



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, 1979

Apparent consumption of explosives and blasting agents in the United States increased 3% to 4.1 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 the most significant change in consumption of all classes of explosives and blasting agents in 1979, an increase of 15% over the amount used in 1978.

All principal consuming industries used greater quantities of explosives and blasting agents in 1979 than in 1978. Over 55% of the total weight was utilized in the mining of coal. Nearly all permissibles, and 62% 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 (33%), and construction (29%). The majority of water gels and slurries went into metal mining (52%).

Seven States collectively consumed 59% of all explosives and blasting agents used in the United States in 1979. These were, in order of consumption, Kentucky, Pennsylvania, Alabama, Arizona, Ohio, West Virginia, and Indiana.

Prepared in the Section of Nonmetallic Minerals, August 14, 1980.

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
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--Cleveland, Ohio
Ireco Chemicals--Salt Lake City, Utah
Kaiser Aluminum & Chemical Corp.--Savannah, Georgia
Monsanto Co.--St. Louis, Missouri
Nitrox Products Company--Charleston, West Virginia
Phillips Chemical Co.--Bartlesville, Oklahoma
Sierra Chemical Company--Reno, Nevada
Southern Explosives Corporation--Glasgow, Kentucky
Trojan Division, IMC Chemical Group, Inc.--Allentown, Pennsylvania
USS Agri-Chemicals--Atlanta, Georgia

TABLE 1. - Salient statistics of industrial explosives and blasting agents sold for consumption in the United States, 1978-79
(Thousand pounds)

Class	1978	1979
Permissibles <u>1</u> /-----	41,143	47,307
Other high explosives <u>1</u> /-----	179,355	182,319
Water gels and slurries-----	431,797	460,913
Ammonium nitrate fuel-mixed blasting agents-----	1,264,307	1,327,999
Unprocessed ammonium nitrate <u>2</u> /-----	2,012,587	2,046,623
Total-----	3,929,189	4,065,161

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 permissible explosives and other high explosives.

TABLE 2. - Industrial explosives and blasting agents sold for consumption in the United States by class and use, 1978-79
(Thousand pounds)

Class	Coal mining 1/		Metal mining 1/		Quarrying and nonmetal mining 1/		Construction work 1/		All other purposes 2/		Total	
	1978	1979	1978	1979	1978	1979	1978	1979	1978	1979	1978	1979
Permissibles 3/----	38,530	44,891	208	281	618	615	1,587	1,294	200	226	41,143	47,307
Other high explosives 3/----	27,741	25,783	25,400	23,699	59,974	60,734	53,516	52,924	12,724	19,179	179,355	182,319
Water gels and slurries-----	63,494	74,739	234,470	238,738	89,322	107,280	42,462	38,284	2,049	1,872	431,797	460,913
Ammonium nitrate fuel-mixed blasting agents--	777,082	886,054	74,267	65,394	237,611	221,460	172,442	151,669	2,905	3,422	1,264,307	1,327,999
Unprocessed ammonium nitrate 4/-----	1,261,783	1,193,425	239,868	275,042	217,430	260,858	146,602	229,951	146,904	87,347	2,012,587	2,046,623
Total-----	2,168,630	2,224,892	574,213	603,154	604,955	650,947	416,609	474,122	164,782	112,046	3,929,189	4,065,161

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.

4/ Includes some quantities of permissible explosives and other high explosives.

