



MINERAL INDUSTRY SURVEYS

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON, D. C. 20241



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Explosives, Annual

APPARENT CONSUMPTION OF INDUSTRIAL EXPLOSIVES AND BLASTING AGENTS IN THE UNITED STATES, 1976

Apparent consumption of explosives and blasting agents in the United States was 3.3 billion pounds in 1976, an increase of 6.7% over the 1975 consumption, according to the Bureau of Mines, U.S. Department of the Interior. Apparent consumption is measured by sales reported by manufacturers.

Consumption of bulk blasting agents ("other processed blasting agents and unprocessed ammonium nitrate") increased 8.6%. Use of cylindrically packaged blasting agents rose 5.6% and use of water gels and slurries increased 9.1%. Consumption of permissible explosives declined 3.8% in 1976, and also the use of other high explosives declined 10.7%.

All users showed an increase in explosives consumption in 1976 as compared with the previous year. Coal mining used more than half (54.0%) of the total weight of explosives consumed in 1976; it consumed 92.1% of permissible explosives, 77.0% of cylindrically packaged blasting agents, and 59.5% of bulk blasting agents. Other high explosives were consumed principally in quarrying (32.7%) and construction (31.8%). The chief use of water gels and slurries was in metal mining (60.5%).

Seven States together consumed 59.3% of all explosives and blasting agents used in the United States in 1976. These were, in order of consumption, Kentucky, Pennsylvania, Alabama, Ohio, Arizona, West Virginia, and Virginia.

Prepared in the Division of Nonmetallic Minerals, May 6, 1977.

Classification of Industrial Explosives and Blasting Agents

"Apparent consumption" of explosives and blasting agents, as used in this report, means sales reported by manufacturers of such to the Bureau of Mines on Form 6-1439-A, plus sales reported to the Institute of Makers of Explosives (IME) by IME members and provided to the Bureau on a confidential basis; classification of any particular quantity of explosives (or blasting agents) by type and use is as reported by the manufacturers. Coverage is substantially complete, but occasional omissions do occur, and the Bureau would welcome notification of them. In particular, any sales of explosives (or blasting agents) imported by nonmanufacturers of explosives (or blasting agents) are not included; these may be locally important. Another unavoidable inaccuracy is caused by the necessity to conceal certain figures to protect company confidentiality.

The distinction between explosives and blasting agents today is chiefly related to their safety in handling; former usage classified as explosives those materials that were cap-sensitive, and as blasting agents those that required a primer, and this distinction is still the principal criterion. Only "high" explosives are now used in industry; "low" explosives, which decompose at a lower speed than high explosives, included principally black powder, the use of which in industry has not been reported since 1971. While explosives vary widely in composition, blasting agents are essentially ammonium nitrate plus a fuel.

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

The five product classifications used in this report are the same as those adopted by the Institute of Makers of Explosives (IME). These are:

1. Permissibles.--Grades of high explosives approved by brand name by the U.S. Bureau of Mines or the Mining Enforcement and Safety Administration for use, in a prescribed manner, in underground coal mines.

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.

4. Cylindrically Packaged Blasting Agents.--Ammonium nitrate and fuel mixtures packaged in paper, burlap, or plastic containers, having a cylindrical shape and having trade name identification thereon, accompanied by a diameter plus a weight or length measurement. The purpose of this classification is to distinguish "down-the-hole" materials from bagged blasting agents for bulk loading.

5. Other Processed Blasting Agents and Unprocessed Ammonium Nitrate.--

- a) Ammonium nitrate and fuel mixtures sold in bulk or packed in paper, plastic or burlap bags, or other containers designed for bulk loading, and
- b) Prilled or grained ammonium nitrate for explosives use.

Acknowledgment

The data in this report have been assembled from information provided by the Institute of Makers of Explosives (IME) and from data collected through voluntary responses by nonmembers of the IME to a Bureau of Mines canvass. Certain small quantities included are industry estimates of unreported sales. Companies covered, including IME members, are:

