



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, 1981

Apparent consumption of explosives and blasting agents in the United States remained about the same as in 1980 at 4.3 billion pounds, according to the Bureau of Mines, U.S. Department of the Interior. Apparent consumption is measured by sales reported by manufacturers.

Permissibles showed a decrease in consumption of 5% compared with 1980 and "Other high explosives" consumption decreased 11% compared with 1980. The apparent large increase in consumption of unprocessed ammonium nitrate over 1980 totals was the result of placing certain quantities in "All other purposes" to avoid disclosing company proprietary data.

All principal consuming industries except the metal mining industry used less quantities of explosives and blasting agents in 1981 than in 1980. About 52% of the total weight was utilized in the mining of coal. Nearly all permissibles and 56% of ammonium nitrate fuel-mixed blasting agents and unprocessed ammonium nitrate were consumed in coal mining. Other high explosives were used primarily in quarrying and nonmetal mining (27%) and construction (23%). The majority of water gels and slurries went into metal mining (44%).

Seven States collectively consumed 54% of all explosives and blasting agents used in the United States in 1981. These were in order of consumption, Kentucky, Pennsylvania, Alabama, Arizona, West Virginia, Wyoming, and Ohio.

Prepared in the Division of Industrial Minerals, June 23, 1982.

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 as 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 separately in a recognizable category.

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

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 and Slurries.--All water gels and slurries, 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-Mixed Blasting Agents.--Without regard to packaging or container.

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

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

American Cyanamid Company--Wayne, New Jersey
Apache Powder Company--Benson, Arizona
Atlas Powder Company--Dallas, Texas
Austin Powder Company--Cleveland, Ohio
C-I-L Inc.--Quebec, Canada
Columbia Nitrogen Corp.--Augusta, Georgia
E. I. du Pont de Nemours & Co., Inc.--Wilmington, Delaware
Energy Sciences & Consultants, Inc.--Biwabik, Minnesota
Goex Inc.--Cleburne, Texas
W.R. Grace & Co. ACG--Memphis, Tennessee
Gulf Oil Chemicals Company--Merriam, Kansas
Hawkeye Chemical Company--Clinton, Iowa
Hercules, Inc.--Wilmington, Delaware
Independent Explosives Company of Pennsylvania--Scranton, Pennsylvania
Ireco Chemicals--Salt Lake City, Utah
Kaiser Aluminum & Chemical Corp.--Savannah, Georgia
Mining Services International--Salt Lake City, Utah
Monsanto Co.--St. Louis, Missouri
Phillips Chemical Co.--Bartlesville, Oklahoma
Sierra Chemical Company--Reno, Nevada
Southern Explosives Corporation--Glasgow, Kentucky
Trojan Division, International Minerals and Chemical Corp.--Des Plaines, Illinois
Union Oil Company of California--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, 1980-81
(Thousand pounds)

Class	1980	1981
Permissibles-----	55,461	52,562
Other high explosives-----	175,910	157,276
Water gels and slurries-----	404,519	<u>1</u> /397,243
Ammonium nitrate fuel-mixed blasting agents-----	1,395,836	<u>1</u> /965,657
Unprocessed ammonium nitrate-----	2,242,736	<u>2</u> /2,768,311
Total-----	4,274,462	4,341,049

- 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 water gels and slurries and ammonium nitrate fuel-mixed blasting agents.

TABLE 2. - Industrial explosives and blasting agents sold for consumption in the United States by class and use, 1980-81
(Thousand pounds)

Class	Coal mining 1/		Metal mining 1/		Quarrying and nonmetal mining 1/		Construction work 1/		All other purposes 2/		Total	
	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981
Permissibles-----	52,476	49,814	81	166	716	1,638	973	831	1,215	113	55,461	52,562
Other high explosives-----	24,912	22,314	25,085	23,384	50,138	43,223	46,185	36,611	29,590	31 744	175,910	157,276
Water gels and slurries 3/-----	93,916	99,796	171,213	174,528	99,947	86,671	36,311	32,226	3,132	4 022	404,519	397,243
Ammonium nitrate fuel-mixed blasting agents 3/	981,454	689,076	70,073	60,752	227,637	131,932	113,483	82,692	3,189	1,205	1,395,836	965,657
Unprocessed ammonium nitrate 4/-----	1,350,601	1,388,262	292,777	436,619	245,746	230,307	218,695	177,729	134,917	535.394	2,242,736	2,768,311
Total-----	2,503,359	2,249,262	559,229	695,449	624,184	493,771	415,647	330,089	172,043	572,478	4,274,462	4,341,049

1/ Some quantities of this use 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.

