

MINERAL INDUSTRY SURVEYS



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
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Explosives, Annual

APPARENT CONSUMPTION OF INDUSTRIAL EXPLOSIVES AND BLASTING AGENTS IN THE UNITED STATES, 1986

Apparent consumption of explosives and blasting agents in the United States decreased slightly to 3.7 billion pounds, according to the Bureau of Mines, U.S. Department of the Interior. Apparent consumption is measured by sales reported by manufacturers.

Permissibles consumption decreased slightly and other high explosives consumption decreased 3% compared with that of 1985.

All principal consuming industries except metal mining and all other purposes used larger quantities of explosives and blasting agents in 1986 than in 1985. About 64% of the total weight was utilized in the mining of coal. Nearly all permissibles and 68% of ammonium nitrate-fuel oil blasting agents and unprocessed ammonium nitrate were consumed in coal mining. Other high explosives were used primarily in quarrying and nonmetal mining (48%) and construction (28%). The major uses of water gels and slurries were in coal mining (43%) and quarrying and nonmetal mining (31%).

Seven States collectively consumed 59% of all explosives and blasting agents used in the United States in 1986. These were, in decreasing order of consumption, Kentucky, Pennsylvania, Alabama, West Virginia, and Ohio.

Prepared in the Division of Industrial Minerals, July 20, 1987.

Classification of Industrial Explosives and Blasting Agents

"Apparent consumption" of explosives and blasting agents, as used in this report, means sales reported to the Institute of Makers of Explosives (IME) by IME members and provided to the Bureau of Mines on a proprietary basis, plus sales by nonmember manufacturers reported directly to the Bureau on Form 6-1439-A. Classification of explosives and blasting agents by type and use appears as reported by the manufacturers. Sales of explosives and blasting agents imported by nonmanufacturers are not included, but may be locally important. Some quantities are published in such a way to avoid disclosing company proprietary data.

The principal distinction between explosives and blasting agents is related to their sensitivity to initiation. Explosives are cap-sensitive but blasting agents are not, and therefore require a primer. Only "high" explosives are currently reported. "Low" explosives, which burn very rapidly but do not detonate, include principally black powder and propellants. Black powder has not been reported in industrial use since 1971. Both explosives and blasting agents vary widely in composition, although most blasting agents are essentially mixtures of ammonium nitrate plus a fuel.

Water gels and slurries may be either explosives or blasting agents, but for convenience are classified in a separate category.

The five product classifications used in this report are the same as those adopted by IME. These are as follows:

1. Permissibles.--Grades of high explosives approved by brand name by the U.S. Bureau of Mines or the Mine Safety and Health Administration for use, in a prescribed manner, in underground coal mines, including water gels and slurries approved as permissibles.

2. Other High Explosives.--All high explosives except

(a) permissibles and

(b) any water gels or slurries that would otherwise be classified as high explosives.

Included in the "Other High Explosives" classification are all formulations packaged in metal containers.

3. Packaged and Bulk Water Gels, Slurries, and Emulsions.--All water gels, slurries, and emulsions, packaged or in bulk, made by addition of more than 5% water to high explosives or blasting agents, except those approved as permissibles.

4. Ammonium Nitrate-Fuel Oil Blasting Agents.--Without regard to packaging or container, and having a density less than 1.0 gram per cubic centimeter (cc).

5. Unprocessed Ammonium Nitrate.--Prilled or grained ammonium nitrate for use in blasting agents.

Companies covered by this report, including IME members, are as follows:

American Cyanamid Company--New Castle, Pennsylvania
 Apache Powder Company--Benson, Arizona
 Atlas Powder Company--Dallas, Texas
 Austin Powder Company--Cleveland, Ohio
 C-I-L Inc.--Willowdale, Ontario, Canada
 Columbia Nitrogen Corp.--Augusta, Georgia
 E. I. du Pont de Nemours & Co., Inc.--Wilmington, Delaware
 El Dorado Chemical Co.--St. Louis, Missouri
 Ensign Bickford Company--Simsbury, Connecticut
 Goex Inc.--Cleburne, Texas
 W.R. Grace & Co. ACG--Memphis, Tennessee
 Hawkeye Chemical Company--Clinton, Iowa
 Independent Explosives Company of Pennsylvania--Scranton, Pennsylvania
 Ireco Incorporated--Salt Lake City, Utah
 Kaichem Internal Corp.--Garden City, Georgia
 Mining Services International--Salt Lake City, Utah
 Nitrochem Energy Corp.--Allentown, Pennsylvania
 Sierra Chemical Company--Reno, Nevada
 Southern Explosives Corporation--Glasgow, Kentucky
 Thermex Energy Corporation--Dallas, Texas
 Trojan Corp.--Salt Lake City, Utah
 UNOCAL Corporation--Los Angeles, California
 USS Agri-Chemicals--Atlanta, Georgia