Air Products and Chemicals, Inc. - Allentown, Pennsylvania
American Cyanamid Company - Princeton, New Jersey
Apache Powder Company - Benson, Arizona
Atlas Powder Company - Dallas, Texas
Austin Powder Company - Cleveland, Ohio
Collier Carbon & Chemical Corporation - Los Angeles, California
E. I. duPont de Nemours & Co., Inc. - Wilmington, Delaware
Explosive Technology - Fairfield, California
Gearhart-Owen Industries, Inc. - Fort Worth, Texas
Gardiner Big River Inc. - Tampa, Florida
Gulf Oil Chemicals Company - Merriam, Kansas
Hawkeye Chemical Company - Clinton, Iowa
Hercules, Inc. - Wilmington, Delaware
Independent Explosives Company - Cleveland, Ohio
Ireco Chemicals - Salt Lake City, Utah
Monsanto Agricultural Products Co. - St. Louis, Missouri
Nipak, Inc. - Dallas, Texas
Nitrox Products Company - Charleston, West Virginia
Phillips Petroleum Co. - Henderson, Colorado
Sierra Chemical Company - Reno, Nevada
Terra Chemicals International, Inc. - Sioux City, Iowa
Trace X Chemical - East Camden, Arkansas
Trojan - U.S. Powder - Allentown, Pennsylvania
USS Agri-Chemicals - Atlanta, Georgia

TABLE 1. - Salient statistics of industrial explosives and blasting agents
sold for consumption in the United States, 1975-76
(Thousand pounds)

Class	1975	1976
Permissibles-----	46,422	44,641
Other high explosives-----	225,318	201,308
Water gels and slurries-----	311,132	339,372
Cylindrically packaged blasting agents-----	331,725	350,168
Other processed blasting agents and unprocessed ammonium nitrate-----	2,204,430	2,393,040
Total-----	3,119,027	3,328,529

TABLE 2. - Industrial explosives and blasting agents sold for consumption
in the United States by class and use, 1975-76
(Thousand pounds)

Class	<u>Coal mining</u>		<u>Metal mining</u>		<u>Quarrying and nonmetal mining</u>		<u>Construction work</u>		<u>All other purposes</u>		<u>Total</u>	
	1975	1976	1975	1976	1975	1976	1975	1976	1975	1976	1975	1976
5 Permissibles-----	41,996	41,123	241	204	1,083	1,090	2,215	1,990	887	234	46,422	44,641
Other high explosives----	36,875	34,521	25,118	24,265	74,796	65,891	73,793	64,001	14,736	12,630	225,318	201,308
Water gels and slurries--	24,118	30,871	181,809	205,429	73,872	74,176	30,413	28,743	920	153	311,132	339,372
Cylindrically packaged blasting agents-----	286,608	269,778	4,845	3,471	28,551	65,922	9,853	9,522	1,868	1,475	331,725	350,168
Other processed blasting- agents and unprocessed ammonium nitrate-----	1,262,654	1,422,580	237,258	255,284	314,823	286,577	212,063	234,981	177,632	193,618	2,204,430	2,393,040
Total-----	1,652,251	1,798,873	449,271	488,653	493,125	493,656	328,337	339,237	196,043	208,110	3,119,027	3,328,529