TABLE 3. - Industrial explosives and blasting agents sold for consumption
in the United States, by State and use, 1979
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	215,982	135	27,389	105,691	1,149	350,346
Alaska-----	67	30	317	6,039	296	6,749
Arizona-----	44,257	210,890	1,070	1,864	129	258,210
Arkansas-----	5,799	1,376	8,563	2,652	107	18,497
California-----	6	7,578	13,520	10,023	61	31,188
Colorado-----	41,904	20,992	849	1,619	486	65,850
Connecticut-----	---	---	11,480	4,872	---	16,352
Delaware-----	---	---	---	40	16	56
District of Columbia ^{1/}	---	---	---	---	---	---
Florida-----	---	---	27,029	9,685	533	37,247
Georgia-----	108	---	26,383	5,370	15	31,876
Hawaii-----	---	---	220	328	86	634
Idaho-----	2	4,625	1,688	4,613	83	11,011
Illinois-----	79,751	11	43,737	2,886	1,456	127,841
Indiana-----	156,299	10	24,975	9,539	212	191,035
Iowa-----	2,562	1	27,477	3,466	9,906	43,412
Kansas-----	6,781	---	10,968	2,582	238	20,569
Kentucky-----	595,046	53	50,504	24,983	38,509	709,095
Louisiana-----	---	---	4,364	151	1,817	6,332
Maine-----	25	---	1,789	325	---	2,139
Maryland-----	6,414	---	11,735	1,592	---	19,741
Massachusetts-----	---	---	3,823	2,219	---	6,042
Michigan-----	364	38,200	25,230	4,674	1,050	69,518
Minnesota-----	4	137,746	3,699	2,734	5,726	149,909
Mississippi-----	---	---	756	55	1,636	2,447
Missouri-----	18,828	5,260	34,931	23,300	1,350	83,669
Montana-----	30,737	33,083	465	925	4,331	69,541
Nebraska-----	---	---	1,052	1,168	1	2,221
Nevada-----	---	11,581	326	412	50	12,369
New Hampshire-----	---	---	553	1,474	---	2,027
New Jersey-----	---	85	3,425	884	---	4,394
New Mexico-----	27,097	53,196	12,713	2,020	89	95,115
New York-----	8	1,636	11,153	6,782	202	19,781
North Carolina-----	354	99	18,436	20,472	---	39,361
North Dakota-----	3,150	---	---	1	1,180	4,331
Ohio-----	153,446	13	53,926	11,591	7,153	226,129
Oklahoma-----	27,215	2	16,296	3,660	2,101	49,274
Oregon-----	12	1,219	872	10,710	20	12,833
Pennsylvania-----	356,109	192	45,780	20,661	5,709	428,451
Rhode Island-----	---	---	211	207	---	418
South Carolina-----	---	---	4,970	1,185	---	6,155
South Dakota-----	---	2,457	47	229	36	2,769
Tennessee-----	53,032	7,207	39,661	51,033	1,192	152,125
Texas-----	---	8,243	32,481	34,220	5,042	79,986
Utah-----	17	36,872	316	1,393	1,037	39,635
Vermont-----	---	25	868	1,049	---	1,942
Virginia-----	98,226	15	34,534	29,405	---	162,180
Washington-----	54	2,351	209	12,725	3	15,342
West Virginia-----	191,753	12	3,980	22,460	720	218,925
Wisconsin-----	---	6,275	5,380	7,847	64	19,566
Wyoming-----	109,483	11,684	797	307	3,512	125,783
Undistributed-----	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	14,743	14,743
Total-----	2,224,892	603,154	650,947	474,122	112,046	4,065,161

^{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, 1979 (Thousand pounds)

