of coal, iron, metallic minerals, and petroleum are not substantial. In 2005, Italy continued to be a leading producer of cement, crude steel, dimension stone, feldspar, marble, and pumice and to supply a significant portion of its own needs for some minerals. Industrial mineral production, including construction materials, was an important sector of the economy. Italy was a significant processor of imported raw materials and a consumer and exporter of metal and mineral semimanufactured and finished products. Mining contributed only a small portion of the gross domestic product (GDP). Italy was almost entirely dependent on imports of natural gas and petroleum to meet its energy needs.

The country is a peninsula in southern Europe that is surrounded on the west by the Tyrrhenian Sea and on the east by the Adriatic Sea. It is bounded by France, Switzerland, Austria, and Slovenia to the north. Italy includes several islands, the largest of which are Sicily, 25,708 square kilometers (km²), and Sardinia, 24,090 km², and has a surface area of 301,000 km². In 2005, the GDP based on purchasing power parity was \$1.7 trillion. The GDP per capita based on purchasing power parity was \$28,760. The annual change in inflation was 2.3% and the unemployment rate was 8.1% (International Monetary Fund, 2006§).

Government Policies and Programs

Italy was one of the 11 founding members of the European Economic and Monetary Union; it was the world's seventh ranked economy and the fourth ranked economy in Europe in 2005. The Government continued to play a role in the economy through regulation of ownership of large industrial and financial companies; privatization and regulatory reform in accordance with European Union (EU) directives, however, had reduced that presence.

Environmental Issues

Environmental issues in Italy were focused on three main problem areas—air pollution from industrial emissions, such as sulfur dioxide; water pollution of coastal and inland rivers from industrial and agricultural effluents; and weak environmental laws. Possible natural hazards included landslides, avalanches, volcanic eruptions, and land subsidence in Venice (U.S. Central Intelligence Agency, 2006§).

Production

Mining of such metallic ores as lead, silver, and zinc was not regionally significant. Gold was produced by one company, Sargold Resource Corp., near Cagliari, Sardinia.

Production of industrial minerals, which included construction materials, was estimated to be the most important sector of the mineral industry; the overall estimated output remained about the same as that of 2004. Domestic production of natural gas and crude petroleum also remained about the same as that of 2004.

Private and public companies own facilities for the mining and processing of minerals and mineral products (table 2). Some enterprises were under state control for such economic reasons as to maintain employment.

Commodity Review

Metals

Bauxite and Alumina and Aluminum.—Euroallumina S.p.A. was an international joint venture between Comalco Ltd. (56.2%) and Glencore International AG (43.8%) and operated a plant in the Porto Vesme Industrial Area in southwestern Sardinia; the plant produced metallurgical-grade alumina and aluminum hydrate for joint-venture participants. Part of the alumina produced (about 25%) was used at Alcoa Italia S.p.A.'s Porto Vesme smelter, for which Euralumina was the sole supplier. The rest of the production was sold on the international market (Comalco Ltd., 2005§).

Vendani Carlo Metalli S.p.A. held negotiations with Novelelis S.p.A. to buy Novelis's cast alloy smelter in Borgofranco d'Ivrea. The talks appeared to be nearing the end of a long-running process to sell the smelter that was no longer considered a core asset of the Alcan Inc. spinoff. Verdani produced about 170,000 metric tons per year (t/yr) of primary and secondary aluminum at two plants in Pavia (Metal Bulletin, 2005).

Copper.—Società Metalli Italia S.p.A., which was the leading producer of electrorefined copper in Italy, accounted for more than one-half of Italy's refined copper output. Copper mines in Italy were not in production in 2005, and imports of ore were small. The production was mainly from scrap.

Gold.—Medoro Resources Ltd. announced that it had sold all its Italian assets to Sargold Resource Corp. The assets included Gold Mines of Sardinia Pty Ltd.'s (GMS) mining operations at Furtei, the undeveloped gold property at Osilo, and the Monte Ollasteddu gold project. GMS stated that it would continue to evaluate properties in the natural gas and petroleum sectors, with emphasis in South America (Medoro Resources Ltd., 2005§).

Iron and Steel.—The Riva Group consisted of several companies that operated in the iron and steel production sector. The Riva Acciaio S.p.A. group of seven plants included the Lesegno works, which had a 95-metric-ton (t) electric furnace, a ladle furnace, a 6-strand continuous casting machine, and a rolling mill for rounds and billets; the Verona works, which had two 85-t electric furnaces, one ladle furnace, two 6-strand continuous casting machines, and a rolling mill; the Caronno Pertusella works, which had an 80-t electric furnace, a ladle furnace, and a 6-strand continuous casting machine; the Sellero

¹References that include a section mark (§) are found in the Internet References Cited section.

works, which had two pusher reheat furnaces and a rolling mill for beals; the Cerveno works, which had a pusher reheat furnace and a rolling mill; the Malegno works, which had three drawing lines for round, ground, and drawn bars; and the Annone Brianza works, which had 10 rolling mills for wire rod and 8 welding machines for mesh. Riva, which was the leader in the steel sector in Italy, ranked 4th in Europe and 11th in the world. The main production of the group in 2005 was 17.5 million metric tons (Mt) of raw steel, 9.1 Mt of black coil, 4.2 Mt of wire rod, 2.2 Mt of concrete-reinforcing steel, 1.2 Mt of quatro plates, 1 Mt of rolled bars and billets, 0.7 Mt of welded pipe, and 0.4 Mt of hollow sections (Riva Group, 2005§).

Acciaierie e Ferriere Vicentine Beltrame S.p.A. (AFV-Beltrame) was the European leader in the production of commercial rolled sections used in building and of iron for construction of civil and industrial works; it was the main producer of special bars for earth-moving machines and for shipbuilding. AFV-Beltrame was part of the Beltrame Group of eight plants that were located in Belgium, France, Italy, and Luxembourg (Acciaierie e Ferriere Vicentine Beltrame S.p.A., 2005§).

Lucchini S.p.A. had a fully integrated plant at Piombino that produced both finished long products and semifinished flat and long products. Lucchini was the leading producer of high-quality wire rod and hot-rolled long products and was one of a few European manufacturers able to produce high-quality seamless rails of 108 meters (m) in length. In 2005, it produced about 2.4 Mt of crude steel and was one of the European leaders in the production of special steel long products (Lucchini S.p.A., 2005b§).

Lucchini and the Severstal Group of Russia announced the signing of an agreement for the Russian steel concern to acquire a 62% stake in Lucchini. The transaction would cost €450 million (\$576 million²), which Severstal would pay from its existing cash fund. The deal was expected to benefit both parties substantially. Severstal would be able to leverage off an established European platform and a complementary range of engineering steel long products, and Lucchini would preserve its integrity and benefit from a partnership with a world-class, financially strong steelmaker. Lucchini was reported to have been losing about one-quarter of a billion dollars per year and was carrying a debt of about \$2.4 billion (Lucchini S.p.A., 2005a§).

Lead and Zinc.—Italy imported most of its requirements for lead and zinc concentrates. Within Italy, a minor amount of lead and zinc concentrate production came from mines on Sardinia Island.

Glencore International AG announced that it was considering closing the zinc imperial smelting furnace (ISF) at its Porto Vesme lead and zinc plant. The rest of the plant, which included an electrolytic zinc refinery, a Kivcet lead smelter, and a lead refiner, would not be affected. The ISF operation had been closed in 2003 owing to high electricity costs and then reopened in 2004 when the Government agreed to provide a subsidy to help with electricity costs. The European Commission (EC) deemed that subsidy illegal. Another shutdown was likely

²Where necessary, values have been converted from European Union euros (€) to U.S. dollars (\$) at the rate of €1.00=\$1.28.

when the stockpile of concentrates is used up (American Metal Market, 2005§).

Industrial Minerals

Barite.—Società Mineraria Baritina S.p.A. (SMB) mined barite from two locations in northern Italy. SMB's production capacity was 20,000 t/yr, which was mainly used in making paint and drilling-grade material. SMB's main markets were Italy and Spain.

Bentonite.—Laviosa Chimica Mineraria S.p.A.'s activities included two facilities at Livorno and one on Sardinia Island. The bentonite operation on Sardinia served the cat litter market. Bentonite was mined, processed, packaged, and delivered directly from Sardinia Island (Laviosa Chimica Mineraria S.p.A., 2005§).

Cement.—Buzzi Unicem S.p.A. was active in the production and distribution of cement, ready-mix concrete, and related products. Buzzi Unicem operated 12 plants, 1 grinding facility, and 4 sea terminals located throughout the country; the company had a production capacity of about 9.5 Mt/yr of portland cement and an estimated market share of 17% (Buzzi Unicem S.p.A., 2005§).

Italcementi Fabbriche Riunite Cemento S.p.A., which was part of the Italcementi Group, announced the completion of work on the that tunnel links the raw materials quarry with the Nuova Calusco cement plant. The tunnel, which runs underground for its entire length, was nearly 10 km long, was fully automated, and conveyed 600 metric tons per hour of material. The tunnel was part of a revamping of the works at an investment cost of €150 million (\$192 million); the effort was focused on relocation of facilities and included the replacement of four old kilns with a new one (Italcementi Group, 2005b§).

Italcementi was making a direct move into the sea transport of loose cement. The ship *Turbocem* was a self-unloading cement carrier with a 5,500-t net load capacity. The investment to construct the vessel totaled about €6.5 million (\$10.8 million) and represented Italcementi's first step in the strategy to become a major presence in the sea transport of loose cement (Italcementi Group, 2005a§).

Gypsum.—Fassa S.r.l.'s gypsum processing plant continued to burn and process gypsum extracted from a nearby quarry. The plant was completely automatic from the discharge of raw gypsum to the bagging of the finished product.

Lime.—The Italian lime industry had a quicklime production of about 1.8 Mt/yr. Unicalce S.p.A., which had a capacity of about 500,000 t/yr, was the leading producer of quicklime. Most of the lime production was concentrated in Lombardy (Paginegialle Italy, 2005§).

Potash.—Production of potash had been suspended since 2002. The main reasons continued to be the shortage of ground water and the inability to remove waste material and mine water owing to environmental and ecological concerns. The underground mines in Sicily that had been operating at Pasquasia, Racalmuto, and Realmonte remained on care and maintenance status.