3/ Some quantities of this class of explosive are included with "Unprocessed ammonium nitrate" to avoid disclosing company proprietary data for 1981.

4/ Includes some quantities of water gels and slurries and ammonium nitrate fuel-mixed blasting agents for 1981.

TABLE 3. - Industrial explosives and blasting agents sold for consumption
in the United States, by State and use, 1981
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	186,923	---	7,910	55,130	1,745	251,708
Alaska-----	867	4,523	303	10,454	90	16,237
Arizona-----	27,421	211,220	998	439	26	240,104
Arkansas-----	897	---	7,821	2,790	238	11,746
California-----	33	11,997	8,997	5,737	456	27,220
Colorado-----	37,049	33,042	5,905	4,122	857	80,975
Connecticut-----	160	---	8,478	1,186	1,964	11,788
Delaware-----	---	---	---	---	47	47
District of Columbia ^{1/}	---	---	---	---	---	---
Florida-----	---	---	23,188	6,606	---	29,794
Georgia-----	166	---	12,436	2,555	1	15,158
Hawaii-----	---	---	150	29	---	179
Idaho-----	---	25,560	11,501	1,136	14	38,211
Illinois-----	64,130	47	48,200	2,318	2,548	117,243
Indiana-----	128,736	---	16,231	9,195	2	154,164
Iowa-----	8,580	---	14,522	1,045	8,833	32,980
Kansas-----	228	---	4,966	3,447	383	9,024
Kentucky-----	674,406	2	40,379	74,239	45,573	834,599
Louisiana-----	140	---	326	123	2,792	3,381
Maine-----	---	---	730	340	---	1,070
Maryland-----	1,707	---	9,466	9,181	---	20,354
Massachusetts-----	---	---	4,307	1,105	---	5,412
Michigan-----	181	29,686	14,859	3,357	7,243	55,326
Minnesota-----	2,313	125,584	3,826	2,033	8,490	142,246
Mississippi-----	191	---	327	107	2,588	3,213
Missouri-----	12,253	4,282	23,712	12,728	1,327	54,302
Montana-----	52,974	54,641	729	1,202	7,747	117,293
Nebraska-----	---	---	51	1,087	30	1,168
Nevada-----	42	37,104	2,472	7	165	39,790
New Hampshire-----	---	---	1,170	1,086	---	2,256
New Jersey-----	---	8	2,720	913	---	3,641
New Mexico-----	39,988	29,024	2,692	2,306	1	74,011
New York-----	476	285	5,168	4,406	99	10,434
North Carolina-----	770	---	16,183	6,949	10	23,912
North Dakota-----	97	---	---	---	2,646	2,743
Ohio-----	124,247	---	33,413	6,046	8,195	171,901
Oklahoma-----	16,916	4,183	8,026	9,905	10,194	49,224
Oregon-----	98	3,982	3,070	7,430	290	14,870
Pennsylvania-----	353,004	20	64,449	12,482	1,790	431,745
Rhode Island-----	---	---	143	268	---	411
South Carolina-----	---	---	4,047	683	1	4,731
South Dakota-----	---	416	---	---	5	421
Tennessee-----	27,354	3,819	16,765	20,358	1,659	69,955
Texas-----	14	371	26,052	21,291	6,348	54,076
Utah-----	680	69,924	7,664	672	4,216	83,156
Vermont-----	22	---	543	3,007	---	3,572
Virginia-----	127,956	---	6,200	9,687	35	143,878
Washington-----	7,254	23,459	2,369	3,213	17	36,312
West Virginia-----	200,230	---	3,756	5,436	83	209,505
Wisconsin-----	---	2,574	4,579	1,279	928	9,360
Wyoming-----	150,759	19,696	11,972	974	8,232	191,633
Undistributed-----	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	434,570	434,570
Total-----	2,249,262	695,449	493,771	330,089	572,478	4,341,049

^{1/} Included with Maryland.