State	Class					Total
	Fixed high explosives		Water gels and slurries	Blasting agents		
	Permissibles 1/	Other high explosives 1/		Ammonium nitrate fuel-mixed blasting agents	Unprocessed ammonium nitrate 2/	
Alabama-----	3,416	2,670	9,785	101,612	232,863	350,346
Alaska-----	---	2,213	4,215	311	10	6,749
Arizona-----	---	3,656	48,984	10,959	194,611	258,210
Arkansas-----	10	1,546	3,008	6,638	7,295	18,497
California-----	---	3,112	4,626	2,364	21,086	31,188
Colorado-----	55	6,507	17,537	20,769	20,982	65,850
Connecticut-----	---	2,112	4,255	2,526	7,459	16,352
Delaware-----	3	---	8	24	21	56
District of Columbia 3/	---	---	---	---	---	---
Florida-----	---	12,049	9,080	11,282	4,836	37,247
Georgia-----	---	2,121	7,534	18,669	3,552	31,876
Hawaii-----	---	284	220	130	---	634
Idaho-----	---	1,070	2,684	63	7,194	11,011
Illinois-----	350	7,388	7,213	75,478	37,412	127,841
Indiana-----	375	2,192	9,580	146,444	32,444	191,035
Iowa-----	139	2,931	8,887	1,399	30,056	43,412
Kansas-----	---	439	952	11,034	8,144	20,569
Kentucky-----	23,052	10,187	10,448	276,109	389,299	709,095
Louisiana-----	---	1,906	539	2,715	1,172	6,332
Maine-----	---	343	1,312	484	---	2,139
Maryland-----	2	2,880	3,841	12,406	612	19,741
Massachusetts-----	---	1,682	1,310	3,050	---	6,042
Michigan-----	---	1,558	34,018	15,198	18,744	69,518
Minnesota-----	---	543	109,033	31,287	9,046	149,909
Mississippi-----	---	1,628	406	110	303	2,447
Missouri-----	50	10,439	7,592	14,887	50,701	83,669
Montana-----	46	5,879	908	2,120	60,588	69,541
Nebraska-----	---	569	134	1,518	---	2,221
Nevada-----	---	656	95	9,721	1,897	12,369
New Hampshire-----	---	1,250	211	566	---	2,027
New Jersey-----	---	1,816	743	1,776	59	4,394
New Mexico-----	16	6,466	17,949	29,874	40,810	95,115
New York-----	1	3,011	3,165	6,695	6,909	19,781
North Carolina-----	---	3,045	9,053	21,777	5,486	39,361
North Dakota-----	---	1,177	---	49	3,105	4,331
Ohio-----	1,173	5,001	8,526	84,371	127,058	226,129
Oklahoma-----	---	3,068	2,166	36,312	7,728	49,274
Oregon-----	---	4,324	1,154	3,271	4,084	12,833
Pennsylvania-----	1,255	19,290	43,923	65,148	298,835	428,451
Rhode Island-----	---	185	4	229	---	418
South Carolina-----	---	239	1,835	4,077	4	6,155
South Dakota-----	---	291	435	43	2,000	2,769
Tennessee-----	884	8,555	6,064	49,585	87,037	152,125
Texas-----	---	7,354	4,348	18,231	50,053	79,986
Utah-----	198	3,823	8,798	1,251	25,565	39,635
Vermont-----	4	347	745	846	---	1,942
Virginia-----	9,886	10,906	10,167	73,904	57,317	162,180
Washington-----	---	3,520	2,406	604	8,812	15,342
West Virginia-----	6,113	4,797	2,410	85,290	120,315	218,925
Wisconsin-----	2	2,135	8,298	8,307	824	19,566
Wyoming-----	277	3,159	20,309	56,486	45,552	125,783
Undistributed-----	---	---	---	---	14,743	14,743
Total-----	47,307	182,319	460,913	1,327,999	2,046,623	4,065,161

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 permissible explosives and other high explosives.

3/ Included with Maryland.

