U.S. Department of the Interior • Bureau of Mines

MINERAL INDUSTRY SURVEYS

T S Ary, Director — Washington, DC 20241

For more information call:
Peter H. Kuck, Iron Ore Specialist, (202) 634-1023
Cheryl M. Cvetic, Commodity Specialist, (202) 634-1019
Robin C. Kaiser, Mineral Data Assistant, (202) 634-1013

IRON ORE IN AUGUST 1990

U.S. mine production of iron ore in August was 26% less than that of July, according to the Bureau of Mines, U.S. Department of the Interior. Mine shipments also dropped off dramatically, falling 23%. The sharp declines in production and shipments were due primarily to a labor dispute that halted mining and pelletizing operations on the Upper Peninsula of Michigan. The Empire and Tilden mines both have been shut down since August 1. Shipments from U.S. loading docks on the upper Great Lakes totaled only 5.5 million metric tons and were down 11% from those of the previous month. The two shutdowns occurred at a time when blast furnace operators had just begun to build up yard stocks for the winter. As a result, mine stocks were down 11%, while stocks at consuming plants were up 12%. Monthly consumption of ore and agglomerates rose 4% to 6.9 million tons in spite of the labor dispute. Year-to-date consumption was down only slightly from that of the corresponding period of 1989 and stood at 50 million tons. On August 31, 48 blast furnaces were in operation, the same number as on July 31. Furnace operators had, on the average, about 50 days of ore stocks in their yards.

Update on Michigan Mine Strike

More than 1,800 hourly employees of the Empire and Tilden Mines walked off their jobs on August 1, when their contract with the Cleveland-Cliffs Iron Co. (CCI) expired. (See June 1990 MIS.) Repeated attempts by the company and union representatives to settle the dispute over wages and profit sharing have been unsuccessful. The strike is now in its 18th week, with no end near. The strike triggered layoffs at several related operations in Marquette County. The Lake Superior and Ishpeming Railroad, which hauls pellets from the mines to the port of Marquette on Lake Superior, and the Chicago and North Western Railroad, which hauls pellets to Escanaba on Lake Michigan, have laid off some of their workers. The regional utility company, which provides power to the mines, furloughed workers at its Presque Isle generating station in October and cut the plant's output in half.

THIS ISSUE ALSO INCLUDES ANNUAL IRON ORE DATA FOR 1989.

Prepared in the Branch of Ferrous Metals and Branch of Data Collection and Coordination, November 21, 1990.

State of Minnesota Releases Final EIS for the Laurentian Mine

On August 27, the Minnesota Department of Natural Resources released the Final Environmental Impact Statement (EIS) for the Laurentian Taconite Mine. The project, proposed by Inland Steel Mining Co., would be the first new mine to be constructed on the Mesabi Range in more than a decade. Crude taconite from the mine would be trucked 10 kilometers to Inland's existing Minorca mining and pelletizing complex on the northeastern edge of the City of Virginia. (See May 1989 and November 1989 MIS). The Laurentian taconite would replace ore from the existing Minorca pit, where reserves are almost exhausted. The new mine would enable the 2.5-million-ton-per year pelletizing plant to continue operating until 2031.

The Laurentian site is southeast of Virginia, between Gilbert and McKinley. The 1,200-acre project would include a service building and a 600-acre stockpile area in addition to the haul road and 440-acre open pit. Approximately 0.92 million cubic meters of overburden would have to be removed from the north end of the ore body. The initial stage of the project is expected to cost more than $10 million.

Although the EIS addressed a variety of environmental and socio-economic issues, special emphasis was given to the impact of the operation on surface water and groundwater. The Minnesota Pollution Control Agency (MPCA), the City of McKinley, and several other parties were concerned about the effect that mine dewatering would have on local water levels. The Laurentian site is bordered on the south and southeast by seven abandoned open pits which are now filled with water. One of these pits, the Corsica Mine, serves as the water supply for McKinley. Another four form Lake Orebegone, a local recreational area. There are also several natural lakes in the immediate area. On the north side, the proposed haul road would cut through the protected Pike River headwaters and its environmentally sensitive wetlands. The project would remove or alter approximately 860 acres of forest and 71 acres of wetland. Homeowners were concerned about dust and noise created by the mine trucks, blasting, and various stockpile activities. Inland has agreed to water the haul road and construct a sound attenuation berm between the road and Gilbert. The company would use well-tested blasting procedures and institute a blast monitoring program to minimize air shock noise and reduce the risk of vibration damage. Dewatering discharge would be rerouted to restore water levels in wetlands and lakes affected by groundwater changes. Aeration systems would be installed in key lakes to lessen the impact on fish, and revegetation programs would be undertaken to restore wildlife habitat.