TABLE 3. - Industrial explosives and blasting agents sold for consumption
in the United States, by State and use, 1976
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	191,055	---	21,327	46,489	3,781	262,652
Alaska-----	55	53	40	18,404	147	18,699
Arizona-----	---	177,254	1,181	2,636	54	181,125
Arkansas-----	5,050	2,005	4,622	2,581	183	14,441
California-----	---	18,322	13,552	10,005	73	41,952
Colorado-----	772	24,947	1,328	3,635	46	30,728
Connecticut-----	---	---	4,721	6,709	---	11,430
Delaware-----	120	---	---	1,130	66	1,316
District of Columbia ^{1/} -----	---	---	---	---	---	---
Florida-----	39	---	13,699	4,038	40	17,816
Georgia-----	93	---	18,878	3,454	50	22,475
Hawaii-----	854	---	1,063	40	---	1,957
Idaho-----	123	2,824	1,598	3,267	25	7,837
Illinois-----	48,812	---	38,543	1,390	1,033	89,778
Indiana-----	121,405	53	12,549	2,593	368	136,968
Iowa-----	1,644	---	20,953	1,752	7,674	32,023
Kansas-----	7,820	---	3,556	368	217	11,961
Kentucky-----	448,297	587	27,761	15,050	41,801	533,496
Louisiana-----	---	10	4,164	55	1,817	6,046
Maine-----	---	557	760	498	---	1,815
Maryland-----	6,577	---	9,540	715	25	16,857
Massachusetts-----	---	---	4,117	2,181	---	6,298
Michigan-----	298	38,778	16,091	3,863	6,130	65,160
Minnesota-----	---	81,426	9,582	7,311	14,932	113,251
Mississippi-----	---	---	225	141	837	1,203
Missouri-----	19,625	8,988	29,026	13,273	3,216	74,128
Montana-----	5,127	327	554	628	1,976	8,612
Nebraska-----	---	---	1,668	176	---	1,844
Nevada-----	---	7,223	7,603	337	6	15,169
New Hampshire-----	7	---	319	1,593	---	1,919
New Jersey-----	---	376	3,248	146	---	3,770
New Mexico-----	20,402	53,305	13,932	3,817	1,250	92,706
New York-----	185	6,960	9,038	5,656	3	21,842
North Carolina-----	---	821	18,954	6,294	48	26,117
North Dakota-----	---	---	599	---	95	694
Ohio-----	144,685	61	30,767	5,886	6,572	187,971
Oklahoma-----	25,720	5	7,185	1,990	1,312	36,212
Oregon-----	---	---	583	9,587	---	10,170
Pennsylvania:						
Anthracite-----	70,582	---	---	---	---	---
Bituminous-----	313,077	668	41,593	23,642	384	449,946
Rhode Island-----	---	---	---	52	---	52
South Carolina-----	---	---	3,655	314	---	3,969
South Dakota-----	---	303	84	13	27	427
Tennessee-----	58,175	9,586	21,863	33,552	16,332	139,508
Texas-----	---	67	20,910	20,170	4,787	45,934
Utah-----	791	37,577	74	1,673	1,564	41,679
Vermont-----	5	---	613	4,006	8	4,632
Virginia-----	138,091	398	20,459	12,535	7,765	179,248
Washington-----	63	52	199	17,640	17	17,971
West Virginia-----	129,600	39	14,326	35,311	40	179,316
Wisconsin-----	160	4,862	10,313	462	595	16,392
Wyoming-----	39,564	10,219	6,241	2,179	1,884	60,087
Undistributed-----	2/	2/	2/	---	80,930	80,930
Total-----	1,798,873	488,653	493,656	339,237	208,110	3,328,529

^{1/} Included with Maryland.

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

TABLE 4. - Industrial explosives and blasting agents sold for consumption in the United States, by State and class, 1976 (Thousand pounds)

State	Class					Total
	Fixed high explosives		Blasting agents			
	Permissible	Other high explosives	Water gels and slurries	Cylindrically-packaged	Other processed blasting agents and unprocessed ammonium nitrate	
Alabama	4,330	4,061	7,930	31,502	214,829	262,652
Alaska	---	13,992	3,979	496	232	18,699
Arizona	---	3,569	57,684	2,682	117,190	181,125
Arkansas	5	1,224	2,122	944	10,146	14,441
California	---	3,160	14,495	179	24,118	41,952
Colorado	116	5,551	13,060	68	11,933	30,728
Connecticut	---	1,625	2,893	298	6,614	11,430
Delaware	---	1,271	---	---	45	1,316
District of Columbia ^{1/}	---	---	---	---	---	---
Florida	---	6,188	2,734	8,390	504	17,816
Georgia	19	2,442	5,226	4,313	10,475	22,475
Hawaii	---	---	120	---	1,837	1,957
Idaho	---	1,916	755	602	4,564	7,837
Illinois	917	8,389	6,882	42,291	31,299	89,778
Indiana	147	1,510	3,925	34,699	96,687	136,968
Iowa	120	4,800	5,976	728	20,399	32,023
Kansas	---	651	973	2,900	7,437	11,961
Kentucky	16,815	12,306	7,353	69,748	427,274	533,496
Louisiana	---	2,371	75	2,210	1,390	6,046
Maine	---	453	724	---	638	1,815
Maryland	3	2,390	4,857	909	8,698	16,857
Massachusetts	---	2,395	695	71	3,137	6,298
Michigan	---	2,621	30,361	2,183	29,995	65,160
Minnesota	---	747	70,418	2,871	39,215	113,251
Mississippi	2	1,038	157	6	---	1,203
Missouri	173	10,322	9,449	18,145	36,039	74,128
Montana	151	2,651	247	680	4,883	8,612
Nebraska	---	472	33	---	1,339	1,844
Nevada	---	529	128	309	14,203	15,169
New Hampshire	---	1,311	160	17	431	1,919
New Jersey	---	1,028	1,395	103	1,244	3,770
New Mexico	---	4,843	11,817	10,190	65,856	92,706
New York	5	4,375	3,048	984	13,430	21,842
North Carolina	3	3,526	5,356	3,600	13,632	26,117
North Dakota	---	220	47	---	427	694
Ohio	1,650	7,841	3,338	20,885	154,257	187,971
Oklahoma	---	1,686	1,726	4,597	28,203	36,212
Oregon	---	3,587	892	---	5,691	10,170
Pennsylvania	1,435	26,322	21,073	19,588	381,528	449,946
Rhode Island	---	43	---	---	9	52
South Carolina	---	331	1,281	360	1,997	3,969
South Dakota	---	14	303	---	110	427
Tennessee	894	9,626	3,922	14,729	110,337	139,508
Texas	---	6,575	4,277	2,869	32,213	45,934
Utah	526	4,431	7,032	---	29,690	41,679
Vermont	6	1,164	982	7	2,473	4,632
Virginia	7,461	7,870	4,404	28,180	131,333	179,248
Washington	---	4,910	1,478	---	11,583	17,971
West Virginia	9,757	9,482	3,498	7,123	149,456	179,316
Wisconsin	2	1,543	5,383	139	9,325	16,392
Wyoming	104	1,936	4,709	9,573	43,765	60,087
Undistributed	---	---	---	---	80,930	80,930
Total	44,641	201,308	339,372	350,168	2,393,040	3,328,529