Pumice and Pumicite.—Pumex S.p.A. was one of the world's major producers of pumice powders. The mineral was

extracted and processed on the island of Lipari, which is the largest of the Aeolian Islands located off the northeastern coast of Sicily. Pumex, which had a capacity of about 600,000 t/yr, was Italy's leading pumice producer. The company quarried the Mount Pelato deposit and supplied lightweight aggregates for concrete, grout, and mortar for the construction industry. These products were exported worldwide (Pumex S.p.A., 2005§).

Stone, Dimension.—Marble occurs in many localities from the Italian Alps to Sicily and was quarried at hundreds of operations. The most important geographic area for producing white marble is in the Apuan Alps in Tuscany, particularly near the town of Carrara. Lombardy, the Po Valley, Puglia, and Verona-Vincenza on the mainland and the island of Sicily are important colored-marble-producing areas. About one-half of the production was in block form. Other major marble-producing areas included the Valle di Susa, which is located near Benevento and Turin.

Mineral Fuels and Other Sources of Energy

The Government has expressed a commitment to improve conditions for companies looking to drill and develop natural gas and petroleum fields in the country. The reorganization of the energy sector has been set to enable the relaunch of the Italian upstream sector so that it can play a growing role in Europe's natural gas and petroleum industries, especially at a time when the energy markets of the EU were in the process of being deregulated with a view toward future integration (Offshore Engineer, 2005).

Coal.—Coalcorp Mining Inc., formerly Adobe Ventures Inc., entered into an agreement with Sardegna Energy Ltd. (SEL) to upgrade and operate the Carbosulcis Mine in Sardinia and to develop and operate an integrated gasification powerplant. SEL provided the Regional Administration of Sardegna (RAS) with a feasibility study for establishing the ability to use gasification technology to convert the Corbosulcis coal into power. The Carbosulcis project consisted of an integrated concession that covered a coal mine and a proposed 450-megawatt (MW) powerplant situated in the industrial zone of Porto Vesme. Although RAS publicly supported the Carbosulcis acquisition and began the process of awarding the concession for the Carbosulcis coal mine, Coalcorp decided to write off costs related to the Carbosulcis acquisition and not proceed with the project because of continuing political and administrative barriers and delays (Resource World Magazine, 2005§).

Geothermal Energy.—Geothermal energy continued to be produced in the Larderello, the Monte Amiata, and the Travale areas in Tuscany. Exploration that used various geologic techniques was being actively pursued in these areas, and research for power stations that exploit geothermal energy was continuing.

Natural Gas and Petroleum.—Italy was less than 20% self-sufficient in energy. Italy's natural gas reserves were estimated to be 226.5 billion cubic meters, and its petroleum reserves were estimated to be 622 million barrels. Italy imported 84% of its natural gas requirements and 93% of its petroleum requirements for domestic consumption. The leading sources of imports of natural gas were Algeria (38%), Russia (32%), and the

Netherlands (14%). The leading sources of imports of petroleum were Libya (25%), the former Soviet Union (23%), and Saudi Arabia (13%). Italy was the fourth ranked consumer of energy in Europe (U.S. Energy Information Administration, 2006§).

Edison S.p.A. of Italy and Depa SA of Greece signed an agreement to build an 800-km natural gas pipeline between the two countries at a cost of €950 million (\$1.2 billion). The project was scheduled to be completed by 2010 when 60% of Italy's electric energy would be produced by gas-powered generating stations. The pipeline would allow Italy to import from 8 billion to 10 billion cubic meters per year from the Caspian Sea and the Middle East (Alexander's Gas & Oil Connections, 2005§).

Azienda Energetical Municipale (AEM) and Electricité de France (EDF) received EC approval to take control of Edison in a deal that valued the power group at \$9.9 billion. Edison was Italy's second ranked power group after Enel S.p.A. (EN). Under the multistage deal, AEM, EDF, and other partners would buy the holding company Italennergia S.p.A., which owned 62% of Edison. They would then be forced by Italian law to launch a full takeover bid for Edison (Reuters, 2005§).

Nuclear Energy.—EDF and EN signed a memorandum of understanding for the joint development of the new-generation European Pressurized Reactor (EPR) program. The EPR is a third generation fission pressurized water reactor (PWR) design. It was designed and developed mainly by Electricité de France, Framatome NP, and Siemens AG. The main design objectives were increased safety, enhanced economic competitiveness, and improvements to previous PWR designs. The reactor would have an electrical power output of 1,600 MW and could use 5% enriched uranium oxide or a mixed uranium plutonium oxide fuel (Enel S.p.A., 2005§).

Eni S.p.A. purchased 50% of Siciliana Gas S.p.A. from Sicily's industrial development agency, which raised its holding to 100%. Siciliana Gas operated 2,600 km of pipelines on Sicily and supplied 190 million cubic meters per year of gas in 2005. The cost of the purchase was \$117.6 million (Petroleum Economist, 2005).

Outlook

Mining of metallic ores is expected to cease altogether owing to depletion of reserves. The metals-processing industry, which is based primarily on imported raw materials, is expected to continue to play an important role in Italy's economy. Italy is expected to remain a leading producer of crude steel and a significant producer of secondary aluminum in the EU.

The industrial minerals quarrying industry and preparation plants are expected to remain significant, especially in the production of barite, cement, clays, fluorspar, marble, and talc. Italy is expected to continue to be a leading producer of feldspar, feldspathic minerals, and pumice.

Although production has been relatively stagnant during the past 5 years, domestic outputs of natural gas, crude petroleum, and petroleum refinery derivatives are expected to grow. Italy will continue to depend on imported coal, gas, and petroleum for most of its energy needs. Because of the energy shortage in the country, nuclear power will become more viable.

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Major Sources of Information

- Associazione Mineraria Italiana
Via delle Madonne, 20
00197 Rome, Italy
- Ministero dell'Industria del Commercio e dell'Artigianato
Direzione Generale delle Miniere
Via Molise, 2
00184 Rome, Italy

TABLE 1
ITALY: ESTIMATED PRODUCTION OF MINERAL COMMODITIES^{1, 2}

(Metric tons unless otherwise specified)

Commodity	2001	2002	2003	2004	2005
METALS					
Aluminum:					
Alumina, calcined basis	950,000	925,000	975,000	950,000	950,000
Bauxite	thousand metric tons	300	300	300	300
Metal:					
Primary	187,400 ³	190,000	191,000	195,400 ³	192,900 ³
Secondary	574,900 ³	590,000	594,000	619,000 ³	654,100 ³
Total	762,300 ³	780,000	785,000	814,400 ³	847,000 ³
Antimony oxides, gross weight ⁴	600	500	500	500	500
Bismuth metal	5	5	5	5	5
Cadmium metal, smelter	313	390	22 ³	--	--
Copper, metal, refined, all kinds	35,500	32,400	26,700 ³	33,600	32,200
Gold, mine output, Au content	kilograms	503	600	500	100
Iron and steel, metal:					
Pig iron	thousand metric tons	10,650	9,736 ³	10,148 ^{r, 3}	10,604 ^{r, 3}
Ferrous alloys, electric furnace:					
Ferromanganese	40,000	40,000	40,000	40,000	40,000
Ferrosilicon	12,000	12,000	12,000	12,000	12,000
Silicomanganese	80,000	80,000	80,000	80,000	80,000
Silicon metal	5,978	6,000	6,000	-- ^r	--
Other	10,000	10,000	10,000	10,000	10,000
Total	147,978	148,000	148,000	142,000 ^r	142,000
Steel, crude	thousand metric tons	26,483	25,930 ³	26,832 ^{r, 3}	28,477 ^{r, 3}
Lead:					
Mine output, Pb content	1,000	500	500	500	500
Metal, refined:					
Primary	82,000	41,000	16,000	40,000 ³	49,500 ³
Secondary	121,000	152,000	198,000	162,000 ³	161,500 ³
Total	203,000	193,000	214,000 ³	202,000 ³	211,000 ³
Manganese, mine output, Mn content	1,000	500	500	500	500
Silver, mine output, Ag content	kilograms	3,500	3,500	3,000	3,000
Zinc, metal, primary	177,800	175,800 ³	123,100 ³	118,000	121,000 ³
INDUSTRIAL MINERALS					
Barite	10,809 ^{r, 3}	10,215 ^{r, 3}	12,214 ^{r, 3}	12,000 ^r	12,000
Bromine	300	300	300	300	300
Cement, hydraulic	thousand metric tons	39,885	40,000	40,000	38,000
Clays, crude:					
Bentonite	do.	579 ³	463 ^{r, 3}	474 ^{r, 3}	500 ^r
Refractory excluding kaolinitic earth	do.	700	700	700	700
Fuller's earth	do.	20	24 ^{r, 3}	5 ^r	5
Kaolin	do.	295 ^{r, 3}	175 ^{r, 3}	225 ^{r, 3}	250 ^r
Kaolinitic earth	do.	10	10	10	10
Diatomite	25,000	25,000	25,000	25,000	25,000
Feldspar	thousand metric tons	3,240 ^{r, 3}	3,159 ^{r, 3}	2,972 ^{r, 3}	3,000 ^r
Fluorspar:					
Acid-grade	30,000	30,000	30,000	30,000	30,000
Metallurgical-grade	15,000	15,000	15,000	15,000	15,000
Total	45,000	45,000	45,000	45,000	45,000
Gypsum	thousand metric tons	1,559 ^{r, 3}	1,531 ^{r, 3}	1,784 ^{r, 3}	1,600 ^r
Lime, hydrated, hydraulic and quicklime	do.	2,500	2,500	2,200 ^r	2,200
Nitrogen, N content of ammonia	do.	434	391 ³	475 ^{r, 3}	532 ³
Perlite	60,000	60,000	60,000	60,000	60,000
Pigments, mineral, iron oxides, natural	500	500	500	500	500
Pumice and related materials:					
Pumice and pumiceous lapilli	thousand metric tons	600	600	600	600
Pozzolan	do.	4,000	4,000	4,000	4,000

See footnotes at end of table.