If the Laurentian Mine were not developed, the Minorca complex reportedly, would be forced to close sometime between 1992 and 1995. The community would lose over 300 jobs and a $12 million-per-year payroll, according to Inland.

The MINES - DATA System

The telephone number for the MINES-DATA computer bulletin board is (202) 634-4637; the computer settings are: 2400, N, 8, and 1. Anyone who needs technical assistance or a copy of the MINES-DATA instruction manual can leave a message with the answering machine by calling (202) 634-9632.

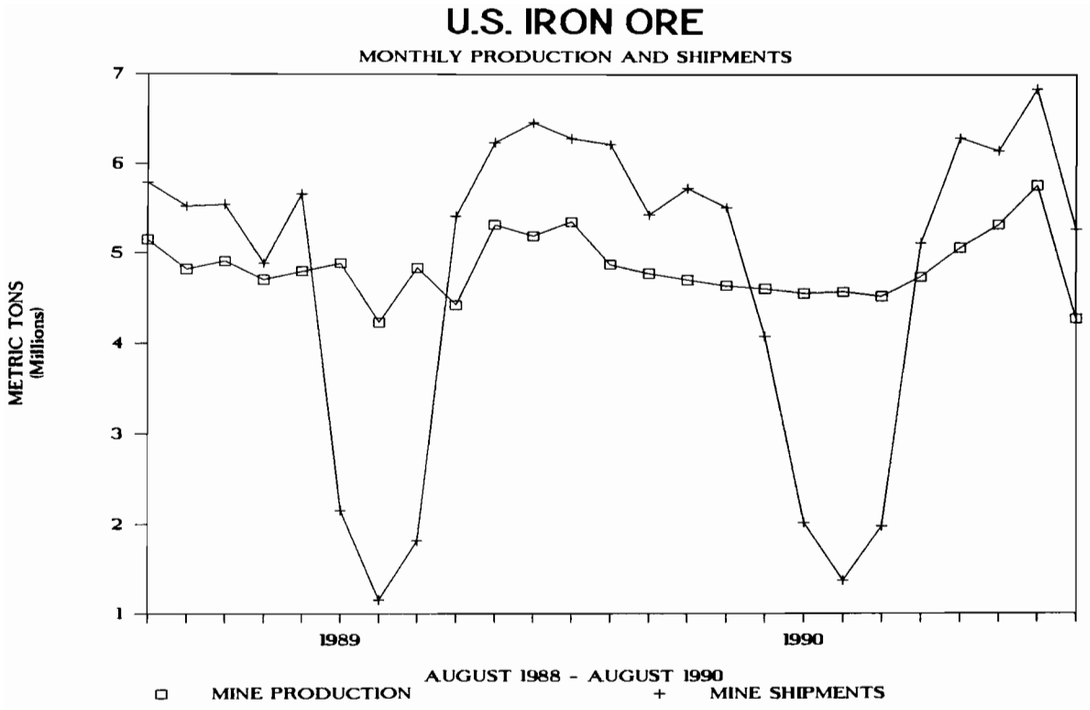

Table 1. - U.S. production and shipments of iron ore, by districts 1/
(Exclusive of ore containing 5% or more manganese)
(thousand metric tons)

Period	Lake Superior	Other U.S.	Total 2/ 1990	Total 2/ 1989
Production:				
1989	56,981	2,052	--	59,032
1990:				
1st Quarter	13,425	223	13,648	13,960
2nd Quarter	14,909	232	15,141	14,946
July	5,690	87	5,777	5,357
August	4,176	98	4,274	4,876
Shipments:				
1989 3/	56,089	2,210	--	58,299
1990:				
1st Quarter	5,145	230	5,375	5,131
2nd Quarter	17,335	250	17,585	18,121
July	6,766	83	6,849	6,289
August	5,186	88	5,273	6,220

1/ Excludes byproduct ore, except where noted.
2/ Data may not add to totals shown because of independent rounding.
3/ Includes byproduct ore.