^{1/} Included with Maryland.

TABLE 5. - Permissible explosives sold for consumption in the United States
by State and use, 1976
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	4,144	---	26	160	---	4,330
Alaska-----	---	---	---	---	---	---
Arizona-----	---	---	---	---	---	---
Arkansas-----	2	---	2	1	---	5
California-----	---	---	---	---	---	---
Colorado-----	103	1	---	12	---	116
Connecticut-----	---	---	---	---	---	---
Delaware-----	---	---	---	---	---	---
District of Columbia 1/-----	---	---	---	---	---	---
Florida-----	---	---	---	---	---	---
Georgia-----	19	---	---	---	---	19
Hawaii-----	---	---	---	---	---	---
Idaho-----	---	---	---	---	---	---
Illinois-----	538	---	203	176	---	917
Indiana-----	8	---	5	134	---	147
Iowa-----	104	---	16	---	---	120
Kansas-----	---	---	---	---	---	---
Kentucky-----	16,811	---	---	---	4	16,815
Louisiana-----	---	---	---	---	---	---
Maine-----	---	---	---	---	---	---
Maryland-----	2	---	1	---	---	3
Massachusetts-----	---	---	---	---	---	---
Michigan-----	---	---	---	---	---	---
Minnesota-----	---	---	---	---	---	---
Mississippi-----	---	---	---	---	2	2
Missouri-----	37	---	136	---	---	173
Montana-----	34	---	---	---	117	151
Nebraska-----	---	---	---	---	---	---
Nevada-----	---	---	---	---	---	---
New Hampshire-----	---	---	---	---	---	---
New Jersey-----	---	---	---	---	---	---
New Mexico-----	---	---	---	---	---	---
New York-----	1	---	2	---	2	5
North Carolina-----	---	---	1	2	---	3
North Dakota-----	---	---	---	---	---	---
Ohio-----	1,116	---	528	6	---	1,650
Oklahoma-----	---	---	---	---	---	---
Oregon-----	---	---	---	---	---	---
Pennsylvania:						
Anthracite-----	375	---	22	306	---	1,435
Bituminous-----	732	---	---	---	---	---
Rhode Island-----	---	---	---	---	---	---
South Carolina-----	---	---	---	---	---	---
South Dakota-----	---	---	---	---	---	---
Tennessee-----	840	5	49	---	---	894
Texas-----	---	---	---	---	---	---
Utah-----	250	159	---	8	109	526
Vermont-----	5	---	---	1	---	6
Virginia-----	7,456	---	2	3	---	7,461
Washington-----	---	---	---	---	---	---
West Virginia-----	8,442	39	95	1,181	---	9,757
Wisconsin-----	---	---	2	---	---	2
Wyoming-----	104	---	---	---	---	104
Total-----	41,123	204	1,090	1,990	234	44,641

1/ Included with Maryland.