TABLE 1--Continued
 ITALY: ESTIMATED PRODUCTION OF MINERAL COMMODITIES^{1,2}

(Metric tons unless otherwise specified)

Commodity	2001	2002	2003	2004	2005	
INDUSTRIAL MINERALS--Continued						
Salt:						
Marine, crude ⁵	thousand metric tons	600	600	600	600	600
Rock and brine	do.	3,301 ^{r,3}	3,343 ^{r,3}	2,922 ^{r,3}	3,000 ^r	3,000
Sand and gravel:						
Volcanic sand	do.	100	100	100	100	100
Silica sand	do.	300	300	300	300	300
Other sand and gravel		100,000	100,000	100,000	100,000	100,000
Sodium compounds, n.e.s.:						
Soda ash	thousand metric tons	100	100	100	100	100
Sodium sulfate	do.	125	125	125	125	125
Stone:						
Calcareous:						
Alabaster	do.	25	25	25	25	25
Marble in blocks:						
White	do.	100	100	100	100	100
Colored	do.	3,000	3,000	3,000	3,000	3,000
Travertine	do.	2,500	2,500	2,500	2,500	2,500
Other:						
Granite	do.	100	100	100	100	100
Sandstone	do.	1,800	1,800	1,800	1,800	1,800
Slate	do.	100	100	100	100	100
Crushed and broken:⁶						
Dolomite	do.	700	700	700	700	700
Limestone	do.	120,000	120,000	120,000	120,000	120,000
Marl for cement	do.	14,000	14,000	14,000	14,000	14,000
Serpentine	do.	1,500	1,500	1,500	1,500	1,500
Quartz and quartzite	do.	30	30	30	30	30
Sulfur, recovered as elemental, in compounds, byproducts, other sources	do.	743	702 ³	692 ³	688 ³	680
Talc and related materials		126,868 ^{r,3}	125,040 ^{r,3}	122,849 ^{r,3}	125,000 ^r	125,000
MINERAL FUELS AND RELATED MATERIALS						
Asphalt and bituminous rock, natural		30,000	25,000	25,000	25,000	25,000
Coal:						
Lignite	thousand metric tons	10	10	10	-- ^r	--
Subbituminous, Sulcis coal		5	5	--	--	--
Coke, metallurgical	thousand metric tons	4,829	4,064 ³	4,500	4,500	
Gas, natural	million cubic meters	16,000 ^r	15,000 ^r	13,000 ^r	12,570 ³	13,000
Natural gas liquids	thousand 42-gallon barrels	350	350	350	350	350
Petroleum:						
Crude	do.	23,256	28,424 ³	30,000	30,000	30,000
Refinery products:						
Liquefied petroleum gas	do.	27,000	27,207 ³	27,000	27,000	27,000
Gasoline	do.	175,000	184,280 ³	175,000	175,000	175,000
Naphtha	do.	30,000	30,983 ³	30,000	30,000	30,000
Jet fuel	do.	36,000	36,000	36,000	36,000	36,000
Kerosene	do.	15,000	15,000	15,000	15,000	15,000
Distillate fuel oil	do.	262,000	289,913 ³	260,000	260,000	260,000
Residual fuel oil	do.	100,000	105,641 ³	100,000	100,000	100,000
Other	do.	46,000	46,000	46,000	46,000	46,000
Refinery fuel and losses	do.	1,700	1,700	1,700	1,700	1,700
Total	do.	693,000	737,000	691,000	691,000	691,000

^rRevised. -- Zero.

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

²Table includes data available through August 2006.

³Reported figure.

⁴Antimony content is 83% of gross weight.

TABLE 1--Continued
ITALY: ESTIMATED PRODUCTION OF MINERAL COMMODITIES^{1, 2}

⁵Does not include production from Sardinia and Sicily, which was estimated to be 200,000 metric tons per year.

⁶Output of limestone and serpentine for dimension stone is included with "Stone: Crushed and broken." In addition to the commodities listed, a variety of other dimension stone was produced and previously listed, but available general information was inadequate for continued reliable estimates of output.

TABLE 2
ITALY: STRUCTURE OF THE MINERAL INDUSTRY IN 2005

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina	Eurallumina S.p.A. (Comalco Ltd., 56.2%, and Glencore International AG, 43.8%)	Plant at Portoscuso, Sardinia	1,000
Aluminum	Alcoa Italia S.p.A. (Alcoa Inc., 100%)	Smelters at Porto Vesme, Sardinia, and Fusina, near Venice	188
Asbestos	Amiantifera di Balangero S.p.A.	Mine at Balangero, near Turin	100
Barite	Bariosarda S.p.A. (Ente Mineraria Sarda)	Mines at Barega and Mont'Ega, Sardinia	100
Do.	Edem S.p.A. (Government)	Mines at Val di Castello, Lucca	20
Do.	Edemsarda S.p.A. (Soc. Imprese Industriali)	Mines at Su Benatzu, Sto Stefano, and Peppixeddu, Sardinia	
Do.	Società Mineraria Baritina S.p.A.	Mines at Marigolek, Monte Elto, and Primaluna, near Milan	20
Bauxite	Sardabauxiti S.p.A. (Cogein S.p.A., 40%; Comtec S.p.A., 40%; Icofin Co., 20%)	Mine at Olmedo, Sardinia	350
Bentonite	Industria Chimica Carlo Laviosa S.p.A.	Mines and plant on Sardinia Island, and a plant near Pisa	250
Cement	52 companies, of which the largest are: Italcementi Fabbriche Riunite Cemento S.p.A.	18 plants, of which the largest are Calusco, Monselice, and Collefero	15,000
Do.	Buzzi Unicem Group	11 plants, of which Guidonia, Lugagnano, Morano, Piacenza, S'Arcangelo di Romagna, and Settimello are the largest	9,000
Do.	Cementerie del Tirreno S.p.A. (Cementir)	6 plants at Arquasta Scivia, Livorno, Maddaloni, Napoli, Spoleto, and Taranto	5,300
Copper:			
Refined	Società Metalli Italia S.p.A.	Refinery at Porto Marghera	60
Refined, secondary	Europametalli - LMI S.p.A.	Refinery at Fornaci di Barga	24
Do.	Sitindustrie S.p.A.	Refinery at Pieve Vergonte	22
Feldspar	At least 5 companies, of which the largest are:		1,500
Do.	Maffei S.p.A.	Surface mines at Pinzolo and Campiglia	(200)
Do.	do.	Underground mine at Vipiteno	(300)
Do.	Miniera di Fragne S.p.A.	Surface mine at Alagna Valsesia	(60)
Do.	Sabbie Silicee Fossanova S.P.A. (Sasifo)	Surface mine at Fossanova	(30)
Gold	kilograms Sargold Resources plc.	Furtei Mine near Cagliari, Sardinia	1,400
Gypsum	Fassa S.r.l.	Plant at Moncalvo, Asti	90
Lead, metal	Glencore International AG	Refinery at San Gavino, Sardinia	100
Do.	do.	Kivcet smelter and Imperial smelter at Porto Vesme, Sardinia	35
Lignite	Ente Nazionale per l'Energia Electrica (ENEL)	Surface mine at Santa Barbara (closed)	1,000
Lime	Unicale S.p.A.	Plants in Lombardy region	500
Magnesium, metal	Società Italiana Magnesio S.p.A. (INDEL)	Plant at Bolzano	8
Marble	A number of companies, of which the largest include:		2,000
Do.	Mineraria Marittima Srl	Quarries in the Carrara and Massa areas	(500)
Do.	Industria dei Marmi Vicentini S.p.A.	do.	(300)
Do.	Figaia S.p.A.	do.	(100)
Nitrogen, N content of ammonia	Hydro Agri S.p.A.	Plant at Ferrara	410
Petroleum:			
Crude	Ente Nazionale Idrocarburi (ENI), Government 100%	Oilfields: offshore Sicily, the Adriatic Sea, and onshore in Po River Valley	90
Refined	thousand 42-gallon barrels per day do.	About 30 refineries	2,000

TABLE 2--Continued
 ITALY: STRUCTURE OF THE MINERAL INDUSTRY IN 2005

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Potash ore	Industria Sali Otassici e Affini per Aziono S.p.A.	Underground mines at Corvillo, Pasquasia, Racalmuto, and San Cataldo, in Sicily (closed)	1,300
Do.	Sta Italiana Sali Alcalini S.p.A. (Italkali)	Underground mines at Casteltermini and Pasquasia, Sicily	700
Pumice	Pumex S.p.A.	Quarries, Lipari Island, north of Sicily	600
Do.	Sta Siciliana per l'Industria ed il Commercio della Pomice di Lipari S.p.A. (Italpomice S.p.A.)	do.	200
Pyrite	Nuova Solmine S.p.A.	Underground mines at Campiano and Niccioleta	900
Salt, rock	Sta Italiana Sali Alcalini S.p.A. (Italkali)	Underground mines at Petralia, Racalmuto, and Realmonte, Sicily	4,000
Do.	Solvay S.p.A.	Underground mines at Buriano, Ponteginori, and Querceto, Tuscany	2,000
Steel	Ilva S.p.A. (Riva Group)	5 steel plants, the largest of which is Taranto (1,500)	4,000
Do.	Riva Acciaio S.p.A. (Riva Group)	7 steel plants	7,000
Do.	Acciaierie e Ferriere Vicentine Beltrame S.p.A. (AFV-Beltrame S.p.A.)	Steel plant at Vicenza	1,000
Talc	Luzenac Val Chisone S.p.A.	Mines at Pinerolo, near Turin, and at Orani, Sardinia	120
Do.	Talco Sardegna S.p.A.	Mine at Orani, Sardinia	20
Zinc, metal	Glencore International AG	Plant at Porto Vesme, Sardinia	60
Do.	Pertulosa Sud S.p.A.	Plant at Crotona, Calabria	100