^{2/} Quantities included with "All other purposes" to avoid disclosing company proprietary data.

TABLE 4. - Industrial explosives and blasting agents sold for consumption in the United States, by State and class, 1981
(Thousand pounds)

State	Class					Total
	Fixed high explosives		Water gels and slurries 1/	Blasting agents		
	Permissibles	Other high explosives		Ammonium nitrate fuel-mixed blasting agents 1/	Unprocessed ammonium nitrate 2/	
Alabama-----	2,447	3,348	10,915	21,536	213,462	251,708
Alaska-----	---	2,868	6,523	1,456	5,390	16,237
Arizona-----	---	3,268	59,705	7,363	169,768	240,104
Arkansas-----	1	1,586	2,280	3,478	4,401	11,746
California-----	---	3,220	4,889	2,214	16,897	27,220
Colorado-----	115	4,408	14,907	5,270	56,275	80,975
Connecticut-----	---	1,610	3,384	1,430	5,364	11,788
Delaware-----	2	---	14	31	---	47
District of Columbia 3/	---	---	---	---	---	---
Florida-----	---	7,694	19,043	2,820	237	29,794
Georgia-----	---	1,663	4,673	8,822	---	15,158
Hawaii-----	---	19	160	---	---	179
Idaho-----	---	1,841	1,153	1,374	33,843	38,211
Illinois-----	443	3,721	5,576	57,512	49,991	117,243
Indiana-----	14	1,785	4,494	111,833	36,038	154,164
Iowa-----	61	2,335	6,295	1,184	23,105	32,980
Kansas-----	2	645	1,389	5,495	1,493	9,024
Kentucky-----	28,724	8,643	11,164	278,619	507,449	834,599
Louisiana-----	220	2,695	466	---	---	3,381
Maine-----	---	388	340	342	---	1,070
Maryland-----	6	1,873	3,851	5,832	8,792	20,354
Massachusetts-----	---	1,783	382	3,044	203	5,412
Michigan-----	74	1,803	16,559	14,229	22,661	55,326
Minnesota-----	---	464	66,352	33,447	41,983	142,246
Mississippi-----	---	2,320	385	317	191	3,213
Missouri-----	9	7,108	4,628	17,885	24,672	54,302
Montana-----	10	8,900	2,783	37	105,563	117,293
Nebraska-----	---	165	205	174	624	1,168
Nevada-----	---	924	305	6,818	31,743	39,790
New Hampshire-----	---	1,379	80	797	---	2,256
New Jersey-----	---	1,008	889	1,744	---	3,641
New Mexico-----	42	6,708	19,324	1,555	46,382	74,011
New York-----	1	2,390	1,788	4,222	2,033	10,434
North Carolina-----	---	1,754	5,480	7,797	8,881	23,912
North Dakota-----	---	2,642	---	6	95	2,743
Ohio-----	749	3,525	3,635	46,196	117,796	171,901
Oklahoma-----	---	3,846	2,773	25,471	17,134	49,224
Oregon-----	---	2,692	859	3,331	7,988	14,870
Pennsylvania-----	1,235	12,892	40,346	64,239	313,033	431,745
Rhode Island-----	---	122	13	276	---	411
South Carolina-----	---	700	1,609	2,422	---	4,731
South Dakota-----	---	8	413	---	---	421
Tennessee-----	886	7,049	3,081	27,462	31,477	69,955
Texas-----	5	8,510	3,503	7,395	34,663	54,076
Utah-----	160	5,956	12,281	67	64,692	83,156
Vermont-----	---	537	1,318	1,717	---	3,572
Virginia-----	11,758	4,257	2,705	46,283	78,875	143,878
Washington-----	---	3,802	1,726	65	30,719	36,312
West Virginia-----	5,464	4,155	1,759	88,011	110,116	209,505
Wisconsin-----	12	691	7,119	610	928	9,360
Wyoming-----	122	5,576	33,722	43,429	108,784	191,633
Undistributed-----	---	---	---	---	434,570	434,570
Total-----	52,562	157,276	397,243	965,657	2,768,311	4,341,049

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

2/ Includes some quantities of water gels and slurries and ammonium nitrate fuel-mixed blasting agents.