Table 2. - U.S. mine production, shipments and stocks of iron ore 1/
(Exclusive of ore containing 5% or more manganese)
(Thousand metric tons)

District	Production August		Shipments August		Mine Stocks August 31	
	1990	1989	1990	1989	1990	1989
Lake Superior:						
Michigan 2/.....	--	1,021	541	1,403	1,244	1,942
Minnesota.....	4,176	3,760	4,645	4,715	6,906	4,604
Other U.S.	98	95	88	101	127	118
Total 3/.....	4,274	4,876	5,273	6,220	8,277	6,664

1/ Excludes byproduct ore.
2/ Production facilities were shut down by a labor dispute on August 1, 1990.
3/ Data may not add to totals shown because of independent rounding.

Table 3. - Canada: Shipments of iron ore
(Thousand dry metric tons)

Period	Newfound-land	Quebec	Ontario	British Columbia	Total 1/	
					1990	1989
1989 p/.....	20,662	15,395	3,353	64	--	39,474
1990:						
1st Quarter.....	1,179	1,884	677	9	3,749	6,008
2nd Quarter.....	r/5,070	4,058	296	33	r/9,457	11,230
July.....	2,624	1,261	112	9	4,006	4,515
August.....	2,453	1,251	--	7	3,711	3,180

p/ Preliminary. r/ Revised.
1/ Data may not add to totals shown because of independent rounding.

Source: Energy, Mines, and Resources Canada.

Table 4. - U.S. consumption and stocks of iron ore and agglomerates at consuming plants and production of pig iron
(Thousand metric tons)

State or Region	Consumption: July 1990	Consumption: Year to date 1/ 1990	Consumption: Year to date 1/ 1989	Stocks: July 31 1990	Stocks: July 31 1989
Alabama, Kentucky, Tennessee, Texas, and Missouri	579	3,821	3,387	820	1,223
California, Colorado, and Utah	178	1,195	1,282	112	23
Delaware, Maryland, and West Virginia	525	3,707	5,054	1,593	1,849
Illinois and Indiana	2,939	17,045	16,779	4,248	4,727
Michigan and Minnesota	619	4,404	4,227	1,198	1,681
New York, Ohio, Pennsylvania, New Jersey, Rhode Island	1,733	12,578	13,772	2,778	2,736
Total 2/	6,573	42,751	44,500	10,748	12,240
Stocks at U.S. receiving/transfer docks				1,828	2,040

Consuming Sector	Consumption by process: July 1990	Consumption by process: Year to date 1/ 1990	Consumption by process: Year to date 1/ 1989	Pig iron produced: July 1990	Pig iron produced: Year to date 1/ 1990	Pig iron produced: Year to date 1/ 1989
Blast furnaces	6,039	39,559	39,111	4,224	29,051	30,728
Steel furnaces	7	56	192	-- --	-- --	-- --
Agglomerating plants 3/	527	3,133	5,109	-- --	-- --	-- --
Miscellaneous 4/	(5/)	3	88	-- --	-- --	-- --
Total 2/	6,573	42,751	44,500	4,224	29,051	30,728

1/ May include revisions for previous months.
2/ Data may not add to totals shown because of independent rounding.
3/ Iron ore and iron ore concentrates consumed in agglomerating plants not located at the mine site.
4/ Sold to nonreporting companies or used for purposes not listed.
5/ Less than one-half unit.

Source: American Iron Ore Association (consumption of iron ore).
American Iron and Steel Institute (production of pig iron).

Table 5. - U.S. exports of iron ore and agglomerates, by country of destination
(Thousand metric tons)

Period	Canada	Mexico	Other	Total 1/	
				1990	1989
1989.....	5,359	(2/)	6	--	5,365
1990:					
1st Quarter....	352	(2/)	1	353	348
2nd Quarter....	1,811	1	1	1,813	1,991
July.....	585	(2/)	--	585	393

1/ Data may not add to totals shown because of independent rounding.
2/ Less than one-half unit.

Source: Bureau of the Census data reported under heading 2601 of the export classification system (Schedule B).