TABLE 5. - Permissible explosives sold for consumption in the United States,
by State and use, 1979 ^{1/}
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	3,217	---	3	196	---	3,416
Alaska-----	---	---	---	---	---	---
Arizona-----	---	---	---	---	---	---
Arkansas-----	2	---	3	5	---	10
California-----	---	---	---	---	---	---
Colorado-----	55	---	---	---	---	55
Connecticut-----	---	---	---	---	---	---
Delaware-----	---	---	---	---	3	3
District of Columbia ^{2/}	---	---	---	---	---	---
Florida-----	---	---	---	---	---	---
Georgia-----	---	---	---	---	---	---
Hawaii-----	---	---	---	---	---	---
Idaho-----	---	---	---	---	---	---
Illinois-----	274	---	76	---	---	350
Indiana-----	328	---	46	1	---	375
Iowa-----	139	---	---	---	---	139
Kansas-----	---	---	---	---	---	---
Kentucky-----	23,029	---	23	---	---	23,052
Louisiana-----	---	---	---	---	---	---
Maine-----	---	---	---	---	---	---
Maryland-----	2	---	---	---	---	2
Massachusetts-----	---	---	---	---	---	---
Michigan-----	---	---	---	---	---	---
Minnesota-----	---	---	---	---	---	---
Mississippi-----	---	---	---	---	---	---
Missouri-----	32	---	11	7	---	50
Montana-----	---	3	---	3	40	46
Nebraska-----	---	---	---	---	---	---
Nevada-----	---	---	---	---	---	---
New Hampshire-----	---	---	---	---	---	---
New Jersey-----	---	---	---	---	---	---
New Mexico-----	6	---	---	10	---	16
New York-----	---	---	---	1	---	1
North Carolina-----	---	---	---	---	---	---
North Dakota-----	---	---	---	---	---	---
Ohio-----	794	---	372	7	---	1,173
Oklahoma-----	---	---	---	---	---	---
Oregon-----	---	---	---	---	---	---
Pennsylvania-----	1,027	---	69	151	8	1,255
Rhode Island-----	---	---	---	---	---	---
South Carolina-----	---	---	---	---	---	---
South Dakota-----	---	---	---	---	---	---
Tennessee-----	357	121	---	406	---	884
Texas-----	---	---	---	---	---	---
Utah-----	8	156	---	---	34	198
Vermont-----	---	1	3	---	---	4
Virginia-----	9,856	---	9	21	---	9,886
Washington-----	---	---	---	---	---	---
West Virginia-----	5,629	---	---	484	---	6,113
Wisconsin-----	---	---	---	2	---	2
Wyoming-----	136	---	---	---	141	277
Total-----	44,891	281	615	1,294	226	47,307

^{1/} Some quantities of permissible explosives are included with "Unprocessed ammonium nitrate" to avoid disclosing company proprietary data.

^{2/} Included with Maryland.

TABLE 6. - Other high explosives sold for consumption in the United States, by State and use, 1979 ^{1/}
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	470	---	314	1,150	736	2,670
Alaska-----	---	---	---	1,936	277	2,213
Arizona-----	7	3,391	48	198	12	3,656
Arkansas-----	13	2	609	835	87	1,546
California-----	6	136	460	2,468	42	3,112
Colorado-----	354	4,661	170	936	386	6,507
Connecticut-----	---	---	1,298	814	---	2,112
Delaware-----	---	---	---	---	---	---
District of Columbia ^{2/}	---	---	---	---	---	---
Florida-----	---	---	6,821	5,228	---	12,049
Georgia-----	30	---	1,397	694	---	2,121
Hawaii-----	---	---	---	284	---	284
Idaho-----	---	314	38	689	29	1,070
Illinois-----	953	---	5,666	762	7	7,388
Indiana-----	366	---	1,515	311	---	2,192
Iowa-----	9	---	2,334	588	---	2,931
Kansas-----	32	---	94	77	236	439
Kentucky-----	5,766	---	3,442	979	---	10,187
Louisiana-----	---	---	282	1	1,623	1,906
Maine-----	---	---	165	178	---	343
Maryland-----	443	---	1,958	479	---	2,880
Massachusetts-----	---	---	892	790	---	1,682
Michigan-----	---	415	913	46	184	1,558
Minnesota-----	---	165	33	345	---	543
Mississippi-----	---	---	133	48	1,447	1,628
Missouri-----	701	4,169	3,533	1,914	122	10,439
Montana-----	62	790	256	511	4,260	5,879
Nebraska-----	---	---	---	568	1	569
Nevada-----	---	557	---	49	50	656
New Hampshire-----	---	---	170	1,080	---	1,250
New Jersey-----	---	5	1,600	211	---	1,816
New Mexico-----	20	5,524	120	718	84	6,466
New York-----	---	91	1,568	1,343	9	3,011
North Carolina-----	---	---	1,072	1,973	---	3,045
North Dakota-----	---	---	---	1	1,176	1,177
Ohio-----	1,242	---	3,127	632	---	5,001
Oklahoma-----	30	---	400	592	2,046	3,068
Oregon-----	---	19	181	4,104	20	4,324
Pennsylvania-----	8,431	77	6,519	4,232	31	19,290
Rhode Island-----	---	---	97	88	---	185
South Carolina-----	---	---	107	132	---	239
South Dakota-----	---	22	47	186	36	291
Tennessee-----	711	833	3,272	3,651	88	8,555
Texas-----	---	---	564	3,334	3,456	7,354
Utah-----	9	1,662	219	933	1,000	3,823
Vermont-----	---	4	106	237	---	347
Virginia-----	1,645	---	8,355	906	---	10,906
Washington-----	51	550	44	2,875	---	3,520
West Virginia-----	3,649	---	241	907	---	4,797
Wisconsin-----	---	---	250	1,885	---	2,135
Wyoming-----	783	312	304	26	1,734	3,159
Total-----	25,783	23,699	60,734	52,924	19,179	182,319