TABLE 3
ITALY: EXPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
METALS			
Alkali and alkaline-earth metals:			
Alkali metals	470,527	--	Ethiopia 287,500; Syria 40,000; Romania 20,910.
Alkaline-earth metals	250,303	24	Egypt 102,000; Philippines 40,000; Algeria 36,000.
Aluminum:			
Ore and concentrate	metric tons 41,109	--	South Africa 17,000; Croatia 9,134; Morocco 5,677.
Oxides and hydroxides	do. 643,189	190	Croatia 221,934; Slovenia 161,460; Slovakia 69,454.
Ash or residue containing aluminum	9,793,523	39,160	Spain 3,125,312; Germany 2,320,437; Norway 1,998,562.
Metal, including alloys:			
Scrap	26,750,168	--	Germany 6,320,183; France 5,070,109; China 3,433,875.
Unwrought	49,215,654	9,125	France 22,894,199; Germany 7,692,292; Slovenia 6,365,874.
Semimanufactures:			
Powders and flakes	metric tons 2,023	1	Germany 1,326; Hong Kong, China 241; unspecified Asia 71.
Rods, bars, profiles	do. 154,835	1,361	Germany 48,600; France 25,293; Spain 9,373.
Wire	do. 13,137	123	United Kingdom 1,615; Germany 1,347; Thailand 1,005.
Plates, sheets, strips	do. 147,886	779	Germany 27,453; France 19,876; Spain 19,375.
Foil	do. 121,352	3,859	Germany 27,173; France 17,797; United Kingdom 7,404.
Tubes and pipes	do. 27,896	123	Germany 5,632; France 4,765; United Kingdom 2,091.
Tube or pipe fittings	926,543	19,699	Egypt 139,542; Poland 96,730; Hungary 93,039.
Antimony:			
Ore and concentrate	99,866	38,000	Serbia and Montenegro 22,351; Czech Republic 12,000; Spain 7,375.
Oxides	211,550	--	Germany 42,851; Romania 42,500; Slovenia 36,976.
Metal, including alloys, all forms	7,919	--	Cyprus 5,000; Morocco 2,000; Slovenia 511.
Beryllium, metal, including alloys, all forms	290	--	Turkey 246; Slovenia 4; unspecified 40.
Bismuth, metal, including alloys, all forms	686	207	Mexico 246; Iran 97; Germany 74.
Cadmium, metal, including alloys, all forms	53,458	--	India 50,121; United Kingdom 2,437; Egypt 792.
Chromium:			
Ore and concentrate	3,805,591	38,000	Romania 1,051,250; Austria 853,500; Spain 468,500.
Metal, including alloys, all forms	4,183,717	--	Austria 2,232,937; France 909,000; Poland 328,812.
Cobalt:			
Ore and concentrate	40,233	--	United Kingdom 35,000; Austria 2,500; Portugal 1,437.
Oxides and hydroxides	122,370	593	Turkey 46,507; Belgium 24,027; Netherlands 20,238.
Metal, including alloys, all forms	171,895	62	Portugal 32,047; Germany 30,308; United Kingdom 27,968.
Columbium (niobium) and tantalum, metal, including alloys, all forms, tantalum	2,026	--	Spain 738; France 593; Israel 558.
Copper:			
Ore and concentrate	51,816	--	Germany 33,000; Israel 18,000; Morocco 500.
Matte and speiss, including cement copper	365,836	--	Belgium 217,210; Germany 142,386; Brazil 3,312.
Oxides and hydroxides	metric tons 649	--	Germany 307; Belgium 204; unspecified Asia 21.
Ash and residue containing copper	14,327,717	--	Germany 5,648,730; Spain 5,312,113; Belgium 2,657,062.
Metal, including alloys:			
Scrap	metric tons 98,567	26	Germany 28,345; Austria 25,092; China 21,516.
Unwrought	41,483,579	248,553	France 14,250,041; China 3,292,457; Germany 3,292,457.
Semimanufactures:			
Powders and flakes	4,893,257	694,875	Germany 1,478,847; Spain 763,749; France 464,937.
Rods, bars, profiles	metric tons 78,489	1,422	Germany 19,033; Spain 16,729; France 15,384.
Wire	52,117,618	299,985	Spain 27,311,193; France 5,956,421; Germany 3,161,702.
Plates, sheets, strips	metric tons 69,008	3,183	Germany 21,217; France 9,281; United Kingdom 6,365.
Foil	6,935,655	120,619	Austria 2,528,811; Spain 1,435,651; Germany 576,444.
Tubes and pipes	metric tons 74,763	106	Spain 19,947; France 15,506; United Arab Emirates 5,070.
Tube or pipe fittings	28,891,894	531,375	France 7,211,288; Germany 6,279,757; Spain 2,794,562.
Gold:			
Waste and sweepings	7,187	--	Germany 4,252; United Kingdom 2,839; Spain 82.
Metal, including alloys, unwrought and partly wrought	44,273	2,007	Switzerland 13,866; Croatia 10,519; France 6,491.

See footnotes at end of table.

TABLE 3—Continued
ITALY: EXPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
METALS—Continued			
Iron and steel:			
Iron and concentrate:			
Including roasted pyrite	11,324,161	--	France 10,860,000; Romania 194,140; Germany 105,285.
Excluding roasted pyrite	242,396	--	Romania 194,140; Hungary 47,566; Spain 468.
Pyrite, roasted	11,081,765	--	France 10,860,000; Germany 105,285; Finland 72,855.
Metal:			
Scrap	metric tons	210,770	12 France 89,427; China 54,317; Belgium 16,018.
Pig iron, cast iron, related materials	do.	41,661	173 Turkey 15,8823; Austria 10,075; Belgium 3,222.
Ferroalloys:			
Ferrosilicon	do.	8,910	-- Austria 3,977; Slovenia 2,013; Czech Republic 1,069.
Ferromanganese		9,145,860	-- Austria 3,435,562; Slovenia 1,553,937; Germany 841,199.
Ferromolybdenum		161,894	-- Spain 88,000; Germany 35,937; Netherlands 24,000.
Ferronickel		16,739	33 Germany 11,187; Venezuela 4,187; Bosnia and Herzegovina 1,000.
Ferrosilicochromium		2,000	-- All to Bosnia and Herzegovina.
Ferrosilicomanganese		3,162,827	-- Austria 1,707,937; Romania 583,000; Poland 341,812.
Ferrosilicon	metric tons	3,958	-- United Kingdom 848; Luxembourg 509; Slovenia 604.
Ferrotungsten and ferrosilicotungsten		2,296	-- Germany 1,500; Slovenia 796.
Ferrotitanium and ferrosilicotitanium		58,831	-- Germany 27,980; France 24,101; Slovenia 4,750.
Ferrovandium		59,675	1,937 Netherlands 50,000; Slovenia 3,000; France 2,250.
Ferroniobium		1,750	-- Slovenia 1,250; Venezuela 500.
Silicon metal		722,378	8,375 France 372,562; Spain 324,687; Thailand 4,625.
Unspecified		2,726,759	-- Syria 2,187,000; Hong Kong, China 105,859; Pakistan 55,343.
Steel, primary forms	metric tons	416,644	40,181 France 55,126; Germany 52,156; unspecified Asia 58,488.
Semimanufactures:			
Flat-rolled products:			
Of iron or nonalloy steel:			
Not clad, plated, coated	do.	3,347,648	179,166 France 618,690; Spain 529,878; Greece 485,116.
Clad, plated, coated	do.	1,299,058	5,954 Spain 311,636; France 181,663; Germany 137,576.
Of alloy steel	do.	869,014	34,022 Mexico 171,276; China 120,021; Germany 76,046.
Bars, rods, angles, shapes, sections	do.	4,048,046	235,450 Germany 879,311; France 659,149; Greece 350,020.
Rails and accessories	do.	101,273	9,552 United Kingdom 19,412; Namibia 29,285; Switzerland 12,618.
Wire	do.	426,073	27,492 France 69,731; Germany 47,792; Austria 41,878.
Tubes, pipes, fittings	do.	2,757,098	100,028 Germany 512,781; France 451,986; Spain 170,137.
Lead:			
Ore and concentrate		500	-- All to Hungary.
Oxides	metric tons	12,457	(1) Egypt 3,408; Slovenia 1,679; United Kingdom 1,672.
Ash and residue containing lead		15,742,882	-- All to Belgium.
Metal, including alloys:			
Scrap		1,991,755	-- France 1,053,437; Greece 810,687; Germany 76,910.
Unwrought		28,624,717	10,062 Spain 13,885,894; Turkey 6,407,875; Austria 3,292,812.
Semimanufactures		4,403,661	-- Czech Republic 2,639,999; France 1,440,272; Iran 66,777.
Lithium oxide and hydroxide		11,295	-- France 4,125; Switzerland 3,937; Romania 1,875.
Magnesium, metal, including alloys:			
Scrap		384,247	-- Brazil 178,238; Austria 92,621; United Kingdom 53,398.
Unwrought		4,211,002	-- Norway 3,562,812; United Kingdom 192,726; Brazil 122,122.
Semimanufactures		1,096,971	-- France 211,608; Germany 177,530; Austria 87,335.
Manganese:			
Ore and concentrate		225,474	-- Turkey 215,898; Spain 6,375; Slovenia 2,125.
Oxides	metric tons	148	-- Serbia and Montenegro 52; Poland 44; Slovenia 28.
Metal, including alloys, all forms		113,843	-- Luxembourg 56,000; France 25,617; Croatia 10,125.
Mercury		6,920	-- Tunisia 2,000; Cuba 1,875; Turkey 1,375.

See footnotes at end of table.