3/ Included with Maryland.

TABLE 5. - Permissible explosives sold for consumption in the United States,
by State and use, 1981
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	1,362	---	908	177	---	2,447
Alaska-----	---	---	---	---	---	---
Arizona-----	---	---	---	---	---	---
Arkansas-----	1	---	---	---	---	1
California-----	---	---	---	---	---	---
Colorado-----	82	15	---	---	18	115
Connecticut-----	---	---	---	---	---	---
Delaware-----	---	---	---	---	2	2
District of Columbia ^{1/}	---	---	---	---	---	---
Florida-----	---	---	---	---	---	---
Georgia-----	---	---	---	---	---	---
Hawaii-----	---	---	---	---	---	---
Idaho-----	---	---	---	---	---	---
Illinois-----	330	---	108	5	---	443
Indiana-----	7	---	7	---	---	14
Iowa-----	58	---	3	---	---	61
Kansas-----	---	---	2	---	---	2
Kentucky-----	28,563	---	161	---	---	28,724
Louisiana-----	140	---	80	---	---	220
Maine-----	---	---	---	---	---	---
Maryland-----	4	---	2	---	---	6
Massachusetts-----	---	---	---	---	---	---
Michigan-----	55	---	19	---	---	74
Minnesota-----	---	---	---	---	---	---
Mississippi-----	---	---	---	---	---	---
Missouri-----	---	---	9	---	---	9
Montana-----	---	---	---	---	10	10
Nebraska-----	---	---	---	---	---	---
Nevada-----	---	---	---	---	---	---
New Hampshire-----	---	---	---	---	---	---
New Jersey-----	---	---	---	---	---	---
New Mexico-----	42	---	---	---	---	42
New York-----	1	---	---	---	---	1
North Carolina-----	---	---	---	---	---	---
North Dakota-----	---	---	---	---	---	---
Ohio-----	674	---	75	---	---	749
Oklahoma-----	---	---	---	---	---	---
Oregon-----	---	---	---	---	---	---
Pennsylvania-----	941	---	55	239	---	1,235
Rhode Island-----	---	---	---	---	---	---
South Carolina-----	---	---	---	---	---	---
South Dakota-----	---	---	---	---	---	---
Tennessee-----	286	8	204	388	---	886
Texas-----	---	---	5	---	---	5
Utah-----	---	143	---	---	17	160
Vermont-----	---	---	---	---	---	---
Virginia-----	11,758	---	---	---	---	11,758
Washington-----	---	---	---	---	---	---
West Virginia-----	5,454	---	---	10	---	5,464
Wisconsin-----	---	---	---	12	---	12
Wyoming-----	56	---	---	---	66	122
Total-----	49,814	166	1,638	831	113	52,562

^{1/} Included with Maryland.

TABLE 6. - Other high explosives sold for consumption in the United States, by State and use, 1981
(Thousand pounds)