TABLE 1.--Salient statistics of industrial explosives and blasting agents sold for consumption in the United States, 1985-86 (Thousand pounds)

Class	1985	1986
Permissibles-----	36,068	35,439
Other high explosives-----	1/135,876	131,789
Water gels, slurries, and emulsions-----	1/324,526	420,090
Ammonium nitrate-fuel oil blasting agents-----	1/556,859	648,438
Unprocessed ammonium nitrate-----	2/2,747,025	2,486,958
Total-----	3,800,354	3,722,714

1/Some quantities of this class of explosive are included with "Unprocessed ammonium nitrate" to avoid disclosing company proprietary data.

2/Includes some quantities of other high explosives, water gels, slurries, and emulsions, and ammonium nitrate-fuel oil blasting agents.

TABLE 2.--Industrial explosives and blasting agents sold for consumption in the United States, by class and use, 1985-86
(Thousand pounds)

Class	Coal mining 1/		Metal mining 1/		Quarrying and nonmetal mining 1/		Construction work 1/		All other purposes 2/		Total	
	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986
Permissibles-----	34,563	34,971	117	7	481	155	836	245	71	61	36,068	35,439
Other high explosives 3/-----	21,705	18,004	9,466	7,027	55,470	63,249	35,460	37,403	13,775	6,106	135,876	131,789
Water gels and slurries 3/-----	133,858	180,201	66,653	57,153	80,283	128,854	27,487	38,582	16,245	15,300	324,526	420,090
Ammonium nitrate-fuel oil blasting agents 3/-----	369,139	416,914	29,534	32,670	106,727	117,785	47,292	53,821	4,167	27,248	556,859	648,438
Unprocessed ammonium nitrate 4/-----	1,682,038	1,716,125	276,640	222,987	267,539	275,177	136,376	128,600	384,432	144,069	2,747,025	2,486,958
Total-----	2,241,303	2,366,215	382,410	319,844	510,500	585,220	247,451	258,651	418,690	192,784	3,800,354	3,722,714

1/Some quantities of this use for 1985 are included with "All other purposes" to avoid disclosing company proprietary data.

2/Includes some quantities from coal mining, metal mining, quarrying and nonmetal mining, and construction work for 1985.

3/Some quantities of this class of explosive for 1985 are included with "Unprocessed ammonium nitrate" to avoid disclosing company proprietary data.

4/Includes some quantities of other high explosives, water gels and slurries, ammonium nitrate-fuel oil blasting agents for 1985.