TABLE 7.--Packaged and bulk water gels and slurries sold for consumption in the United States, by State and use, 1976 (Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	5,175	---	1,693	1,035	27	7,930
Alaska-----	---	---	---	3,979	---	3,979
Arizona-----	---	57,653	5	26	---	57,684
Arkansas-----	27	41	1,296	758	---	2,122
California-----	---	9,765	1,552	3,158	20	14,495
Colorado-----	317	11,782	376	585	---	13,060
Connecticut-----	---	---	592	2,301	---	2,893
Delaware-----	---	---	---	---	---	---
District of Columbia 1/-----	---	---	---	---	---	---
Florida-----	2	---	2,322	410	---	2,734
Georgia-----	68	---	4,329	820	9	5,226
Hawaii-----	---	---	120	---	---	120
Idaho-----	---	631	62	62	---	755
Illinois-----	2,305	---	4,370	207	---	6,882
Indiana-----	2,127	---	1,665	125	8	3,925
Iowa-----	329	---	5,150	497	---	5,976
Kansas-----	520	---	447	5	1	973
Kentucky-----	5,215	---	1,565	573	---	7,353
Louisiana-----	---	---	38	37	---	75
Maine-----	---	242	373	109	---	724
Maryland-----	227	---	4,393	237	---	4,857
Massachusetts-----	---	---	520	175	---	695
Michigan-----	---	28,934	1,394	33	---	30,361
Minnesota-----	---	68,028	2,148	242	---	70,418
Mississippi-----	---	---	157	---	---	157
Missouri-----	92	1,519	6,119	1,717	2	9,449
Montana-----	40	60	91	36	20	247
Nebraska-----	---	---	33	---	---	33
Nevada-----	---	101	27	---	---	128
New Hampshire-----	---	---	115	45	---	160
New Jersey-----	---	---	1,381	14	---	1,395
New Mexico-----	75	11,544	8	190	---	11,817
New York-----	---	1,439	1,114	495	---	3,048
North Carolina-----	---	175	4,697	484	---	5,356
North Dakota-----	---	---	47	---	---	47
Ohio-----	499	20	2,772	44	3	3,338
Oklahoma-----	527	2	1,001	196	---	1,726
Oregon-----	---	---	105	787	---	892
Pennsylvania;						
Anthracite-----	1,131)	---	---	---	---	---
Bituminous-----	8,048)	25	9,372	2,497	---	21,073
Rhode Island-----	---	---	---	---	---	---
South Carolina-----	---	---	1,126	155	---	1,281
South Dakota-----	---	303	---	---	---	303
Tennessee-----	393	731	1,952	833	13	3,922
Texas-----	---	39	3,472	751	15	4,277
Utah-----	---	6,817	---	215	---	7,032
Vermont-----	---	---	259	715	8	982
Virginia-----	916	3	3,036	449	---	4,404
Washington-----	---	15	61	1,385	17	1,478
West Virginia-----	1,213	---	1,278	1,007	---	3,498
Wisconsin-----	8	3,913	1,377	85	---	5,383
Wyoming-----	1,617	1,647	166	1,269	10	4,709
Total-----	30,871	205,429	74,176	28,743	153	339,372

1/ Included with Maryland.