^{1/} Some quantities of other high explosives are included with "Unprocessed ammonium nitrate" to avoid disclosing company proprietary data.

^{2/} Included with Maryland.

TABLE 7. - Packaged and bulk water gels and slurries sold for consumption in the United States, by State and use, 1979
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	6,395	---	1,515	1,868	7	9,785
Alaska-----	66	---	317	3,832	---	4,215
Arizona-----	---	48,945	38	---	1	48,984
Arkansas-----	4	149	2,041	814	---	3,008
California-----	---	1,635	1,630	1,357	4	4,626
Colorado-----	2,151	14,829	305	199	53	17,537
Connecticut-----	---	---	1,412	2,843	---	4,255
Delaware-----	---	---	---	---	8	8
District of Columbia ^{1/}	---	---	---	---	---	---
Florida-----	---	---	8,357	723	---	9,080
Georgia-----	78	---	5,988	1,455	13	7,534
Hawaii-----	---	---	220	---	---	220
Idaho-----	2	1,097	803	778	4	2,684
Illinois-----	2,569	---	3,807	836	1	7,213
Indiana-----	4,536	---	4,615	425	4	9,580
Iowa-----	118	---	7,696	1,073	---	8,887
Kansas-----	112	---	806	34	---	952
Kentucky-----	8,737	---	1,012	699	---	10,448
Louisiana-----	---	---	200	145	194	539
Maine-----	25	---	1,203	84	---	1,312
Maryland-----	287	---	3,331	223	---	3,841
Massachusetts-----	---	---	1,012	298	---	1,310
Michigan-----	---	32,451	1,534	18	15	34,018
Minnesota-----	---	107,106	1,697	229	1	109,033
Mississippi-----	---	---	232	7	167	406
Missouri-----	709	287	4,251	2,345	---	7,592
Montana-----	181	121	169	406	31	908
Nebraska-----	---	---	126	8	---	134
Nevada-----	---	58	12	25	---	95
New Hampshire-----	---	---	180	31	---	211
New Jersey-----	---	76	555	112	---	743
New Mexico-----	4,529	10,777	2,443	195	5	17,949
New York-----	---	696	1,134	1,335	---	3,165
North Carolina-----	---	---	4,855	4,198	---	9,053
North Dakota-----	---	---	---	---	---	---
Ohio-----	737	---	5,969	1,820	---	8,526
Oklahoma-----	344	2	1,266	554	---	2,166
Oregon-----	---	---	71	1,083	---	1,154
Pennsylvania-----	24,703	---	17,797	1,321	102	43,923
Rhode Island-----	---	---	4	---	---	4
South Carolina-----	---	---	1,363	472	---	1,835
South Dakota-----	---	435	---	---	---	435
Tennessee-----	513	1,447	3,283	821	---	6,064
Texas-----	---	---	2,537	1,428	383	4,348
Utah-----	---	8,239	97	459	3	8,798
Vermont-----	---	---	536	209	---	745
Virginia-----	1,325	---	8,565	277	---	10,167
Washington-----	3	534	74	1,792	3	2,406
West Virginia-----	1,342	---	320	748	---	2,410
Wisconsin-----	---	6,074	1,545	679	---	8,298
Wyoming-----	15,273	3,780	357	26	873	20,309
Total-----	74,739	238,738	107,280	38,284	1,872	460,913