TABLE 3. Industrial explosives and blasting agents sold for consumption
in the United States, by State and use, 1986
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes ^{1/}	
Alabama-----	272,252	--	6,168	2,691	237	281,348
Alaska-----	899	5	78	5,468	--	6,450
Arizona-----	11,403	80,794	532	155	4,728	97,612
Arkansas-----	10	151	8,924	2,041	27	11,153
California-----	28	7,669	13,660	8,730	816	30,903
Colorado-----	46,594	9,455	2,110	1,867	1,268	61,294
Connecticut-----	3	--	9,089	2,480	271	11,843
Delaware-----	38	--	304	125	--	467
District of Columbia ^{2/}	--	--	--	--	--	--
Florida-----	--	41	31,959	7,354	223	39,577
Georgia-----	5,950	--	57,022	1,545	2	64,519
Hawaii-----	--	--	59	219	44	322
Idaho-----	16,579	27,756	1,385	414	27	46,161
Illinois-----	58,283	128	33,342	3,922	5,670	101,345
Indiana-----	103,485	37	11,599	6,602	654	122,377
Iowa-----	2,160	--	9,979	3,414	8,278	23,831
Kansas-----	3,404	94	11,584	1,064	72	16,218
Kentucky-----	651,961	4,241	19,122	57,487	38,288	771,099
Louisiana-----	--	1,062	546	34	566	2,208
Maine-----	--	--	357	1,727	--	2,084
Maryland-----	221	1	4,201	844	162	5,429
Massachusetts-----	23	--	13,210	3,464	408	17,105
Michigan-----	153	23,394	9,501	1,572	10,244	44,864
Minnesota-----	63	41,191	5,954	926	10,493	58,627
Mississippi-----	--	--	229	51	346	626
Missouri-----	9,916	2,445	55,303	9,680	6,895	84,239
Montana-----	44,262	31,352	1,738	455	1,141	78,948
Nebraska-----	7	--	69	2,520	--	2,596
Nevada-----	19	32,952	1,926	1,140	123	36,160
New Hampshire-----	--	--	1,226	2,754	--	3,980
New Jersey-----	22,724	--	26,999	474	81	50,278
New Mexico-----	68,366	29,123	700	11,359	1,027	110,575
New York-----	1,653	180	9,180	3,727	--	14,740
North Carolina-----	11,708	690	57,881	3,066	--	73,345
North Dakota-----	42	--	92	124	310	568
Ohio-----	154,416	113	20,916	24,753	10,918	211,116
Oklahoma-----	13,901	4,450	20,081	9,475	276	48,183
Oregon-----	4	533	2,888	3,522	2,377	9,324
Pennsylvania-----	277,059	--	21,155	10,147	49,953	358,314
Rhode Island-----	--	--	295	273	--	568
South Carolina-----	106	18	379	102	--	605
South Dakota-----	291	159	--	330	107	887
Tennessee-----	42,923	882	14,584	6,414	428	65,231
Texas-----	6,588	94	52,419	24,425	4,661	88,187
Utah-----	708	11,411	3,801	171	588	16,679
Vermont-----	--	--	328	580	1,043	1,951
Virginia-----	103,728	--	17,589	5,074	416	126,807
Washington-----	158	7,043	17,232	11,266	97	35,796
West Virginia-----	259,796	98	2,063	8,282	6,602	276,841
Wisconsin-----	--	53	3,352	2,158	1,258	6,821
Wyoming-----	174,331	2,229	2,110	2,184	506	181,360
Undistributed-----	--	--	--	--	21,153	21,153
Total-----	2,366,215	319,844	585,220	258,651	192,784	3,722,714

^{1/}Some quantities of this use are included in "Undistributed" to avoid disclosing company proprietary data.

^{2/}Included with Maryland.

TABLE 4.--Industrial explosives and blasting agents sold for consumption in the United States, by State and class, 1986
(Thousand pounds)

State	Class					Total
	Fixed high explosives		Water gels, slurries, and emulsions	Blasting Agents		
	Permissibles	Other high explosives		Ammonium nitrate-fuel oil blasting agents	Unprocessed ammonium nitrate 1/	
Alabama-----	1,575	1,583	9,347	14,717	254,126	281,348
Alaska-----	--	4,995	869	586	--	6,450
Arizona-----	4	2,180	18,751	2,841	73,836	97,612
Arkansas-----	--	695	4,035	2,301	4,122	11,153
California-----	30	3,151	5,902	12,112	9,708	30,903
Colorado-----	55	1,730	15,234	6,374	37,901	61,294
Connecticut-----	3	3,688	2,425	2,749	2,978	11,843
Delaware-----	--	317	43	65	42	467
District of Columbia 2/	--	--	--	--	--	--
Florida-----	--	2,001	32,365	2,838	2,373	39,577
Georgia-----	16	1,907	12,237	3,814	46,545	64,519
Hawaii-----	--	151	42	129	--	322
Idaho-----	6	1,351	775	406	43,623	46,161
Illinois-----	524	6,090	19,941	9,597	65,193	101,345
Indiana-----	76	1,924	28,015	51,209	41,153	122,377
Iowa-----	267	5,094	2,805	1,417	14,248	23,831
Kansas-----	46	1,643	1,522	12,950	57	16,218
Kentucky-----	19,443	7,490	42,148	194,574	507,444	771,099
Louisiana-----	--	883	165	1,160	--	2,208
Maine-----	--	918	218	948	--	2,084
Maryland-----	46	1,270	1,999	267	1,847	5,429
Massachusetts-----	17	6,518	2,395	8,042	133	17,105
Michigan-----	24	1,616	11,875	11,206	20,143	44,864
Minnesota-----	10	1,343	18,852	8,114	30,308	58,627
Mississippi-----	--	385	12	229	--	626
Missouri-----	938	9,877	9,035	11,948	52,441	84,239
Montana-----	96	1,728	5,928	2,406	68,790	78,948
Nebraska-----	7	255	--	472	1,862	2,596
Nevada-----	--	269	2,061	6,478	27,352	36,160
New Hampshire-----	8	2,558	166	1,248	--	3,980
New Jersey-----	22	2,208	1,800	2,210	44,038	50,278
New Mexico-----	29	1,478	15,277	16,781	77,010	110,575
New York-----	8	3,454	3,898	5,180	2,200	14,740
North Carolina-----	27	8,823	14,324	3,048	47,123	73,345
North Dakota-----	1	295	75	1	196	568
Ohio-----	171	3,137	14,293	47,070	146,445	211,116
Oklahoma-----	--	821	9,237	24,327	13,798	48,183
Oregon-----	--	1,789	101	2,371	5,063	9,324
Pennsylvania-----	1,381	6,947	24,789	36,379	288,818	358,314
Rhode Island-----	--	262	3	303	--	568
South Carolina-----	--	124	384	97	--	605
South Dakota-----	--	38	506	228	115	887
Tennessee-----	559	6,430	7,903	25,873	24,466	65,231
Texas-----	3	3,870	5,913	26,867	51,534	88,187
Utah-----	297	2,044	677	750	12,911	16,679
Vermont-----	--	685	484	776	6	1,951
Virginia-----	6,156	4,286	10,860	20,807	84,698	126,807
Washington-----	36	3,508	248	718	31,286	35,796
West Virginia-----	3,426	3,281	7,761	55,322	207,051	276,841
Wisconsin-----	--	2,208	466	211	3,936	6,821
Wyoming-----	132	2,491	51,929	7,922	118,886	181,360
Undistributed-----	--	--	--	--	21,153	21,153
Total-----	35,439	131,789	420,090	648,438	2,486,958	3,722,714