TABLE 3—Continued
ITALY: EXPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
METALS—Continued			
Molybdenum:			
Ore and concentrate:			
Roasted	283,029	--	Netherlands 168,023; Turkey 51,210; Germany 44,980.
Unroasted	52,507	--	France 40,300; Brazil 4,375; Belgium 4,062.
Oxides and hydroxides	20,815	--	Germany 20,812; unspecified 3.
Metal, including alloys:			
Scrap and unwrought	48,640	--	Germany 26,187; France 22,453.
Semimanufactures	129,252	48	Germany 116,996; France 4,937; Spain 2,000.
Nickel:			
Ore and concentrate	296	--	All to Iran.
Matte and speiss	246	238	Switzerland 8.
Oxides and hydroxides	41,875	--	Brazil 26,000; Germany 5,875; Belgium 5,000.
Metal, including alloys:			
Scrap	643,744	25,480	Germany 343,312; France 162,589; United Kingdom 91,363.
Unwrought	1,679,983	199	Germany 539,456; Portugal 172,144; France 145,109.
Semimanufactures	2,810,077	336,136	Germany 367,265; United Kingdom 302,355; China 204,261.
Platinum-group metals:			
Waste and sweepings	10,522	--	Switzerland 10,504; France 18.
Metal, including alloys, unwrought and partly wrought:			
Palladium	3,338	1,254	Switzerland 565; Germany 285; United Kingdom 255.
Platinum	6,332	1,342	France 1,729; Switzerland 1,324; United Kingdom 504.
Rhodium	544	1	Hong Kong, China 183; Switzerland 96; unspecified 36.
Iridium, osmium, ruthenium	328	--	Hong Kong, China 225; United Kingdom 9; unspecified 87.
Rare-earth metals, including alloys, all forms	80,645	26,148	Serbia and Montenegro 24,699; Iran 20,000; Belarus 5,625.
Selenium, elemental	6,794	--	United Kingdom 4,000; Brazil 1,750; Finland 250.
Silicon, high-purity	946,860	362,562	France 200,078; Japan 110,964; Malaysia 107,914.
Silver:			
Ore and concentrate value	\$1,421	--	All to Mexico.
Metal, including alloys, unwrought and partly wrought	638,475	9,532	Spain 105,422; France 63,942; Germany 56,303.
Tin:			
Ore and concentrate	19,937	--	France 19,121; United Kingdom 816.
Metal, including alloys:			
Scrap	179,758	--	Netherlands 103,796; United Arab Emirates 40,714; Canada 24,878.
Unwrought	405,046	152	Poland 122,229; Turkey 106,175; United Kingdom 47,371.
Semimanufactures	971,675	21,511	Austria 411,000; United Kingdom 120,160; Romania 81,163.
Titanium:			
Ore and concentrate	19,462	--	Spain 16,464; Portugal 2,187; unspecified 811.
Oxides	16,464,029	5,232,058	United Kingdom 1,598,312; Mexico 796,000; France 763,687.
Metal, including alloys:			
Powders, unwrought, scrap	176,105	40,796	Germany 69,410; Poland 19,378; unspecified Asia 17,199.
Semimanufactures metric tons	4,290	173	Germany 1,777; United Kingdom 276; France 229.
Tungsten:			
Ore and concentrate	500	--	All to Mexico.
Metal, including alloys:			
Scrap and unwrought	1,631	19	Germany 1,125; France 85; Slovakia 52.
Semimanufactures	403,223	175	Germany 209,316; Ethiopia 93,531; United Kingdom 68,826.
Vanadium:			
Oxides and hydroxides	13,426	156	Oman 12,500; Vietnam 769; unspecified 1.
Metal, including alloys, all forms	4,683	--	Algeria 3,375; Poland 1,187; Spain 97.

See footnotes at end of table.

TABLE 3—Continued
ITALY: EXPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
METALS—Continued			
Zinc:			
Ore and concentrate	metric tons	96,605	-- Belgium 30,364; Germany 20,313; France 18,328.
Oxides		12,009,868	-- Spain 6,548,015; France 2,286,125; Germany 1,140,000.
Blue powder		2,975,515	54 Belgium 1,269,812; Brazil 925,562; United Kingdom 726,437.
Ash and residue containing zinc		10,055,452	-- France 2,115,312; Austria 1,626,875; Netherlands 1,609,816.
Metal, including alloys:			
Scrap		15,156,921	-- China 9,411,246; India 3,458,875; Germany 511,812.
Unwrought		5,964,790	-- Slovenia 1,243,812; Tunisia 1,158,437; Austria 1,110,726.
Zirconium:			
Ore and concentrate		25,829,796	-- Turkey 8,410,000; Iran 4,594,113; Egypt 3,468,812.
Metal, including alloys:			
Scrap and unwrought		110,062	-- Switzerland 75,000; Spain 20,000; Romania 11,062.
Semimanufactures		331,328	-- Pakistan 116,800; Vietnam 75,000; Romania 42,101.
Other, ash and residue		53,502,956	170,324 Belgium 19,629,193; Germany 11,328,604; Spain 9,851,736.
INDUSTRIAL MINERALS			
Abrasives, n.e.s.:			
Natural: Corundum, emery, pumice, etc.	metric tons	337,176	147,200 United Kingdom 101,580; Germany 57,743; Netherlands 15,229.
Artificial:			
Corundum		31,037,257	5,159,269 Austria 7,247,496; Germany 6,428,980; France 2,006,000.
Silicon carbide		7,824,272	8,125 France 5,981,210; Germany 783,000; Turkey 202,160.
Dust and powder of precious and semiprecious stones, including diamond	value	\$3,632,892	\$36,210 Indonesia \$428,252; Hong Kong, China \$412,925; unspecified \$1,415,955.
Grinding and polishing wheels and stones		47,444,779	1,026,869 Spain 5,427,795; France 3,608,853; Turkey 2,002,390.
Barite and witherite		1,953,606	-- Croatia 1,118,750; Albania 439,750; Czech Republic 139,199.
Boron materials, crude natural borates		9,132,367	-- France 8,570,054; Slovakia 298,000; Germany 124,421.
Cement	metric tons	2,055,303	139 Albania 475,263; Spain 392,715; Malta 283,892.
Chalk		1,278,995	36,000 Syria 378,000; Romania 338,312; Greece 112,957.
Clays, crude:			
Bentonite	metric tons	258,918	20 France 71,562; Germany 62,355; Spain 52,096.
Chamotte earth and Dinas earth		2,518,397	-- Switzerland 1,691,812; Algeria 504,937; Finland 77,941.
Fire clay		608,149	20,000 Tunisia 261,812; Romania 98,222; Switzerland 50,750.
Fuller's earth	metric tons	72	-- Switzerland 57; Croatia 9; Serbia and Montenegro 2.
Kaolin		29,996,751	26,894 Austria 11,031,691; Spain 9,483,523; France 2,974,625.
Diamond, natural:			
Gem, not set or strung	value	\$49,947,762	\$4,446,606 Switzerland \$11,466,983; Hong Kong, China \$8,232,721; Israel \$9,642,965.
Industrial stones	do.	\$1,034,052	\$265,754 Hong Kong, China \$376,123; Switzerland \$160,691; Malta \$61,820.
Dust and powder	do.	\$3,597,179	\$34,380 Indonesia \$428,252; Hong Kong, China \$412,915; unspecified \$1,415,955.
Diatomite and other infusorial earth		1,741,374	226,582 Germany 364,625; Switzerland 284,250; Albania 104,917.
Feldspar	metric tons	204,221	-- Spain 185,546; Germany 6,739; Morocco 2,852.
Fertilizer materials:			
Crude, n.e.s.		93,616,066	197,722 Indonesia 51,180,230; Spain 12,429,484; France 9,330,519.
Manufactured:			
Ammonia		357,481	28,222 Ireland 142,687; Croatia 67,261; France 30,328.
Nitrogenous	metric tons	232,221	1,993 Turkey 63,031; Kenya 35,700; Greece 29,714.
Phosphatic		20,685,990	-- Morocco 15,732,113; Austria 2,246,500; Denmark 1,011,750.
Potassic	metric tons	1,174	-- Greece 225; Slovenia 152; Bosnia and Herzegovina 136.
Unspecified and mixed	do.	387,090	4,336 Turkey 65,129; Greece 65,129; Kenya 35,700.
Fluorspar	do.	23,108	-- Greece 18,090; Cyprus 4,730; Serbia and Montenegro 168.

See footnotes at end of table.

TABLE 3—Continued
ITALY: EXPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
INDUSTRIAL MINERALS—Continued			
Graphite, natural	659,807	2,198	Spain 179,996; Algeria 106,000; Germany 79,988.
Gypsum and plaster	50,416,417	5,030,862	France 17,214,917; Greece 6,225,937; Switzerland 6,054,753.
Iodine	3,074	--	Belgium 2,000; France 656; Czech Republic 199.
Kyanite and related materials:			
Andalusite, kyanite, sillimanite	14,375	--	All to France.
Mullite	109,132	--	France 92,070; Hungary 13,875; Brazil 3,187.
Lime metric tons	37,469	29	Mali 12,924; Serbia and Montenegro 10,509; France 3,965.
Magnesium compounds:			
Magnesite, crude	2,911,120	18,601	Spain 829,812; Thailand 671,000; France 235,472.
Oxides and hydroxides	9,783,764	36,398	Spain 2,464,062; France 2,014,875; Germany 842,125.
Other	82,196	--	Spain 71,000; Slovenia 7,000; Portugal 4,187.
Mica:			
Crude, including splittings and waste	657,570	144	Netherlands 337,500; United Kingdom 87,789; Costa Rica 51,480.
Worked, including agglomerated splittings	70,232	1,062	Romania 14,074; Ethiopia 8,625; Spain 7,812.
Nitrates, crude metric tons	286	--	Serbia and Montenegro 263; Israel 18; Switzerland 5.
Phosphates, crude do.	4,417	--	Switzerland 4,334; Serbia and Montenegro 69; Croatia 10.
Pigments, mineral, iron oxides and hydroxides, processed do.	26,273	8,293	Germany 5,710; United Kingdom 3,865; Spain 1,543.
Potassium salts, crude	2	--	Unspecified 2.
Precious and semiprecious stones other than diamond:			
Natural value, thousands	\$18,683	\$2,063	Switzerland \$6,338; Hong Kong, China \$2,039; Israel \$1,525.
Synthetic do.	\$5,244	\$92	Switzerland \$1,085; Hong Kong, China \$1,068; Turkey \$751.
Pyrite, unroasted	8,524,647	603,312	Germany 2,808,687; Luxembourg 2,018,687; Poland 421,812.
Quartz crystal, piezoelectric value	\$1,752,713	\$163,754	France \$425,004; Germany \$385,241; Spain \$217,483.
Salt and brine metric tons	290,046	57,164	Germany 68,061; Turkey 32,997; United Kingdom 27,008.
Sodium compounds, n.e.s., natural and/or manufactured, sulfate	988,047	--	Romania 338,812; Spain 172,785; Switzerland 118,250.
Stone, sand and gravel:			
Dimension stone:			
Crude and partly worked metric tons	944,854	36,857	China 167,816; Tunisia 74,116; Libya 58,374.
Worked do.	2,254,120	487,549	Saudi Arabia 153,327; Germany 132,859; Switzerland 119,112.
Dolomite, chiefly refractory-grade	55,400,406	34,890	France 37,092,038; Germany 3,749,750; India 2,517,000.
Gravel and crushed rock metric tons	1,486,629	2,463	Germany 352,611; Switzerland 272,587; Tunisia 138,297.
Limestone, other than dimension do.	305	--	French Polynesia 106; Saudi Arabia 86; Algeria 50.
Quartz and quartzite	33,576,900	22,375	France 19,207,432; Germany 3,526,749; Austria 2,236,230.
Sand other than metal-bearing	96,688,355	55,175	Switzerland 58,214,472; Spain 9,326,167; Germany 4,534,749.
Sand and gravel metric tons	1,583,318	2,519	Germany 357,146; Switzerland 330,802; Tunisia 138,617.
Sulfur:			
Elemental:			
Crude, including native and byproduct do.	171,480	(1)	Turkey 65,205; Tunisia 41,770; Croatia 18,151.
Colloidal, precipitated, sublimed do.	930	--	Germany 607; Croatia 244; Bosnia and Herzegovina 49.
Sulfuric acid do.	312,848	156	Spain 99,211; Tunisia 73,014; Turkey 44,828.
Talc, steatite, soapstone, pyrophyllite do.	124,715	520	Germany 49,647; Spain 21,702; Belgium 9,765.
Vermiculite, perlite, chlorite do.	28,887	--	France 14,301; United Kingdom 11,166; Germany 2,590.
Other, slag and dross, not metal-bearing do.	2,019,912	829,803	Spain 547,180; Croatia 404,814; Côte d'Ivoire 75,073.
MINERAL FUELS AND RELATED MATERIALS			
Asphalt and bitumen, natural	589,349	--	Dominican Republic 363,375; Lebanon 83,890; Serbia and Montenegro 57,953.
Carbon black	86,612,967	1,728,000	Turkey 24,159,183; Germany 17,552,039; Spain 14,953,324.