Table 6. - U.S. exports of iron ore and agglomerates, by type
(Thousand metric tons)

Period	Pellets	Concentrates	Direct shipping ores	Other	Total 1/
1989.....	4,852	353	145	16	5,365
1990:					
1st Quarter.....	296	3	2	52	353
2nd Quarter.....	1,704	2	8	99	1,813
July.....	584	1	(2/)	(2/)	585

1/ Data may not add to totals shown because of independent rounding.
2/ Less than one-half unit.

Source: Bureau of the Census data reported under heading 2601 of the export classification system (Schedule B).

Table 7. - U.S. imports for consumption of iron ore and agglomerates, by country
(Exclusive of ore containing 20% or more manganese)

Country of origin	July 1990		Year to date 1990			Year to date 1989
	Thousand metric tons	Value 1/ (thousand dollars)	Thousand metric tons	Value 1/ (thousand dollars)	Value 1/ (dollars per ton)	(thousand metric tons)
Australia.....	--	--	14	584	$42.14	243
Brazil.....	445	9,365	2,712	57,810	21.32	3,022
Canada.....	1,238	44,388	4,132	147,861	35.79	4,754
Chile.....	--	--	--	--	--	61
Liberia.....	--	--	--	--	--	200
Mauritania.....	69	1,436	286	6,216	21.71	391
Norway.....	--	--	--	--	--	40
Peru.....	18	504	2/37	2/1,016	2/27.63	82
Philippines 3/.....	--	--	--	--	--	66
Spain.....	--	--	(4/)	17	54.10	--
Sweden.....	54	2,273	54	2,273	42.28	--
Venezuela.....	320	8,624	2/1,895	2/56,584	2/29.86	2,680
Other 5/.....	--	--	6/(4/)	6/7	6/351.95	(4/)
Total 7/.....	2,144	66,590	9,129	272,368	8/29.83	11,539

1/ Customs value. Excludes international freight, insurance, and other c.i.f. charges.
2/ Part being questioned.
3/ Sinter made from raw materials supplied by Australia, Brazil, and other countries.
4/ Less than one-half unit.
5/ Census has verified the 20-ton shipment of concentrates from the United Kingdom that was reported in April. The material was found to be siderite and had a value of $5,592.
6/ Excludes 11,188 kilograms of high-carbon ferrochromium [7202.41.0000] from the Federal Republic of Germany erroneously reported in June as 118 tons of coarse ore. The ferrochromium had a Customs value of $4,483.
7/ Data may not add to totals shown because of independent rounding. Unit values shown above are calculated from unrounded data.
8/ Weighted average calculated from unrounded data by dividing total value by total tonnage.

Source: Bureau of the Census data reported under heading 2601 of the Harmonized Tariff Schedules of the United States.

Table 8. - U.S. imports for consumption of iron ore and agglomerates, by country
(Exclusive of ore containing 20% or more manganese)

Type of product	July 1990		Year to date 1990			Year to date 1989
	Thousand metric tons	Value 1/ (thousand dollars)	Thousand metric tons	Value 1/ (thousand dollars)	Value 1/ (dollars per ton)	(thousand metric tons)
Concentrates 2/.....	55	2,325	70	2,959	$42.13	198
Coarse ores.....	60	1,621	3/320	3/8,377	3/26.14	409
Fine ores.....	1,210	33,765	5,455	148,866	27.29	r/6,887
Pellets.....	820	28,879	3,283	112,045	34.13	3,267
Briquettes.....	--	--	4/1	4/112	4/95.73	--
Other agglomerates.....	--	--	--	--	--	r/657
Roasted pyrites.....	--	--	4/2	4/9	4/4,305	121
Total 5/.....	2,144	66,590	9,129	272,368	6/29.83	11,539

1/ Customs value. Excludes international freight, insurance, and other c.i.f. charges.
2/ Census has verified the 20-ton shipment reported from the United Kingdom in April. The material was found to be siderite and had a value of $5,592.
3/ Excludes 11,188 kilograms of high-carbon ferrochromium [7202.41.0000] from the Federal Republic of Germany erroneously reported in June as 118 tons of coarse ore. The ferrochromium had a customs value of $4,483.
4/ Being questioned.
5/ Data may not add to totals shown because of independent rounding. Unit values shown above are calculated from unrounded data.
6/ Weighted average calculated from unrounded data by dividing total value by total tonnage.