1/Some quantities of this class of explosives are included in "Undistributed" to avoid disclosing company proprietary data.

2/Included with Maryland.

TABLE 5.--Permissible explosives sold for consumption in the United States,
by State and use, 1986
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	1,502	--	--	73	--	1,575
Alaska-----	--	--	--	--	--	--
Arizona-----	4	--	--	--	--	4
Arkansas-----	--	--	--	--	--	--
California-----	20	--	10	--	--	30
Colorado-----	15	--	--	--	40	55
Connecticut-----	3	--	--	--	--	3
Delaware-----	--	--	--	--	--	--
District of Columbia ^{1/}	--	--	--	--	--	--
Florida-----	--	--	--	--	--	--
Georgia-----	16	--	--	--	--	16
Hawaii-----	--	--	--	--	--	--
Idaho-----	6	--	--	--	--	6
Illinois-----	498	--	26	--	--	524
Indiana-----	76	--	--	--	--	76
Iowa-----	267	--	--	--	--	267
Kansas-----	46	--	--	--	--	46
Kentucky-----	19,442	--	1	--	--	19,443
Louisiana-----	--	--	--	--	--	--
Maine-----	--	--	--	--	--	--
Maryland-----	42	--	4	--	--	46
Massachusetts-----	16	--	1	--	--	17
Michigan-----	24	--	--	--	--	24
Minnesota-----	10	--	--	--	--	10
Mississippi-----	--	--	--	--	--	--
Missouri-----	936	--	2	--	--	938
Montana-----	96	--	--	--	--	96
Nebraska-----	7	--	--	--	--	7
Nevada-----	--	--	--	--	--	--
New Hampshire-----	--	--	6	2	--	8
New Jersey-----	22	--	--	--	--	22
New Mexico-----	29	--	--	--	--	29
New York-----	6	--	2	--	--	8
North Carolina-----	27	--	--	--	--	27
North Dakota-----	1	--	--	--	--	1
Ohio-----	170	--	--	1	--	171
Oklahoma-----	--	--	--	--	--	--
Oregon-----	--	--	--	--	--	--
Pennsylvania-----	1,326	--	6	48	1	1,381
Rhode Island-----	--	--	--	--	--	--
South Carolina-----	--	--	--	--	--	--
South Dakota-----	--	--	--	--	--	--
Tennessee-----	475	--	--	84	--	559
Texas-----	3	--	--	--	--	3
Utah-----	241	7	19	10	20	297
Vermont-----	--	--	--	--	--	--
Virginia-----	6,156	--	--	--	--	6,156
Washington-----	36	--	--	--	--	36
West Virginia-----	3,321	--	78	27	--	3,426
Wisconsin-----	--	--	--	--	--	--
Wyoming-----	132	--	--	--	--	132
Total-----	34,971	7	155	245	61	35,439

^{1/}Included with Maryland.