See footnotes at end of table.

TABLE 3—Continued
ITALY: EXPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
MINERAL FUELS AND RELATED MATERIALS—Continued			
Coal:			
Anthracite	32,225,203	30,043,210	France 506,437; Croatia 351,125; Sri Lanka 269,125.
Bituminous	metric tons 58,706	--	Croatia 54,247; Bosnia and Herzegovina 3,926; Lebanon 388.
Briquets of anthracite and bituminous coal	87,765	--	Hong Kong, China 60,574; Croatia 21,781; Mali 4,687.
Lignite, including briquets	119,611	--	Albania 112,597; Morocco 6,000; India 386.
All grades, including briquets	metric tons 92,435	30,043	Croatia 54,247; Bosnia and Herzegovina 3,926; France 1,140.
Coke and semicoke	do. 259,123	--	Germany 71,117; France 70,159; Turkey 22,822.
Gas, manufactured	2,127	--	Cuba 2,000; Tunisia 117; unspecified 10.
Gas, natural:			
Gaseous	metric tons 299,160	--	Croatia 248,682; Switzerland 41,218; Slovenia 4,417.
Liquefied	do. 387,540	--	Spain 387,507; Libya 15; Brazil 10.
Peat, including briquets and litter	5,681,181	--	Switzerland 1,704,687; Bosnia and Herzegovina 1,053,437; France 1,007,937.
Petroleum:			
Crude	metric tons 824,206	--	France 273,152; Turkey 150,244; Germany 131,325.
Refinery products:			
Liquefied petroleum gas	do. 608,794	26,397	Turkey 130,623; France 97,860; Tunisia 76,905.
Mineral jelly and wax	62,304,121	10,000	Germany 51,341,444; Netherlands 4,670,132; Spain 1,032,713.
Asphalt	metric tons 676,772	--	Spain 114,099; Tunisia 91,258; Romania 78,938.
Bitumen and other residues	do. 677,435	--	Spain 114,260; Tunisia 91,258; Romania 78,938.
Bituminous mixtures	2,255,842	--	Switzerland 615,312; Albania 457,687; Slovenia 195,109.
Petroleum coke	metric tons 124,129	--	Greece 44,550; France 34,400; Turkey 28,377.

¹Less than ½ unit.

Source: United Nations Statistics Division, Commodity Trade Statistics Database (COMTRADE), accessed August 23, 2006, at URL <http://unstats.un.org/unsd/comtrade>.

TABLE 4
ITALY: IMPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
METALS			
Alkali and alkaline-earth metals:			
Alkali metals	1,073,813	23,694	Germany 261,999; France 248,472; Belgium 204,875.
Alkaline-earth metals	276,620	17,687	Netherlands 216,171; China 40,800; Germany 1,437.
Aluminum:			
Ore and concentrate	metric tons 2,409,658	698	Australia 2,318,830; China 68,495; Guyana 11,587.
Oxides and hydroxides	do. 296,998	2,136	France 108,661; Spain 63,907; Germany 58,438.
Ash or residue containing aluminum	10,962,055	--	Australia 7,394,101; France 840,625; Greece 562,625.
Metal, including alloys:			
Scrap	metric tons 356,038	44	Germany 141,359; France 85,412; Switzerland 41,892.
Unwrought	do. 908,019	369	Mozambique 111,895; Russia 80,555; Serbia and Montenegro 77,104.
Semimanufactures:			
Powders and flakes	do. 4,487	585	Germany 1,857; United Kingdom 731; Spain 485.
Rods, bars, profiles	do. 39,273	282	Germany 11,035; Netherlands 4,186; Slovenia 3,154.
Wire	do. 40,797	803	France 14,217; South Africa 6,939; Spain 3,853.
Plates, sheets, strips	do. 384,589	1,268	Germany 120,281; United Kingdom 45,038; France 43,994.
Foil	56,080,674	214,057	Germany 16,406,503; France 5,744,784; Spain 5,410,209.
Tubes and pipes	metric tons 6,504	53	Belgium 2,221; Germany 1,497; Denmark 1,200.
Tube or pipe fittings	do. 410	8	Netherlands 93; Germany 92; United Kingdom 56.
Antimony:			
Ore and concentrate	878,881	226	Bolivia 786,937; Belgium 44,000; Spain 24,000.
Oxides	5,531,150	316	China 2,201,000; France 1,490,812; Belgium 1,244,875.
Metal, including alloys, all forms	743,587	--	China 448,000; Belgium 95,910; Vietnam 50,000.
Arsenic, metal, including alloys, all forms	84,025	--	China 74,000; Netherlands 10,000; France 12.
Beryllium, metal, including alloys, all forms	15,399	12	China 13,312; United Kingdom 1,375; Germany 479.
Bismuth, metal, including alloys, all forms	174,608	97	Belgium 86,859; United Kingdom 31,164; Germany 22,660.
Cadmium, metal, including alloys, all forms	86,968	1	Macedonia 37,578; Peru 35,000; Germany 14,332.
Chromium:			
Ore and concentrate	metric tons 31,166	--	South Africa 27,711; France 1,221; Albania 1,088.
Oxides and hydroxides	do. 5,875	9	United Kingdom 1,661; Russia 1,288; Kazakhstan 753.
Metal, including alloys, all forms	676,927	5,628	France 371,625; Austria 120,010; United Kingdom 100,632.
Cobalt:			
Ore and concentrate	121,960	--	Germany 120,000; France 1,312; Belgium 648.
Oxides and hydroxides	1,013,336	--	Russia 344,750; Belgium 244,824; Finland 172,523.
Metal, including alloys, all forms	464,499	8,062	Belgium 158,558; France 88,385; Finland 66,264.
Columbium (niobium) and tantalum, metal, including alloys, all forms, tantalum	1,722	615	Germany 522; Austria 394; Japan 85.
Copper:			
Ore and concentrate	462,725	--	Germany 379,000; Greece 38,910; France 30,140.
Matte and speiss, including cement copper	5,804	--	United Kingdom 5,750; Netherlands 52; unspecified 2.
Oxides and hydroxides	804,663	264,875	Germany 229,070; Mexico 93,558; Belgium 67,019.
Sulfate	703,182	--	Germany 383,562; Spain 125,027; France 72,511.
Ash and residue containing copper	624,132	--	France 379,625; Spain 194,429; Belgium 27,078.
Metal, including alloys:			
Scrap	metric tons 131,130	27	Germany 31,124; France 30,307; Spain 13,363.
Unwrought	do. 717,792	5,316	Chile 424,218; Peru 63,917; Russia 51,026.
Semimanufactures:			
Powders and flakes	3,158,185	51,667	Germany 1,495,640; Serbia and Montenegro 577,562; United Kingdom 320,011.
Rods, bars, profiles	36,734,627	32,323	Germany 15,101,791; France 7,583,003; Spain 3,981,343.
Wire	metric tons 194,361	260	France 79,296; Germany 49,730; Spain 35,431.
Plates, sheets, strips	do. 85,025	35	Germany 38,433; Finland 13,346; France 10,492.
Foil	13,236,102	36,111	China 2,698,207; Spain 1,760,433; Germany 1,454,920.
Tubes and pipes	54,614,941	170,900	Germany 22,568,338; France 8,520,577; Greece 7,187,522.
Tube or pipe fittings	8,186,437	102,589	Germany 3,759,625; Spain 1,282,937; China 1,153,858.

See footnotes at end of table.