State	Use				Total	
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work		All other purposes
Alabama-----	613	---	242	774	1,719	3,348
Alaska-----	---	---	---	2,778	90	2,868
Arizona-----	---	2,633	454	175	6	3,268
Arkansas-----	8	---	505	835	238	1,586
California-----	33	123	370	2,574	120	3,220
Colorado-----	276	3,296	---	95	741	4,408
Connecticut-----	---	---	1,220	389	1	1,610
Delaware-----	---	---	---	---	---	---
District of Columbia ^{1/}	---	---	---	---	---	---
Florida-----	---	---	5,298	2,396	---	7,694
Georgia-----	91	---	843	729	---	1,663
Hawaii-----	---	---	---	19	---	19
Idaho-----	---	837	---	1,004	---	1,841
Illinois-----	562	47	2,620	492	---	3,721
Indiana-----	657	---	881	247	---	1,785
Iowa-----	36	---	2,149	150	---	2,335
Kansas-----	228	---	41	13	363	645
Kentucky-----	6,523	2	1,544	569	5	8,643
Louisiana-----	---	---	215	8	2,472	2,695
Maine-----	---	---	201	187	---	388
Maryland-----	52	---	1,292	529	---	1,873
Massachusetts-----	---	---	1,446	337	---	1,783
Michigan-----	---	398	1,247	27	131	1,803
Minnesota-----	---	234	178	52	---	464
Mississippi-----	---	---	107	76	2,137	2,320
Missouri-----	221	3,214	2,503	1,170	---	7,108
Montana-----	242	3,484	161	809	4,204	8,900
Nebraska-----	---	---	---	135	30	165
Nevada-----	5	817	71	7	24	924
New Hampshire-----	---	---	557	822	---	1,379
New Jersey-----	---	---	840	168	---	1,008
New Mexico-----	254	3,445	1,216	1,792	1	6,708
New York-----	---	280	1,131	880	99	2,390
North Carolina-----	20	---	844	880	10	1,754
North Dakota-----	---	---	---	---	2,642	2,642
Ohio-----	948	---	2,249	328	---	3,525
Oklahoma-----	30	---	415	486	2,915	3,846
Oregon-----	2	---	810	1,656	224	2,692
Pennsylvania-----	4,095	20	6,123	2,521	133	12,892
Rhode Island-----	---	---	36	86	---	122
South Carolina-----	---	---	73	627	---	700
South Dakota-----	---	3	---	---	5	8
Tennessee-----	614	905	2,409	3,119	2	7,049
Texas-----	14	41	410	1,983	6,062	8,510
Utah-----	341	1,769	---	620	3,226	5,956
Vermont-----	8	---	92	437	---	537
Virginia-----	1,666	---	1,812	744	35	4,257
Washington-----	4	1,793	106	1,882	17	3,802
West Virginia-----	3,703	---	171	281	---	4,155
Wisconsin-----	---	---	6	685	---	691
Wyoming-----	1,068	43	335	38	4,092	5,576
Total-----	22,314	23,384	43,223	36,611	31,744	157,276

^{1/} Included with Maryland.

TABLE 7. - Packaged and bulk water gels and slurries sold for consumption in the United States, by State and use, 1981 ^{1/} (Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	8,801	---	1,357	757	---	10,915
Alaska-----	---	---	303	6,220	---	6,523
Arizona-----	274	59,386	37	8	---	59,705
Arkansas-----	2	---	1,759	519	---	2,280
California-----	---	1	3,157	1,710	21	4,889
Colorado-----	2,536	11,032	851	429	59	14,907
Connecticut-----	---	---	2,717	585	82	3,384
Delaware-----	---	---	---	---	14	14
District of Columbia ^{2/}	---	---	---	---	---	---
Florida-----	---	---	14,863	4,180	---	19,043
Georgia-----	75	---	3,758	839	1	4,673
Hawaii-----	---	---	150	10	---	160
Idaho-----	---	1,070	21	48	14	1,153
Illinois-----	2,154	---	2,995	427	---	5,576
Indiana-----	2,730	---	1,551	211	2	4,494
Iowa-----	148	---	5,570	576	1	6,295
Kansas-----	---	---	1,064	313	12	1,389
Kentucky-----	6,993	---	3,261	910	---	11,164
Louisiana-----	---	---	31	115	320	466
Maine-----	---	---	229	111	---	340
Maryland-----	114	---	3,310	427	---	3,851
Massachusetts-----	---	---	301	81	---	382
Michigan-----	---	15,152	1,281	36	90	16,559
Minnesota-----	---	65,256	970	126	---	66,352
Mississippi-----	---	---	201	4	180	385
Missouri-----	13	369	2,930	1,310	6	4,628
Montana-----	2,123	1	---	390	269	2,783
Nebraska-----	---	---	51	154	---	205
Nevada-----	---	---	298	---	7	305
New Hampshire-----	---	---	27	53	---	80
New Jersey-----	---	8	692	189	---	889
New Mexico-----	13,110	5,734	4	476	---	19,324
New York-----	343	---	670	775	---	1,788
North Carolina-----	---	---	3,866	1,614	---	5,480
North Dakota-----	---	---	---	---	---	---
Ohio-----	268	---	2,906	450	11	3,635
Oklahoma-----	110	196	1,526	807	134	2,773
Oregon-----	9	---	109	711	30	859
Pennsylvania-----	27,483	---	11,671	1,189	3	40,346
Rhode Island-----	---	---	3	10	---	13
South Carolina-----	---	---	1,601	7	1	1,609
South Dakota-----	---	413	---	---	---	413
Tennessee-----	57	496	2,042	486	---	3,081
Texas-----	---	---	2,013	1,292	198	3,503
Utah-----	339	10,904	13	52	973	12,281
Vermont-----	---	---	214	1,104	---	1,318
Virginia-----	651	---	1,651	403	---	2,705
Washington-----	---	366	73	1,287	---	1,726
West Virginia-----	1,093	---	271	395	---	1,759
Wisconsin-----	---	2,574	4,117	428	---	7,119
Wyoming-----	30,370	1,570	186	2	1,594	33,722
Total-----	99,796	174,528	86,671	32,226	4,022	397,243