TABLE 6.--Other high explosives sold for consumption in the United States,
by State and use, 1986
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	363	--	328	764	128	1,583
Alaska-----	110	5	61	4,819	--	4,995
Arizona-----	283	1,664	224	9	--	2,180
Arkansas-----	6	27	328	307	27	695
California-----	8	93	842	2,079	129	3,151
Colorado-----	378	578	363	52	359	1,730
Connecticut-----	--	--	2,753	930	5	3,688
Delaware-----	--	--	304	13	--	317
District of Columbia ^{1/}	--	--	--	--	--	--
Florida-----	--	41	1,305	569	86	2,001
Georgia-----	17	--	1,659	230	1	1,907
Hawaii-----	--	--	19	88	44	151
Idaho-----	5	426	584	336	--	1,351
Illinois-----	1,216	--	3,869	1,003	2	6,090
Indiana-----	1,052	37	817	14	4	1,924
Iowa-----	135	--	3,084	1,849	26	5,094
Kansas-----	50	94	1,248	184	67	1,643
Kentucky-----	4,922	4	1,530	817	217	7,490
Louisiana-----	--	--	509	34	340	883
Maine-----	--	--	115	803	--	918
Maryland-----	34	1	846	389	--	1,270
Massachusetts-----	7	--	4,963	1,548	--	6,518
Michigan-----	87	421	739	209	160	1,616
Minnesota-----	10	428	699	206	--	1,343
Mississippi-----	--	--	--	46	339	385
Missouri-----	44	344	7,150	2,293	46	9,877
Montana-----	204	161	388	178	797	1,728
Nebraska-----	--	--	--	255	--	255
Nevada-----	19	60	77	45	68	269
New Hampshire-----	--	--	825	1,733	--	2,558
New Jersey-----	--	--	1,871	337	--	2,203
New Mexico-----	203	603	79	461	132	1,478
New York-----	--	169	1,950	1,335	--	3,454
North Carolina-----	637	190	6,377	1,619	--	8,823
North Dakota-----	41	--	92	123	39	295
Ohio-----	1,390	65	1,300	360	22	3,137
Oklahoma-----	69	9	334	211	198	821
Oregon-----	4	--	786	987	12	1,789
Pennsylvania-----	1,875	--	3,680	1,177	215	6,947
Rhode Island-----	--	--	139	123	--	262
South Carolina-----	--	3	102	19	--	124
South Dakota-----	--	--	--	31	7	38
Tennessee-----	374	775	3,020	2,259	2	6,430
Texas-----	4	--	1,319	1,326	1,221	3,870
Utah-----	467	235	1,059	157	126	2,044
Vermont-----	--	--	96	181	408	685
Virginia-----	1,218	--	2,263	804	1	4,286
Washington-----	46	333	1,408	1,696	25	3,508
West Virginia-----	1,293	98	924	612	354	3,281
Wisconsin-----	--	53	449	1,706	--	2,208
Wyoming-----	1,433	110	372	77	499	2,491
Total-----	18,004	7,027	63,249	37,403	6,106	131,789

^{1/}Included with Maryland.