TABLE 6.--Other high explosives sold for consumption in the United States, by State and use, 1976
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	2,338	---	828	799	96	4,061
Alaska-----	55	53	---	13,822	62	13,992
Arizona-----	---	3,226	48	258	37	3,569
Arkansas-----	1	5	642	561	15	1,224
California-----	---	334	622	2,183	21	3,160
Colorado-----	96	4,723	186	500	46	5,551
Connecticut-----	---	---	134	1,491	---	1,625
Delaware-----	120	---	---	1,085	66	1,271
District of Columbia ^{1/} -----	---	---	---	---	---	---
Florida-----	37	---	2,904	3,209	38	6,188
Georgia-----	6	---	1,704	731	1	2,442
Hawaii-----	---	---	---	---	---	---
Idaho-----	---	1,132	65	696	23	1,916
Illinois-----	768	---	7,334	287	---	8,389
Indiana-----	77	15	1,223	195	---	1,510
Iowa-----	130	---	4,453	217	---	4,800
Kansas-----	---	---	289	146	216	651
Kentucky-----	6,686	---	3,953	1,636	31	12,306
Louisiana-----	---	10	536	18	1,807	2,371
Maine-----	---	7	100	346	---	453
Maryland-----	351	---	1,754	285	---	2,390
Massachusetts-----	---	---	1,246	1,149	---	2,395
Michigan-----	10	556	1,439	353	263	2,621
Minnesota-----	---	210	264	273	---	747
Mississippi-----	---	---	68	141	829	1,038
Missouri-----	112	5,007	4,244	948	11	10,322
Montana-----	238	169	65	515	1,664	2,651
Nebraska-----	---	---	403	69	---	472
Nevada-----	---	261	262	---	6	529
New Hampshire-----	7	---	---	1,304	---	1,311
New Jersey-----	---	85	895	48	---	1,028
New Mexico-----	86	4,196	229	332	---	4,843
New York-----	184	390	1,771	2,029	1	4,375
North Carolina-----	---	26	2,013	1,487	---	3,526
North Dakota-----	---	---	125	---	95	220
Ohio-----	1,543	21	5,476	801	---	7,841
Oklahoma-----	4	3	453	327	899	1,686
Oregon-----	---	---	150	3,437	---	3,587
Pennsylvania:						
Anthracite-----	3,792)	---	---	---	---	---
Bituminous-----	10,323)	235	7,179	4,793	---	26,322
Rhode Island-----	---	---	---	43	---	43
South Carolina-----	---	---	172	159	---	331
South Dakota-----	---	---	---	---	14	14
Tennessee-----	950	1,580	3,790	3,021	285	9,626
Texas-----	---	12	762	2,081	3,720	6,575
Utah-----	42	1,588	74	1,450	1,277	4,431
Vermont-----	---	---	244	920	---	1,164
Virginia-----	1,972	118	3,450	2,322	8	7,870
Washington-----	63	37	128	4,682	---	4,910
West Virginia-----	4,447	---	2,362	2,673	---	9,482
Wisconsin-----	32	15	1,490	6	---	1,543
Wyoming-----	51	251	362	173	1,099	1,936
Total-----	34,521	24,265	65,891	64,001	12,630	201,308

^{1/} Included with Maryland.

TABLE 8.--Cylindrically packaged blasting agents sold for consumption in the United States, by State and use, 1976 (Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	24,591	---	6,524	354	33	31,502
Alaska-----	---	---	---	496	---	496
Arizona-----	---	322	460	1,900	---	2,682
Arkansas-----	880	---	54	10	---	944
California-----	---	48	128	3	---	179
Colorado-----	---	54	---	14	---	68
Connecticut-----	---	---	163	135	---	298
Delaware-----	---	---	---	---	---	---
District of Columbia ^{1/} -----	---	---	---	---	---	---
Florida-----	---	---	7,969	419	2	8,390
Georgia-----	---	---	4,212	100	1	4,313
Hawaii-----	---	---	---	---	---	---
Idaho-----	---	---	602	---	---	602
Illinois-----	37,302	---	4,940	49	---	42,291
Indiana-----	33,070	---	1,451	178	---	34,699
Iowa-----	3	---	712	13	---	728
Kansas-----	1,900	---	1,000	---	---	2,900
Kentucky-----	68,596	---	916	236	---	69,748
Louisiana-----	---	---	2,200	---	10	2,210
Maine-----	---	---	---	---	---	---
Maryland-----	387	---	484	13	25	909
Massachusetts-----	---	---	71	---	---	71
Michigan-----	200	---	1,931	---	52	2,183
Minnesota-----	---	2,604	266	1	---	2,871
Mississippi-----	---	---	---	---	6	6
Missouri-----	16,401	---	1,744	---	---	18,145
Montana-----	680	---	---	---	---	680
Nebraska-----	---	---	---	---	---	---
Nevada-----	---	280	29	---	---	309
New Hampshire-----	---	---	---	17	---	17
New Jersey-----	---	---	103	---	---	103
New Mexico-----	---	40	8,900	---	1,250	10,190
New York-----	---	---	772	212	---	984
North Carolina-----	---	120	2,490	990	---	3,600
North Dakota-----	---	---	---	---	---	---
Ohio-----	15,336	---	4,668	877	4	20,885
Oklahoma-----	4,300	---	206	41	50	4,597
Oregon-----	---	---	---	---	---	---
Pennsylvania:						
Anthracite-----	1,000)	---	---	---	---	---
Bituminous-----	13,924)	---	3,959	705	---	19,588
Rhode Island-----	---	---	---	---	---	---
South Carolina-----	---	---	360	---	---	360
South Dakota-----	---	---	---	---	---	---
Tennessee-----	11,026	---	2,678	1,025	---	14,729
Texas-----	---	---	2,845	22	2	2,869
Utah-----	---	---	---	---	---	---
Vermont-----	---	---	---	7	---	7
Virginia-----	25,171	---	2,792	217	---	28,180
Washington-----	---	---	---	---	---	---
West Virginia-----	5,438	---	192	1,453	40	7,123
Wisconsin-----	---	3	101	35	---	139
Wyoming-----	9,573	---	---	---	---	9,573
Total-----	269,778	3,471	65,922	9,522	1,475	350,168