^{1/} Some quantities of packaged and bulk water gels and slurries are included with "Unprocessed ammonium nitrate" to avoid disclosing company proprietary data.

^{2/} Included with Maryland.

TABLE 8. - Ammonium nitrate fuel-mixed blasting agents sold for consumption
in the United States, by State and use, 1981 ^{1/}
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	19,381	---	328	1,801	26	21,536
Alaska-----	---	---	---	1,456	---	1,456
Arizona-----	667	5,933	507	256	---	7,363
Arkansas-----	886	---	1,892	700	---	3,478
California-----	---	56	476	1,367	315	2,214
Colorado-----	4,884	26	227	94	39	5,270
Connecticut-----	---	---	1,239	191	---	1,430
Delaware-----	---	---	---	---	31	31
District of Columbia ^{2/}	---	---	---	---	---	---
Florida-----	---	---	2,790	30	---	2,820
Georgia-----	---	---	7,835	987	---	8,822
Hawaii-----	---	---	---	---	---	---
Idaho-----	---	1,374	---	---	---	1,374
Illinois-----	52,348	---	4,309	855	---	57,512
Indiana-----	89,406	---	13,690	8,737	---	111,833
Iowa-----	106	---	1,077	1	---	1,184
Kansas-----	---	---	2,408	3,079	8	5,495
Kentucky-----	242,767	---	13,730	22,066	56	278,619
Louisiana-----	---	---	---	---	---	---
Maine-----	---	---	300	42	---	342
Maryland-----	1,397	---	4,264	171	---	5,832
Massachusetts-----	---	---	2,560	484	---	3,044
Michigan-----	126	4,573	9,379	131	20	14,229
Minnesota-----	---	33,447	---	---	---	33,447
Mississippi-----	---	---	19	27	271	317
Missouri-----	7,021	---	4,441	6,402	21	17,885
Montana-----	21	13	---	3	---	37
Nebraska-----	---	---	---	174	---	174
Nevada-----	37	6,602	45	---	134	6,818
New Hampshire-----	---	---	586	211	---	797
New Jersey-----	---	---	1,188	556	---	1,744
New Mexico-----	---	71	1,472	12	---	1,555
New York-----	---	---	1,471	2,751	---	4,222
North Carolina-----	---	---	6,409	1,388	---	7,797
North Dakota-----	2	---	---	---	4	6
Ohio-----	35,956	---	5,744	4,496	---	46,196
Oklahoma-----	16,776	3,979	3,729	987	---	25,471
Oregon-----	87	---	1,615	1,593	36	3,331
Pennsylvania-----	42,598	---	19,715	1,863	63	64,239
Rhode Island-----	---	---	104	172	---	276
South Carolina-----	---	---	2,373	49	---	2,422
South Dakota-----	---	---	---	---	---	---
Tennessee-----	15,877	80	4,194	7,311	---	27,462
Texas-----	---	18	4,596	2,741	40	7,395
Utah-----	---	67	---	---	---	67
Vermont-----	14	---	237	1,466	---	1,717
Virginia-----	39,787	---	2,737	3,759	---	46,283
Washington-----	---	---	21	44	---	65
West Virginia-----	81,330	---	2,785	3,896	---	88,011
Wisconsin-----	---	---	456	154	---	610
Wyoming-----	37,602	4,513	984	189	141	43,429
Total-----	689,076	60,752	131,932	82,692	1,205	965,657

^{1/} Some quantities of ammonium nitrate fuel-mixed blasting agents are included with "Unprocessed ammonium nitrate" to avoid disclosing company proprietary data.