TABLE 4—Continued
ITALY: IMPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
METALS—Continued			
Germanium, metal, including alloys, all forms	471	24	France 253; China 97; Belgium 70.
Gold:			
Waste and sweepings	44,652	--	France 25,062; United Kingdom 4,281; Germany 4,250.
Metal, including alloys, unwrought, and partly wrought	275,025	204	Switzerland 144,977; South Africa 64,401; Russia 31,386.
Iron and steel:			
Iron and concentrate:			
Including roasted pyrite metric tons	16,714,771	75	Brazil 11,031,416; Mauritania 1,716,705; Canada 1,375,520.
Excluding roasted pyrite do.	16,714,771	74	Do.
Pyrite, roasted	316	316	NA
Metal:			
Scrap metric tons	5,605,841	159,651	Germany 1,446,529; France 1,083,234; Austria 766,664.
Pig iron, cast iron, related materials do.	1,569,213	730	Ukraine 695,597; Russia 425,575; Brazil 61,155.
Ferroalloys:			
Ferrosilicon do.	400,184	179	South Africa 238,429; Zimbabwe 66,781; Albania 33,369.
Ferromanganese	82,875,162	--	Spain 21,809,152; Norway 18,707,027; France 18,004,612.
Ferromolybdenum metric tons	7,300	--	United Kingdom 2,314; Belgium 1,398; Austria 1,285.
Ferronickel do.	82,107	40	Colombia 26,740; Ukraine 12,953; Macedonia 12,182.
Ferrosilicochromium	5,000	--	All from Colombia.
Ferrosilicomanganese metric tons	183,260	--	Ukraine 28,271; Norway 27,163; India 24,087.
Ferrosilicon thousand metric tons	122	--	Netherlands 25; Bosnia and Herzegovina 13; France 10.
Ferrotungsten and ferrosilicotungsten	229,448	--	Netherlands 94,078; Luxembourg 60,000; Austria 39,601.
Ferrotitanium and ferrosilicotitanium	3,386,061	--	Germany 1,179,000; Netherlands 1,117,375; United Kingdom 725,500.
Ferrovandium	1,895,294	--	Austria 658,125; Netherlands 419,000; Germany 392,125.
Ferroniobium	1,402,683	--	Netherlands 1,161,500; Germany 188,246; Austria 47,000.
Silicon metal	46,150,763	7	Brazil 22,335,996; France 9,570,347; Germany 3,889,187.
Unspecified	17,228,134	--	Germany 7,473,988; France 2,612,812; Brazil 2,216,250.
Steel, primary forms metric tons	3,891,724	37	Ukraine 1,509,910; Russia 667,160; Turkey 373,152.
Semimanufactures:			
Flat-rolled products:			
Of iron or nonalloy steel:			
Not clad, plated, coated do.	6,588,187	725	Germany 814,974; Russia 774,827; France 747,119.
Clad, plated, coated do.	2,298,491	41,266	France 486,425; Germany 322,804; Austria 220,211.
Of alloy steel do.	2,326,297	18,346	France 754,955; Germany 332,558; Netherlands 167,674.
Bars, rods, angles, shapes, sections do.	3,046,224	379	Germany 691,194; Turkey 400,335; Spain 241,858.
Rails and accessories	35,266,358	60	Austria 19,382,712; Luxembourg 5,673,132; France 5,406,690.
Wire metric tons	233,177	204	France 31,456; Austria 28,402; Ukraine 27,493.
Tubes, pipes, fittings do.	1,083,513	27,129	Germany 210,765; Russia 139,931; France 107,592.
Lead:			
Ore and concentrate	99,214,547	29,580,421	Netherlands 17,390,785; Ireland 14,081,746; Peru 9,570,839.
Oxides	783,606	--	United Kingdom 397,870; Germany 196,725; Spain 125,000.
Ash and residue containing lead	11,312	--	Israel 10,000; unspecified 1,312.
Metal, including alloys:			
Scrap metric tons	3,948	41	Libya 2,118; Slovenia 343; Serbia and Montenegro 258.
Unwrought do.	115,669	21,353	China 19,667,453; Peru 15,719,382; Australia 12,796,109.
Semimanufactures do.	8,191	(1)	Germany 3,177; Belgium 2,493; United Kingdom 1,765.
Lithium oxide and hydroxide	148,472	--	Belgium 108,980; China 20,000; Germany 12,687.
Magnesium, metal, including alloys:			
Unwrought	15,833,265	2,375	China 9,408,362; Israel 1,294,625; Denmark 1,204,000.
Semimanufactures	2,366,738	10,937	China 1,209,773; Germany 623,011; Canada 233,507.

See footnotes at end of table.

TABLE 4—Continued
ITALY: IMPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
METALS—Continued			
Manganese:			
Ore and concentrate	metric tons	206,256	-- Gabon 87,340; South Africa 68,108; Brazil 34,196.
Oxides		2,514,214	196,304 Belgium 765,000; India 400,000; Germany 308,054.
Metal, including alloys, all forms		4,990,192	78,968 China 2,904,812; Netherlands 827,625; Germany 387,437.
Mercury		73,890	-- Spain 50,746; Germany 20,761; Belgium 1,187.
Molybdenum:			
Ore and concentrate:			
Roasted		4,657,436	5,000 Netherlands 1,609,312; Chile 1,323,000; Belgium 1,185,375.
Unroasted		61,110	2,437 China 32,000; Austria 19,535; United Kingdom 6,125.
Oxides and hydroxides		246,582	-- Germany 134,375; Netherlands 74,203; Luxembourg 24,000.
Metal, including alloys:			
Scrap and unwrought		10,875	1,636 Germany 4,625; China 3,531; Austria 789.
Semimanufactures		98,213	21,339 Austria 39,456; China 22,387; Germany 11,382.
Nickel:			
Matte and speiss		353,381	-- Netherlands 229,500; Russia 98,898; Belgium 16,000.
Oxides and hydroxides		101,750	-- Netherlands 87,605; Finland 10,125; Germany 3,500.
Metal, including alloys:			
Scrap		3,075,086	20,488 France 2,235,562; Germany 356,187; Switzerland 160,605.
Unwrought	metric tons	45,053	653 United Kingdom 14,506; Australia 8,751; Netherlands 7,755.
Semimanufactures		5,157,181	279,649 Germany 1,452,588; France 831,828; Sweden 653,794.
Platinum-group metals:			
Waste and sweepings		278	29 United Kingdom 226; Switzerland 22; France 1.
Metal, including alloys, unwrought, and partly wrought:			
Palladium		18,664	4,125 Russia 5,5318; United Kingdom 3,545; South Africa 2,561.
Platinum		12,195	2,007 South Africa 2,649; France 1,906; United Kingdom 1,808.
Rhodium		1,798	437 South Africa 432; Russia 390; United Kingdom 335.
Iridium, osmium, ruthenium		1,029	186 Germany 300; South Africa 182; United Kingdom 164.
Rare-earth metals, including alloys, all forms		87,311	17,406 India 40,000; Austria 19,574; Republic of Korea 3,625.
Selenium, elemental		46,877	-- Canada 16,000; Germany 13,750; Sweden 8,625.
Silicon, high-purity		443,818	132,554 China 184,203; Germany 73,703; Slovenia 25,000.
Silver:			
Ore and concentrate		1,428	-- Belgium 1,200; Switzerland 180; France 47.
Metal, including alloys, unwrought and partly wrought		1,823,325	6,173 Germany 1,022,899; Switzerland 491,521; Kazakhstan 93,501.
Tin:			
Ore and concentrate		241,039	-- All from Germany.
Metal, including alloys:			
Scrap		47,456	-- Greece 24,929; Malta 19,402; Croatia 3,125.
Unwrought		5,761,021	7 Indonesia 2,416,000; Malaysia 1,059,375; Peru 525,000.
Semimanufactures		1,753,182	3,671 Netherlands 719,312; Germany 703,034; Austria 82,062.
Titanium:			
Ore and concentrate	metric tons	88,502	-- Norway 79,633; Canada 5,478; South Africa 1,724.
Oxides	do.	23,418	2,764 Germany 4,284; Czech Republic 3,232; China 2,336.
Metal, including alloys:			
Powders, unwrought, scrap		2,822,495	133,941 Germany 1,780,750; Russia 403,687; Netherlands 232,902.
Semimanufactures	metric tons	3,762	722 Germany 1,195; Japan 1,014; United Kingdom 148.
Tungsten:			
Ore and concentrate		2,812	-- All from United Kingdom.
Metal, including alloys:			
Scrap and unwrought		184,626	36,889 Republic of Korea 40,550; Germany 25,741; China 24,862.
Semimanufactures		138,568	10,906 Germany 40,862; United Kingdom 26,870; China 20,268.

See footnotes at end of table.