^{1/} Included with Maryland.

TABLE 8. - Ammonium nitrate fuel-mixed blasting agents sold for consumption in the United States, by State and use, 1979 (Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	80,267	135	15,709	5,095	406	101,612
Alaska-----	1	30	---	261	19	311
Arizona-----	118	8,131	976	1,649	85	10,959
Arkansas-----	2,297	25	3,478	818	20	6,638
California-----	---	93	1,403	853	15	2,364
Colorado-----	19,789	224	333	423	---	20,769
Connecticut-----	---	---	1,658	868	---	2,526
Delaware-----	---	---	---	19	5	24
District of Columbia ^{1/}	---	---	---	---	---	---
Florida-----	---	---	7,015	3,734	533	11,282
Georgia-----	---	---	15,446	3,221	2	18,669
Hawaii-----	---	---	---	44	86	130
Idaho-----	---	3	6	4	50	63
Illinois-----	65,651	7	8,532	1,288	---	75,478
Indiana-----	118,833	10	18,799	8,802	---	146,444
Iowa-----	2	---	1,145	252	---	1,399
Kansas-----	6,637	---	1,924	2,471	2	11,034
Kentucky-----	236,872	13	20,966	18,219	39	276,109
Louisiana-----	---	---	2,710	5	---	2,715
Maine-----	---	---	421	63	---	484
Maryland-----	5,200	---	6,446	760	---	12,406
Massachusetts-----	---	---	1,919	1,131	---	3,050
Michigan-----	364	3,787	11,027	20	---	15,198
Minnesota-----	4	30,424	17	842	---	31,287
Mississippi-----	---	---	88	---	22	110
Missouri-----	7,977	122	4,921	1,867	---	14,887
Montana-----	2,090	25	---	5	---	2,120
Nebraska-----	---	---	926	592	---	1,518
Nevada-----	---	9,123	314	284	---	9,721
New Hampshire-----	---	---	203	363	---	566
New Jersey-----	---	4	1,211	561	---	1,776
New Mexico-----	10,140	8,925	9,918	891	---	29,874
New York-----	8	160	3,717	2,668	142	6,695
North Carolina-----	354	99	12,508	8,816	---	21,777
North Dakota-----	45	---	---	---	4	49
Ohio-----	64,516	---	12,226	7,629	---	84,371
Oklahoma-----	26,841	---	7,056	2,360	55	36,312
Oregon-----	12	---	57	3,202	---	3,271
Pennsylvania-----	50,747	---	8,290	6,080	31	65,148
Rhode Island-----	---	---	110	119	---	229
South Carolina-----	---	---	3,496	581	---	4,077
South Dakota-----	---	---	---	43	---	43
Tennessee-----	29,597	19	8,504	11,464	1	49,585
Texas-----	---	229	11,411	5,396	1,195	18,231
Utah-----	---	1,250	---	1	---	1,251
Vermont-----	---	20	223	603	---	846
Virginia-----	36,240	15	10,606	27,043	---	73,904
Washington-----	---	---	---	604	---	604
West Virginia-----	68,470	---	2,657	14,163	---	85,290
Wisconsin-----	---	1	3,069	5,237	---	8,307
Wyoming-----	52,982	2,520	19	255	710	56,486
Total-----	886,054	65,394	221,460	151,669	3,422	1,327,999

^{1/} Included with Maryland.