^{1/} Included with Maryland.

TABLE 9.—Other processed blasting agents and unprocessed ammonium nitrate sold for consumption in the United States, by State and use, 1976
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	154,807	---	12,256	44,141	3,625	214,829
Alaska-----	---	---	40	107	85	232
Arizona-----	---	116,053	668	452	17	117,190
Arkansas-----	4,140	1,959	2,628	1,251	168	10,146
California-----	---	8,175	11,250	4,661	32	24,118
Colorado-----	256	8,387	766	2,524	---	11,933
Connecticut-----	---	---	3,832	2,782	---	6,614
Delaware-----	---	---	---	45	---	45
District of Columbia ^{1/} -----	---	---	---	---	---	---
Florida-----	---	---	504	---	---	504
Georgia-----	---	---	8,633	1,803	39	10,475
Hawaii-----	854	---	943	40	---	1,837
Idaho-----	123	1,061	869	2,509	2	4,564
Illinois-----	7,899	---	21,696	671	1,033	31,299
Indiana-----	86,123	38	8,205	1,961	360	96,687
Iowa-----	1,078	---	10,622	1,025	7,674	20,399
Kansas-----	5,400	---	1,820	217	---	7,437
Kentucky-----	350,989	587	21,327	12,605	41,766	427,274
Louisiana-----	---	---	1,390	---	---	1,390
Maine-----	---	308	287	43	---	638
Maryland-----	5,610	---	2,908	180	---	8,698
Massachusetts-----	---	---	2,280	857	---	3,137
Michigan-----	88	9,288	11,327	3,477	5,815	29,995
Minnesota-----	---	10,584	6,904	6,795	14,932	39,215
Mississippi-----	---	---	---	---	---	---
Missouri-----	2,983	2,462	16,783	10,608	3,203	36,039
Montana-----	4,135	98	398	77	175	4,883
Nebraska-----	---	---	1,232	107	---	1,339
Nevada-----	---	6,581	7,285	337	---	14,203
New Hampshire-----	---	---	204	227	---	431
New Jersey-----	---	291	869	84	---	1,244
New Mexico-----	20,241	37,525	4,795	3,295	---	65,856
New York-----	---	5,131	5,379	2,920	---	13,430
North Carolina-----	---	500	9,753	3,331	48	13,632
North Dakota-----	---	---	427	---	---	427
Ohio-----	126,191	20	17,323	4,158	6,565	154,257
Oklahoma-----	20,889	---	5,525	1,426	363	28,203
Oregon-----	---	---	328	5,363	---	5,691
Pennsylvania:						
Anthracite-----	64,284)	---	---	---	---	---
Bituminous-----	280,050)	408	21,061	15,341	384	381,528
Rhode Island-----	---	---	---	9	---	9
South Carolina-----	---	---	1,997	---	---	1,997
South Dakota-----	---	---	84	13	13	110
Tennessee-----	44,966	7,270	13,394	28,673	16,034	110,337
Texas-----	---	16	13,831	17,316	1,050	32,213
Utah-----	499	29,013	---	---	178	29,690
Vermont-----	---	---	110	2,363	---	2,473
Virginia-----	102,576	277	11,179	9,544	7,757	131,333
Washington-----	---	---	10	11,573	---	11,583
West Virginia-----	110,060	---	10,399	28,997	---	149,456
Wisconsin-----	120	931	7,343	336	595	9,325
Wyoming-----	28,219	8,321	5,713	737	775	43,765
Undistributed-----	<u>2/</u>	<u>2/</u>	<u>2/</u>	---	80,930	80,930
Total-----	1,422,580	255,284	286,577	234,981	193,618	2,393,040

^{1/} Included with Maryland.

^{2/} Quantities included in "all other purposes" to avoid disclosing individual company data.