Source: Bureau of the Census data reported under heading 2601 of the Harmonized Tariff Schedules of the United States.

Table 13.--Salient iron ore statistics
(Thousand metric tons and thousand dollars unless otherwise specified)

	1985	1986	1987	1988	1989
United States:					
Iron ore (usable,1/ less than 5% manganese):					
Production	49,533	39,486	47,648	57,515	59,032
Shipments	50,204	41,991	47,983	57,113	58,299
Value	$2,076,730	$1,472,511	$1,503,087	$1,716,661	$1,901,772
Average value at mines, dollars per ton	$41.37	$35.07	$31.33	$30.06	$32.62
Exports	5,114	4,553	5,093	5,285	5,365
Value	$240,557	$204,738	$198,254	$193,796	$192,796
Imports for consumption	16,024	17,011	16,849	20,183	19,596
Value	$452,267	$460,643	$408,783	$484,543	$522,262
Consumption (iron ore and agglomerates)	71,708	62,097	67,768	2/83,694	2/80,447
Stocks, Dec. 31:					
At mines3/	6,046	3,307	2,402	2,957	3,800
At consuming plants	21,631	17,439	16,565	18,005	15,730
At U.S. docks	2,442	2,019	2,056	2,537	2,171
Manganiferous iron ore (5% to 35% manganese):					
Shipments	18	13	W	W	W

W Withheld to avoid disclosing company proprietary data.
1/Direct-shipping ore, concentrates, agglomerates, and byproduct ore.
2/Consumption data for 1988 and 1989 are not entirely comparable with those of previous years owing to changes in data collection.
3/Excludes byproduct ore. These stocks are not comparable with those of 1982 and earlier years owing to the reclassification of some stocks from the usable to the byproduct category.

PRELIMINARY

Table 14.--Employment at iron ore mines and beneficiating plants, quantity and tenor of ore produced, and average output per worker hour in the United States in 1989, by district and State

District and State	Average number of employees	Worker hours (thousands)	Production (thousand metric tons)			Iron content, natural (percent)	Average per worker hour (metric tons)		
			Crude ore	Usable ore	Iron contained (in usable ore)		Crude ore	Usable ore	Iron contained
Lake Superior:									
Michigan----------	2,205	4,441	45,174	15,611	9,778	62.6	10.17	3.52	2.20
Minnesota----------	5,245	10,750	139,915	41,370	26,409	63.8	13.02	3.85	2.46
Total1/ or average---------	7,450	15,191	185,089	56,981	36,187	63.5	12.18	3.75	2.38
Other States2/----------	278	528	2,717	2,052	1,226	59.8	5.15	3.89	2.32
Grand total1/ or average---	7,728	15,719	187,806	59,032	37,413	63.4	11.95	3.76	2.38

1/Data may not add to totals shown because of independent rounding.
2/Includes California, Missouri, Montana, New Mexico, South Dakota, Texas, and Utah.

PRELIMINARY

Table 15.--Crude iron ore1/ mined in the United States in 1989,
by district, State, and mining method
(Thousand metric tons unless otherwise specified and exclusive of ore containing 5% or more manganese)

District and State	Number of mines	Open pit	Underground	Total quantity
Lake Superior:				
Michigan	2	45,174	--	45,174
Minnesota	7	139,915	--	139,915
Total	9	185,089	--	185,089
Other States:				
Missouri	1	--	1,588	1,588
Other2/	11	1,129	--	1,129
Total	12	1,129	1,588	2,717
Grand total	21	186,218	1,588	187,806

1/Excludes byproduct ore.
2/Includes California, Montana, New Mexico, South Dakota, Texas, and Utah.

PRELIMINARY

Table 16.--Usable iron ore produced in the United States in 1989,
by district, State, and type of product
(Thousand metric tons and exclusive of ore containing 5% or more manganese)

District and State	Direct-shipping ore	Concentrates	Agglomerates1/	Total quantity
Lake Superior:				
Michigan	(2/)	--	15,611	15,611
Minnesota	--	612	40,757	41,370
Total	(2/)	612	56,368	56,981
Other States:				
Missouri	--	97	917	1,014
Other3/	1,038	W	--	1,038
Total	1,038	97	917	2,052
Grand total4/	1,038	709	57,285	59,032

W Withheld to avoid disclosing company proprietary data; included with "Direct-shipping ore."
1/Data may include pellet chips and screenings.
2/Included with "Agglomerates" to avoid disclosing company proprietary data.
3/Includes California, Montana, New Mexico, South Dakota, Texas, and Utah.
4/Data may not add to totals shown because of independent rounding.