TABLE 4—Continued
ITALY: IMPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
METALS—Continued			
Vanadium:			
Oxides and hydroxides	139,409	67,226	Netherlands 35,617; United Kingdom 27,042; Belgium 5,000.
Metal, including alloys, all forms	18,126	183	China 17,601; Japan 199; Germany 128.
Zinc:			
Ore and concentrate	metric tons 250,489	71,645	Ireland 62,140; Australia 48,702; Honduras 17,697.
Oxides	20,131,530	67,246	Spain 3,653,437; Netherlands 3,213,812; China 3,060,812.
Blue powder	3,615,256	233,218	Belgium 1,591,000; Denmark 644,437; Spain 374,375.
Ash and residue containing zinc	14,819,681	--	France 6,792,124; Austria 1,706,812; Germany 1,181,000.
Metal, including alloys:			
Scrap	16,028,730	--	Germany 5,198,613; France 4,795,273; Switzerland 1,466,687.
Unwrought	metric tons 314,077	(1)	Spain 100,811; Belgium 45,024; Namibia 21,129.
Zirconium:			
Ore and concentrate	do. 149,787	33,209	Australia 66,658; South Africa 48,076; Sri Lanka 932.
Metal, including alloys:			
Scrap and unwrought	84,815	4,625	Germany 62,914; Sweden 12,250; Netherlands 3,937.
Semimanufactures	65,609	33,272	France 16,539; United Kingdom 4,250; unspecified Asia 6,875.
Other, ash and residue	27,199,024	2,625	France 8,116,549; Australia 7,394,101; Germany 1,523,843.
INDUSTRIAL MINERALS			
Abrasives, n.e.s.:			
Natural: Corundum, emery, pumice, and so forth	23,916,492	53,882	Turkey 9,256,648; Greece 8,711,000; India 2,317,000.
Artificial:			
Corundum	67,954,837	2,375	China 34,989,644; Austria 8,289,703; Ukraine 6,180,039.
Silicon carbide	32,012,358	557,437	Sweden 8,182,601; Romania 5,486,605; Switzerland 4,556,031.
Dust and powder of precious and semiprecious stones, including diamond	value \$57,021,151	\$2,434,635	Switzerland \$40,620,144; Ireland \$3,790,150; Belgium \$2,530,228.
Grinding and polishing wheels and stones	12,101,773	115,744	Germany 2,601,896; Austria 1,824,350; France 1,031,823.
Barite and witherite	87,000,697	1,000	Bulgaria 54,691,601; Spain 14,607,964; Turkey 10,090,000.
Boron materials:			
Crude natural borates	32,478,873	--	Turkey 31,884,480; United Kingdom 319,625; Spain 220,800.
Oxides and acids	26,333,530	4,957,453	Turkey 10,040,882; Russia 3,563,875; Spain 2,280,375.
Cement	metric tons 5,007,949	136	Turkey 2,142,954; Egypt 1,057,494; Greece 378,712.
Chalk	14,418,086	27,242	France 13,829,183; Greece 136,000; Germany 113,222.
Clays, crude:			
Bentonite	metric tons 153,412	5,536	India 43,404; Greece 41,731; Turkey 20,444.
Chamotte earth and Dinas earth	91,023,805	1,106,062	Germany 32,324,164; France 27,699,644; Bulgaria 18,758,644.
Fire clay	metric tons 1,539,339	--	Ukraine 1,359,693; Germany 114,996; France 26,351.
Fuller's earth	5,759,631	1,226,750	Germany 1,499,437; Senegal 1,000,000; Spain 782,375.
Kaolin	metric tons 950,685	120,277	France 177,757; United Kingdom 169,766; Germany 164,091.
Diamond, natural:			
Gem, not set or strung	value, thousands \$393,586	\$28,949	Belgium \$242,681; Israel \$48,091; India \$31,751.
Industrial stones	value \$11,114,942	\$37,997	Belgium \$9,521,267; United Kingdom \$803,085; Germany \$309,068.
Dust and powder	do. \$55,725,964	\$2,406,387	Switzerland \$39,556,201; Ireland \$3,790,150; Belgium \$2,528,143.
Diatomite and other infusorial earth	15,101,792	601,375	Switzerland 9,103,500; France 3,070,687; Spain 1,504,687.
Feldspar	metric tons 2,693,872	3,170	Turkey 2,608,517; France 37,306; Germany 19,593.
Fertilizer materials:			
Crude, n.e.s.	36,743,815	106,398	Germany 8,782,714; Austria 8,528,730; Spain 7,947,250.
Manufactured:			
Ammonia	78,279,190	44,722	Libya 21,742,886; Egypt 14,517,441; Russia 12,983,867.
Nitrogenous	metric tons 1,438,346	171	Russia 444,448; Austria 158,553; Libya 122,973.
Phosphatic	do. 198,397	--	Tunisia 70,788; Lebanon 42,515; Bulgaria 38,976.
Potassic	do. 521,794	(1)	Germany 223,633; Israel 156,401; Jordan 48,203.
Unspecified and mixed	do. 3,170,465	2,337	Russia 558,642; Germany 364,847; Tunisia 322,812.

See footnotes at end of table.

TABLE 4—Continued
ITALY: IMPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
INDUSTRIAL MINERALS—Continued			
Fluorspar metric tons	212,935	--	China 75,594; Mexico 43,480; South Africa 33,023.
Graphite, natural	10,870,293	40,573	China 4,461,406; Austria 1,959,000; Germany 1,502,148.
Gypsum and plaster metric tons	30,146	2,230	Germany 17,607; France 16,915; United Kingdom 2,372.
Iodine	1,127,937	539	Japan 548,687; Belgium 492,812; Netherlands 76,261.
Kyanite and related materials:			
Andalusite, kyanite, sillimanite metric tons	12,101	2,945	South Africa 5,832; France 2,158; Germany 1,152.
Mullite	3,206,020	347,437	Germany 1,549,312; Hungary 693,000; China 354,375.
Lime metric tons	41,967	--	Slovenia 19,817; Austria 6,320; United Kingdom 6,285.
Magnesium compounds:			
Magnesite, crude	9,429,248	--	Turkey 8,024,199; Germany 566,625; Netherlands 459,125.
Oxides and hydroxides metric tons	165,155	552	Greece 52,453; China 45,802; Austria 14,680.
Other	6,796,859	--	Germany 6,503,210; China 180,000; India 110,000.
Mica:			
Crude, including splittings and waste	3,562,469	159,589	Germany 1,084,835; France 773,733; Austria 726,187.
Worked, including agglomerated splittings	833,404	28,191	China 333,769; Belgium 251,363; Germany 80,046.
Nitrates, crude	3,803,436	--	Chile 1,989,125; Germany 1,081,562; Poland 447,687.
Phosphates, crude metric tons	359,055	12	Morocco 174,894; Germany 88,656; Syria 66,432.
Phosphorus, elemental	7,997,462	12	China 7,996,230; Netherlands 1,187; Germany 24.
Pigments, mineral, iron oxides and hydroxides, processed	43,188,611	2,881,375	Germany 12,296,152; France 6,670,934; Spain 6,104,562.
Precious and semiprecious stones other than diamond:			
Natural value, thousands	\$74,108	\$2,242	Switzerland \$18,790; Thailand \$13,849; India \$9,707.
Synthetic do.	\$8,330	\$291	China \$3,239; Switzerland \$1,665; Hong Kong, China \$683.
Pyrite, unroasted	8,929,163	--	Russia 8,768,738; Austria 58,351; China 44,000.
Quartz crystal, piezoelectric value	\$181,588	\$8,276	China \$83,032; Germany \$41,540; Brazil \$15,511.
Salt and brine metric tons	838,274	47	Tunisia 374,743; France 200,541; Germany 196,288.
Sodium compounds, n.e.s., natural and/or manufactured:			
Soda ash metric tons	319,830	34	Ukraine 87,408; Turkey 86,160; Bulgaria 83,542.
Sulfate do.	251,631	--	Spain 167,668; Austria 36,975; China 23,192.
Stone, sand and gravel:			
Dimension stone:			
Crude and partly worked do.	2,143,335	18,171	India 556,457; China 291,682; South Africa 161,777.
Worked do.	356,911	2,784	China 155,172; Argentina 44,651; Brazil 40,691.
Dolomite, chiefly refractory-grade	12,326,189	--	Austria 6,738,691; Germany 4,032,812.
Gravel and crushed rock metric tons	3,978,838	18	Croatia 2,618,659; Serbia and Montenegro 730,669; Norway 351,192.
Limestone, other than dimension	42,917,596	36,339	Slovenia 35,505,328; Germany 4,600,359; Croatia 2,200,000.
Quartz and quartzite metric tons	68,724	11	Turkey 28,457; Brazil 19,579; Switzerland 13,894.
Sand, other than metal-bearing do.	1,564,426	448	Egypt 522,707; France 380,356; Spain 200,488.
Sand and gravel do.	5,543,264	466	Croatia 2,618,662; Serbia and Montenegro 730,669; Egypt 523,030.
Sulfur:			
Elemental:			
Crude including native and byproduct	18,932,041	2,000	Kazakhstan 7,000; Germany 5,221; France 4,563.
Colloidal, precipitated, sublimed	280,970	--	Portugal 218,199; France 45,203; Germany 14,187.
Dioxide	329,768	--	France 326,437; Germany 2,562; Belgium 757.
Sulfuric acid	63,358,580	957	Iran 10,481,183; Austria 8,575,859; Slovenia 7,413,746.
Talc, steatite, soapstone, pyrophyllite metric tons	128,978	2,189	China 55,608; France 36,674; Austria 12,041.
Vermiculite, perlite, chlorite	68,141,913	39,316	Turkey 49,081,359; Greece 9,364,265; South Africa 6,007,027.
Other, slag and dross, not metal-bearing metric tons	308,875	--	Turkey 255,943; France 43,598; Austria 3,411.

See footnotes at end of table.

TABLE 4—Continued
ITALY: IMPORTS OF SELECTED MINERAL COMMODITIES IN 2004

(Kilograms unless otherwise specified)

Commodity	Total	Sources		
		United States	Other (principal)	
MINERAL FUELS AND RELATED MATERIALS—Continued				
Asphalt and bitumen, natural	metric tons	244,358	689	Venezuela 242,690; Netherlands 777; United Kingdom 79.
Carbon black		79,318,568	1,562,312	France 15,221,445; Hungary 10,868,703; Russia 8,961,742.
Coal:				
Anthracite	metric tons	338,512	--	Ukraine 184,463; Russia 140,452; China 12,669.
Bituminous	thousand metric tons	14,292	2,791	South Africa 3,001; Australia 2,738; Indonesia 1,950.
Briquets of anthracite and bituminous coal		689,829	--	France 555,687; Germany 97,753; Poland 19,589.
Lignite, including briquets		10,586,322	59,000	Germany 8,435,683; Hungary 887,000; Austria 589,750.
All grades, including briquets	thousand metric tons	25,732	2,852	South Africa 3,001; Indonesia 5,657; Australia 3,122.
Coke and semicoke	metric tons	1,400,168	--	China 806,515; Japan 174,366; Egypt 100,059.
Peat, including briquets and litter	do.	454,198	496	Germany 201,180; Latvia 75,506; Estonia 50,660.
Petroleum:				
Crude	thousand metric tons	87,205	--	Libya 22,388; Russia 18,001; Saudi Arabia 11,874.
Refinery products:				
Liquefied petroleum gas	metric tons	1,817,699	4	France 229,199; Egypt 228,710; Libya 122,495.
Mineral jelly and wax	do.	544,473	736	Indonesia 493,918; Germany 10,929; France 9,919.
Asphalt		45,405,691	--	France 26,498,750; Spain 9,522,640; Belgium 4,296,328.
Bitumen and other residues	metric tons	156,573	--	United Kingdom 106,228; France 26,499; Spain 9,523.
Bituminous mixtures	do.	1,859	491	Belgium 395; Germany 366; United Kingdom 302.
Petroleum coke	do.	3,255,062	2,235,465	Venezuela 945,185; Syria 36,075; Turkmenistan 12,140.

¹Less than ½ unit.

Source: United Nations Statistics Division, Commodity Trade Statistics Database (COMTRADE), accessed August 23, 2006, at URL <http://unstats.un.org/unsd/comtrade>.