TABLE 9. - Unprocessed ammonium nitrate sold for consumption
in the United States, by State and use, 1979 ^{1/}
(Thousand pounds)

State	Use					Total
	Coal mining	Metal mining	Quarrying and nonmetal mining	Construction work	All other purposes	
Alabama-----	125,633	---	9,848	97,382	---	232,863
Alaska-----	---	---	---	10	---	10
Arizona-----	44,132	150,423	8	17	31	194,611
Arkansas-----	3,483	1,200	2,432	180	---	7,295
California-----	---	5,714	10,027	5,345	---	21,086
Colorado-----	19,555	1,278	41	61	47	20,982
Connecticut-----	---	---	7,112	347	---	7,459
Delaware-----	---	---	---	21	---	21
District of Columbia ^{2/}	---	---	---	---	---	---
Florida-----	---	---	4,836	---	---	4,836
Georgia-----	---	---	3,552	---	---	3,552
Hawaii-----	---	---	---	---	---	---
Idaho-----	---	3,211	841	3,142	---	7,194
Illinois-----	10,304	4	25,656	---	1,448	37,412
Indiana-----	32,236	---	---	---	208	32,444
Iowa-----	2,294	1	16,302	1,553	9,906	30,056
Kansas-----	---	---	8,144	---	---	8,144
Kentucky-----	320,642	40	25,061	5,086	38,470	389,299
Louisiana-----	---	---	1,172	---	---	1,172
Maine-----	---	---	---	---	---	---
Maryland-----	482	---	---	130	---	612
Massachusetts-----	---	---	---	---	---	---
Michigan-----	---	1,547	11,756	4,590	851	18,744
Minnesota-----	---	51	1,952	1,318	5,725	9,046
Mississippi-----	---	---	303	---	---	303
Missouri-----	9,409	682	22,215	17,167	1,228	50,701
Montana-----	28,404	32,144	40	---	---	60,588
Nebraska-----	---	---	---	---	---	---
Nevada-----	---	1,843	---	54	---	1,897
New Hampshire-----	---	---	---	---	---	---
New Jersey-----	---	---	59	---	---	59
New Mexico-----	12,402	27,970	232	206	---	40,810
New York-----	---	689	4,734	1,435	51	6,909
North Carolina-----	---	---	1	5,485	---	5,486
North Dakota-----	3,105	---	---	---	---	3,105
Ohio-----	86,157	13	32,232	1,503	7,153	127,058
Oklahoma-----	---	---	7,574	154	---	7,728
Oregon-----	---	1,200	563	2,321	---	4,084
Pennsylvania-----	271,201	115	13,105	8,877	5,537	298,835
Rhode Island-----	---	---	---	---	---	---
South Carolina-----	---	---	4	---	---	4
South Dakota-----	---	2,000	---	---	---	2,000
Tennessee-----	21,854	4,787	24,602	34,691	1,103	87,037
Texas-----	---	8,014	17,969	24,062	8	50,053
Utah-----	---	25,565	---	---	---	25,565
Vermont-----	---	---	---	---	---	---
Virginia-----	49,160	---	6,999	1,158	---	57,317
Washington-----	---	1,267	91	7,454	---	8,812
West Virginia-----	112,663	12	762	6,158	720	120,315
Wisconsin-----	---	200	516	44	64	824
Wyoming-----	40,309	5,072	117	---	54	45,552
Undistributed ^{3/}	^{4/}	^{4/}	^{4/}	^{4/}	14,743	14,743
Total-----	1,193,425	275,042	260,858	229,951	87,347	2,046,623

^{1/} Includes some quantities of permissible explosives and other high explosives.

^{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."