TABLE 7.--Packaged and bulk water gels, slurries, and emulsions sold for consumption in the United States, by State and use, 1986
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	3,265	--	4,177	1,799	106	9,347
Alaska-----	789	--	--	80	--	869
Arizona-----	--	14,018	--	5	4,728	18,751
Arkansas-----	--	124	3,411	500	--	4,035
California-----	--	222	4,046	1,041	593	5,902
Colorado-----	9,583	3,496	629	1,225	301	15,234
Connecticut-----	--	--	1,445	714	266	2,425
Delaware-----	38	--	--	5	--	43
District of Columbia <u>1/</u>	--	--	--	--	--	--
Florida-----	--	--	26,977	5,299	89	32,365
Georgia-----	135	--	11,143	958	1	12,237
Hawaii-----	--	--	40	2	--	42
Idaho-----	604	126	31	7	7	775
Illinois-----	10,302	122	7,409	1,219	889	19,941
Indiana-----	21,264	--	4,063	2,430	258	28,015
Iowa-----	49	--	2,185	489	82	2,805
Kansas-----	788	--	719	12	3	1,522
Kentucky-----	31,405	4,235	2,495	1,085	2,928	42,148
Louisiana-----	--	--	37	--	128	165
Maine-----	--	--	16	202	--	218
Maryland-----	118	--	1,407	312	162	1,999
Massachusetts-----	--	--	1,687	300	408	2,395
Michigan-----	42	9,739	1,881	208	5	11,875
Minnesota-----	--	17,507	873	431	41	18,852
Mississippi-----	--	--	4	1	7	12
Missouri-----	3,620	180	4,009	1,142	84	9,035
Montana-----	369	3,937	1,350	272	--	5,928
Nebraska-----	--	--	--	--	--	--
Nevada-----	--	1,685	261	114	1	2,061
New Hampshire-----	--	--	8	158	--	166
New Jersey-----	65	--	1,653	72	10	1,800
New Mexico-----	13,281	587	547	842	20	15,277
New York-----	371	4	1,706	1,817	--	3,898
North Carolina---	306	369	12,958	691	--	14,324
North Dakota----	--	--	--	--	75	75
Ohio-----	5,180	48	2,775	5,967	323	14,293
Oklahoma-----	2,843	3	4,650	1,729	12	9,237
Oregon-----	--	--	80	21	--	101
Pennsylvania-----	15,067	--	6,085	1,743	1,894	24,789
Rhode Island-----	--	--	--	3	--	3
South Carolina---	61	15	247	61	--	384
South Dakota----	291	144	--	71	--	506
Tennessee-----	2,262	105	4,458	652	426	7,903
Texas-----	49	94	3,661	1,476	633	5,913
Utah-----	--	231	231	1	214	677
Vermont-----	--	--	167	160	157	484
Virginia-----	1,451	--	8,589	486	334	10,860
Washington-----	76	23	42	59	48	248
West Virginia----	6,650	--	374	675	62	7,761
Wisconsin-----	--	--	273	193	--	466
Wyoming-----	49,877	139	55	1,853	5	51,929
Total-----	180,201	57,153	128,854	38,582	15,300	420,090

1/ Included with Maryland.

TABLE 8.--Ammonium nitrate-fuel oil blasting agents sold for consumption
in the United States, by State and use, 1986
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	14,368	--	293	55	1	14,717
Alaska-----	--	--	17	569	--	586
Arizona-----	--	2,394	308	139	--	2,841
Arkansas-----	4	--	1,566	731	--	2,301
California-----	--	4,987	4,550	2,481	94	12,112
Colorado-----	3,191	2,544	--	115	524	6,374
Connecticut-----	--	--	1,913	836	--	2,749
Delaware-----	--	--	--	65	--	65
District of Columbia <u>1/</u>	--	--	--	--	--	--
Florida-----	--	--	1,845	993	--	2,838
Georgia-----	132	--	3,325	357	--	3,814
Hawaii-----	--	--	--	129	--	129
Idaho-----	--	310	7	69	20	406
Illinois-----	6,953	6	2,339	299	--	9,597
Indiana-----	44,069	--	4,592	2,202	346	51,209
Iowa-----	--	--	1,369	25	23	1,417
Kansas-----	2,520	--	9,560	868	2	12,950
Kentucky-----	163,130	2	6,421	3,918	21,103	194,574
Louisiana-----	--	1,062	--	--	98	1,160
Maine-----	--	--	226	722	--	948
Maryland-----	27	--	120	120	--	267
Massachusetts-----	--	--	6,426	1,616	--	8,042
Michigan-----	--	4,082	6,804	320	--	11,206
Minnesota-----	18	8,011	45	40	--	8,114
Mississippi-----	--	--	225	4	--	229
Missouri-----	205	1	7,949	3,781	12	11,948
Montana-----	2,401	--	--	5	--	2,406
Nebraska-----	--	--	69	403	--	472
Nevada-----	--	3,979	1,464	981	54	6,478
New Hampshire-----	--	--	387	861	--	1,248
New Jersey-----	--	--	2,145	65	--	2,210
New Mexico-----	15,778	492	74	209	228	16,781
New York-----	--	--	5,009	171	--	5,180
North Carolina-----	--	15	2,436	597	--	3,048
North Dakota-----	--	--	--	1	--	1
Ohio-----	35,031	--	9,020	2,297	722	47,070
Oklahoma-----	10,989	4,438	1,388	7,446	66	24,327
Oregon-----	--	--	1,622	744	5	2,371
Pennsylvania-----	23,338	--	10,788	1,711	542	36,379
Rhode Island-----	--	--	156	147	--	303
South Carolina-----	45	--	30	22	--	97
South Dakota-----	--	--	--	228	--	228
Tennessee-----	15,360	2	7,092	3,419	--	25,873
Texas-----	3,356	--	13,248	7,611	2,652	26,867
Utah-----	--	213	363	3	171	750
Vermont-----	--	--	59	239	478	776
Virginia-----	18,126	--	1,829	771	81	20,807
Washington-----	--	132	279	283	24	718
West Virginia-----	50,245	--	373	4,704	--	55,322
Wisconsin-----	--	--	--	211	--	211
Wyoming-----	7,628	--	54	238	2	7,922
Total-----	416,914	32,670	117,785	53,821	27,248	648,438