^{2/} Included with Maryland.

TABLE 9. - Unprocessed ammonium nitrate sold for consumption
in the United States, by State and use, 1981 ^{1/}
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	156,766	---	5,075	51,621	---	213,462
Alaska-----	867	4,523	---	---	---	5,390
Arizona-----	26,480	143,268	---	---	20	169,768
Arkansas-----	---	---	3,665	736	---	4,401
California-----	---	11,817	4,994	86	---	16,897
Colorado-----	29,271	18,673	4,827	3,504	---	56,275
Connecticut-----	160	---	3,302	21	1,881	5,364
Delaware-----	---	---	---	---	---	---
District of Columbia ^{2/}	---	---	---	---	---	---
Florida-----	---	---	237	---	---	237
Georgia-----	---	---	---	---	---	---
Hawaii-----	---	---	---	---	---	---
Idaho-----	---	22,279	11,480	84	---	33,843
Illinois-----	8,736	---	38,168	539	2,548	49,991
Indiana-----	35,936	---	102	---	---	36,038
Iowa-----	8,232	---	5,723	318	8,832	23,105
Kansas-----	---	---	1,451	42	---	1,493
Kentucky-----	389,560	---	21,683	50,694	45,512	507,449
Louisiana-----	---	---	---	---	---	---
Maine-----	---	---	---	---	---	---
Maryland-----	140	---	598	8,054	---	8,792
Massachusetts-----	---	---	---	203	---	203
Michigan-----	---	9,563	2,933	3,163	7,002	22,661
Minnesota-----	2,313	26,647	2,678	1,855	8,490	41,983
Mississippi-----	191	---	---	---	---	191
Missouri-----	4,998	699	13,829	3,846	1,300	24,672
Montana-----	50,588	51,143	568	---	3,264	105,563
Nebraska-----	---	---	---	624	---	624
Nevada-----	---	29,685	2,058	---	---	31,743
New Hampshire-----	---	---	---	---	---	---
New Jersey-----	---	---	---	---	---	---
New Mexico-----	26,582	19,774	---	26	---	46,382
New York-----	132	5	1,896	---	---	2,033
North Carolina-----	750	---	5,064	3,067	---	8,881
North Dakota-----	95	---	---	---	---	95
Ohio-----	86,401	---	22,439	772	8,184	117,796
Oklahoma-----	---	8	2,356	7,625	7,145	17,134
Oregon-----	---	3,982	536	3,470	---	7,988
Pennsylvania-----	277,887	---	26,885	6,670	1,591	313,033
Rhode Island-----	---	---	---	---	---	---
South Carolina-----	---	---	---	---	---	---
South Dakota-----	---	---	---	---	---	---
Tennessee-----	10,520	2,330	7,916	9,054	1,657	31,477
Texas-----	---	312	19,028	15,275	48	34,663
Utah-----	---	57,041	7,651	---	---	64,692
Vermont-----	---	---	---	---	---	---
Virginia-----	74,094	---	---	4,781	---	78,875
Washington-----	7,250	21,300	2,169	---	---	30,719
West Virginia-----	108,650	---	529	854	83	110,116
Wisconsin-----	---	---	---	---	928	928
Wyoming-----	81,663	13,570	10,467	745	2,339	108,784
Undistributed ^{3/} -----	^{4/}	^{4/}	^{4/}	^{4/}	434,570	434,570
Total-----	1,388,262	436,619	230,307	177,729	535,394	2,768,311

^{1/} Includes some quantities of packaged and bulk water gels and slurries and ammonium nitrate fuel-mixed blasting agents.

^{2/} Included with Maryland.

^{3/} Quantities undistributed to avoid disclosing company proprietary data.

^{4/} Undistributed quantity for this use is included with undistributed "All other purposes."