PRELIMINARY

Table 17.--Shipments of usable iron ore1/ from mines in the United States in 1989
(Exclusive of ore containing 5% or more manganese)

District and State	Gross weight of ore shipped (thousand metric tons)				Average iron content, natural (percent)	Value (thousands)
	Direct-shipping ore	Concentrates	Agglomerates	Total		
Lake Superior:						
Michigan	(2/)	--	15,045	15,045	62.6	W
Minnesota	--	612	40,432	41,044	63.6	$1,285,807
Total reportable or average	(2/)	612	3/55,476	56,089	63.3	1,285,807
Other States:						
Missouri	--	100	960	1,060	64.8	W
Other4/	849	301	--	1,150	55.6	W
Total reportable or average	849	401	960	2,210	60.0	1,285,807
Total withheld	--	--	--	--	--	615,964
Grand total or average	849	1,013	3/56,437	58,299	63.2	3/1,901,772

W Withheld to avoid disclosing company proprietary data; included in "Total withheld."
1/Includes byproduct ore.
2/Included with "Agglomerates" to avoid disclosing company proprietary data.
3/Data do not add to total shown because of independent rounding.
4/Includes California, Montana, New Mexico, New York, South Dakota, Texas, and Utah.

PRELIMINARY

Table 18.--Usable Iron Ore Produced in the U.S. Lake Superior district, by range
(Thousand metric tons and exclusive after 1905 of ore containing 5% or more manganese)

Year	Marquette	Menominee	Gogebic	Vermilion	Mesabi	Cuyuna	Spring Valley	Black River Falls	Total1/
1854-1982----	538,494	334,629	325,474	105,189	3,415,864	71,465	8,280	9,869	4,809,267
1983---------	9,489	--	--	--	26,676	--	--	--	36,165
1984---------	13,190	--	--	--	37,286	--	--	--	50,476
1985---------	12,679	--	--	--	35,470	--	--	--	48,148
1986---------	10,727	--	--	--	27,476	--	--	--	38,203
1987---------	12,491	--	--	--	34,265	--	--	--	46,756
1988---------	14,590	--	--	--	41,449	--	--	--	56,038
1989---------	15,611	--	--	--	41,370	--	--	--	56,981
Total1/----	627,272	334,629	325,474	105,189	3,659,856	71,465	8,280	9,869	5,142,035

1/Data may not add to totals because of independent rounding.

PRELIMINARY

Table 19.--Average analyses of total tonnage1/ of all grades of agglomerates shipped from mines in the United States

Year	Quantity (thousand metric tons)	Content (percent)2/					
		Iron	Phosphorus	Silica	Manganese	Alumina	Moisture
SINTER3/							
1980-----	533	44.04	0.136	13.66	0.18	6.04	2.00
1981-----	423	44.57	.166	13.84	.19	6.34	NA
1982-----	254	45.94	NA	12.99	NA	6.40	NA
PELLETS OF ALL TYPES							
1980-----	63,819	63.42	.022	5.65	.14	.32	2.35
1981-----	66,994	63.59	.019	5.48	.12	.32	2.38
1982-----	33,950	63.76	.018	5.38	.10	.30	2.40
1983-----	43,865	63.64	.018	5.26	.10	.27	2.41
1984-----	49,549	63.83	.018	5.15	.11	.31	2.47
1985-----	47,182	63.91	.016	5.12	.10	.28	2.45
1986-----	40,645	63.90	.015	5.14	.09	.28	2.44
1987-----	46,337	63.86	.014	5.02	.09	.22	2.04
STANDARD PELLETS							
1988-----	41,349	64.17	.015	5.08	.11	.21	2.18
1989-----	36,239	64.46	.013	4.93	.05	.24	1.83
FLUXED PELLETS4/							
1988-----	13,618	60.71	.017	4.52	.21	.24	2.10
1989-----	19,755	61.36	5/.081	4.37	5/.54	.16	2.12

NA Not available.
1/Railroad weight--gross metric tons.
2/Natural basis.
3/Sinter has not been produced at U.S. mines since 1982.
4/Ratio of (CaO + MgO)/(SiO_2 + Al_2O_3) is 0.6 or greater.
5/Being reviewed.