1/Included with Maryland.

TABLE 9.--Unprocessed ammonium nitrate sold for consumption
in the United States, by State and use, 1986
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other ^{1/} purposes	
Alabama-----	252,754	--	1,370	--	2	254,126
Alaska-----	--	--	--	--	--	--
Arizona-----	11,116	62,718	--	2	--	73,836
Arkansas-----	--	--	3,619	503	--	4,122
California-----	--	2,367	4,212	3,129	--	9,708
Colorado-----	33,427	2,837	1,118	475	44	37,901
Connecticut-----	--	--	2,978	--	--	2,978
Delaware-----	--	--	--	42	--	42
District of Columbia ^{2/}	--	--	--	--	--	--
Florida-----	--	--	1,832	493	48	2,373
Georgia-----	5,650	--	40,895	--	--	46,545
Hawaii-----	--	--	--	--	--	--
Idaho-----	15,964	26,894	763	2	--	43,623
Illinois-----	39,314	--	19,699	1,401	4,779	65,193
Indiana-----	37,024	--	2,127	1,956	46	41,153
Iowa-----	1,709	--	3,341	1,051	8,147	14,248
Kansas-----	--	--	57	--	--	57
Kentucky-----	433,062	--	8,675	51,667	14,040	507,444
Louisiana-----	--	--	--	--	--	--
Maine-----	--	--	--	--	--	--
Maryland-----	--	--	1,824	23	--	1,847
Massachusetts-----	--	--	133	--	--	133
Michigan-----	--	9,152	77	835	10,079	20,143
Minnesota-----	25	15,245	4,337	249	10,452	30,308
Mississippi-----	--	--	--	--	--	--
Missouri-----	5,111	1,920	36,193	2,464	6,753	52,441
Montana-----	41,192	27,254	--	--	344	68,790
Nebraska-----	--	--	--	1,862	--	1,862
Nevada-----	--	27,228	124	--	--	27,352
New Hampshire-----	--	--	--	--	--	--
New Jersey-----	22,637	--	21,330	--	71	44,038
New Mexico-----	39,075	27,441	--	9,847	647	77,010
New York-----	1,276	7	513	404	--	2,200
North Carolina---	10,738	116	36,110	159	--	47,123
North Dakota-----	--	--	--	--	196	196
Ohio-----	112,645	--	7,821	16,128	9,851	146,445
Oklahoma-----	--	--	13,709	89	--	13,798
Oregon-----	--	533	400	1,770	2,360	5,063
Pennsylvania-----	235,453	--	596	5,468	47,301	288,818
Rhode Island-----	--	--	--	--	--	--
South Carolina---	--	--	--	--	--	--
South Dakota-----	--	15	--	--	100	115
Tennessee-----	24,452	--	14	--	--	24,466
Texas-----	3,176	--	34,191	14,012	155	51,534
Utah-----	--	10,725	2,129	--	57	12,911
Vermont-----	--	--	6	--	--	6
Virginia-----	76,777	--	4,908	3,013	--	84,698
Washington-----	--	6,555	15,503	9,228	--	31,286
West Virginia---	198,287	--	314	2,264	6,186	207,051
Wisconsin-----	--	--	2,630	48	1,258	3,936
Wyoming-----	115,261	1,980	1,629	16	--	118,886
Undistributed---	--	--	--	--	21,153	21,153
Total-----	1,716,125	222,987	275,177	128,600	144,069	2,486,958

^{1/}Some quantities of this use are included in "Undistributed" to avoid disclosing company proprietary data.

^{2/} Included with Maryland.