Source: American Iron Ore Association.

PRELIMINARY

Table 20.--Consumption of iron ore1/ at U.S. iron and steel plants
(Thousand metric tons)

Year	Iron ore originating areas					
	U.S. ores		Canadian ores		Foreign ores	Total2/
	Great Lakes	Other U.S.	Great Lakes	Other Canada		
1980----------	54,851	8,430	1,390	16,167	9,993	90,832
1981----------	61,279	7,207	656	18,377	8,963	96,482
1982----------	35,789	3,446	76	10,967	5,840	56,119
1983----------	40,344	2,246	123	11,612	7,876	62,202
1984----------	44,384	1,680	109	12,130	8,747	67,049
1985----------	45,089	1,438	1	9,138	9,012	64,678
1986----------	39,881	1,164	401	7,818	6,905	56,170
1987----------	44,004	710	--	8,686	7,651	61,051
1988----------	51,048	1,242	--	9,453	10,122	71,866
1989----------	51,845	1,710	--	7,473	12,034	73,062

1/Excludes dust, mill scale, and other revert iron-bearing materials added to sinter.
2/Data may not add to totals shown because of independent rounding.

Source: American Iron Ore Association.

PRELIMINARY

Table 23.--U.S. exports of iron ore and agglomerates, by country of destination
(Thousand metric tons and thousand dollars)

Country	1986		1987		1988		1989	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Canada	4,551	204,600	5,091	198,108	5,277	193,249	5,359	192,334
India	(1/)	17	--	--	(1/)	25	1	59
Mexico	1	45	1	42	1	62	(1/)	15
Netherlands	(1/)	17	--	--	(1/)	3	--	--
Venezuela	(1/)	39	1	95	4	348	(1/)	44
Other	(1/)	20	(1/)	9	3	109	4	345
Total2/	4,553	204,738	5,093	198,254	5,285	193,796	5,365	192,796

1/Less than 1/2 unit.
2/Data may not add to totals shown because of independent rounding.

Source: Bureau of the Census.

PRELIMINARY

Table 24.--U.S. exports of iron ore and agglomerates, by type of product
(Thousand metric tons)

Year	Pellets	Concentrates	Coarse ores	Fine ores	Other1/	Total2/
1989-----	4,852	353	--	145	16	5,365

1/Sum of briquettes (Schedule B 2601.12.0060), other agglomerates (2601.12.0090), and roasted pyrites (2601.20.0000).
2/Data do not add to total shown because of independent rounding.

Source: Bureau of the Census.

PRELIMINARY

Table 25.--U.S. imports of iron ore and agglomerates, by country
(Thousand metric tons and thousand dollars)

Country	1986		1987		1988		1989	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Australia--------	10	86	194	5,141	1,076	16,780	394	5,211
Brazil-----------	3,752	71,045	3,698	64,820	4,935	78,092	5,169	90,885
Canada-----------	8,836	311,757	7,981	246,181	9,157	285,961	8,538	292,866
Chile------------	94	2,126	636	12,601	139	2,772	61	1,200
India------------	--	--	--	--	126	2,820	59	1,037
Liberia----------	1,511	21,855	994	13,707	128	1,460	200	2,950
Mauritania-------	66	1,158	412	6,403	522	7,864	594	10,130
Norway-----------	--	--	--	--	--	--	40	693
Peru-------------	92	2,429	84	1,691	181	2,939	186	4,280
Philippines1/----	56	1,504	59	1,575	239	5,432	66	1,622
Spain------------	--	--	1	27	--	--	--	--
Sweden-----------	106	2,473	139	3,334	88	4,678	57	1,000
Venezuela--------	2/2,346	2/42,126	3/2,622	3/52,889	3,568	75,443	4,232	110,367
Other------------	140	4,083	29	413	4/24	4/301	(5/)	21
Total6/-----	17,011	460,643	16,849	408,783	20,183	484,543	19,596	522,262

1/Sinter made from raw materials supplied by Australia, Brazil, and other countries.
2/Excludes approximately 84,300 metric tons of sponge iron valued at $8,340,609, originally reported as iron ore.
3/Excludes 18,370 metric tons of sponge iron valued at $1,849,584, originally reported as iron ore.
4/Excludes 28,923 metric tons of crude iron sulfate crystals valued at $318,651, originally reported as iron ore from the Federal Republic of Germany.
5/Less than 1/2 unit.
6/Data may not add to totals shown because of independent rounding.

Source: Bureau of the Census.

PRELIMINARY

Table 26.--U.S. imports of iron ore and agglomerates, by type of product
(Thousand metric tons, thousand dollars, and dollars per ton)

Type of product	1989		
	Quantity	Value	Unit value1/
Concentrates	371	7,760	20.93
Coarse ores	662	15,566	23.52
Fine ores	11,629	297,913	25.62
Pellets	5,628	175,728	31.22
Other agglomerates	1,186	23,251	19.61
Roasted pyrites	121	2,045	16.97
Total2/	19,596	522,262	26.65

1/Unit values shown are calculated from unrounded data.
2/Data may not add to totals shown because of independent rounding.

Source: Bureau of the Census.

PRELIMINARY

Table 27.--U.S. imports of iron ore and agglomerates in 1989,
by country and type of product
(Thousand metric tons)

Country of origin	Concentrates	Coarse ores	Fine ores	Pellets	Other agglomerates	Roasted pyrites	Total1/
Australia	--	--	394	--	--	--	394
Brazil	130	64	3,714	400	740	120	5,169
Canada	143	(2/)	5,248	3,146	1	--	8,538
Chile	--	10	51	--	--	--	61
India	--	--	--	59	--	--	59
Liberia	--	--	200	--	--	--	200
Mauritania	--	--	594	--	--	--	594
Norway	40	--	--	--	--	--	40
Peru	--	--	26	159	--	(2/)	186
Philippines	--	--	--	--	3/66	--	66
Sweden	57	--	--	--	--	--	57
Venezuela	--	587	1,403	1,863	379	--	4,232
Other	(2/)	--	--	--	(2/)	(2/)	(2/)
Total1/	371	662	11,629	5,628	1,186	121	19,596

1/Data may not add to totals because of independent rounding.
2/ Less than 1/2 unit.
3/Sinter made from raw materials supplied by Australia, Brazil, and other countries.

Souce: Bureau of the Census.

PRELIMINARY

Table 28.--U.S. imports of iron ore and agglomerates, by customs district
(Thousand metric tons and thousand dollars)

Customs district	1986		1987		1988		1989	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Baltimore	5,656	144,725	5,975	125,887	7,759	183,932	6,062	158,193
Buffalo	(1/)	25	(1/)	30	(1/)	14	--	--
Chicago	1,562	37,958	2,007	40,224	1,837	28,820	2,795	52,162
Cleveland	1,734	67,123	1,490	54,551	1,401	41,315	1,557	48,401
Detroit	388	17,798	637	27,196	520	19,607	528	24,773
Houston-Galveston	42	745	9	177	62	1,115	28	519
Mobile	2,473	64,317	1,063	22,645	1,595	40,708	2,284	68,830
New Orleans	1,594	31,052	1,530	27,230	1,496	22,673	1,845	30,830
Philadelphia	3,289	90,592	3,809	103,101	5,031	135,335	3,968	123,112
Other	271	6,308	328	7,743	482	11,024	529	15,442
Total2/	17,011	460,643	16,849	408,783	20,183	484,543	19,596	522,262

1/Less than 1/2 unit.
2/Data may not add to totals shown because of independent rounding.

Source: Bureau of the Census.

PRELIMINARY

Table 29.--U.S. imports of pellets, by country
(Thousand metric tons and thousand dollars)

Country	1989	
	Quantity	Value
Brazil----------	400	11,287
Canada----------	3,146	104,984
India----------	59	1,037
Peru----------	159	3,930
Venezuela--------	1,863	54,490
Total-------	1/5,628	175,728

1/Data do not add to total shown because of independent rounding.

Source: Bureau of the Census.

PRELIMINARY