

INFORMATION

CIRCULAR 34



UNITED STATES DEPARTMENT OF THE INTERIOR - James G. Wolf, Secretary  
BUREAU OF MINES

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# The Mineral Industry of Maryland

This chapter has been prepared under a Memorandum of Understanding between the Bureau of Mines, U.S. Department of the Interior, and the Maryland Geological Survey for collecting information on all minerals in the State.

By Joseph A. Sutton<sup>1</sup> and Marilyn N. Dimmitt<sup>2</sup>

Total value of Maryland's mineral production in 1977 was \$187 million, about 1% above that of 1976. The increase was due primarily to higher prices rather than to greater mineral production.

The value of mineral production in the State was divided as follows: Coal, 29%; natural gas, less than 1%; stone, 27%; sand and gravel, 16%; clays, 1%; gem stones, lime, peat, cement, and ball clay accounted for the remainder.

Three serpentinite quarries that produce about 18% of the crushed stone used in the State were reported to contain small quantities of chrysotile asbestos. Maryland's Department of Health and Mental Hygiene, Montgomery County's Department of Envi-

ronmental Protection, and the U.S. Environmental Protection Agency (EPA) initiated studies to determine if the general public was being exposed to asbestos contained in the serpentinite rock used on roads in Maryland. The results of these studies should be available to the general public sometime early in the calendar year 1978.

**Employment.**—Final 1976 statistics and preliminary data for 1977 on business activities of the State are given in table 3.

**Legislation and Government Programs.**—The State Legislature amended Sections 7-6A04(a) and 7-6A19(b) of the Natural Resources Article. These amendments clarified the utilization of funds in the

Table 1.—Mineral production in Maryland<sup>1</sup>

Mineral	1976		1977	
	Quantity	Value (thousands)	Quantity	Value (thousands)
Clays <sup>2</sup> ----- thousand short tons	702	\$1,817	893	\$2,344
Coal (bituminous)----- do	2,830	61,974	3,036	53,676
Lime----- do	16	494	W	W
Natural gas----- million cubic feet	75	24	82	32
Peat----- thousand short tons	2	W	3	W
Sand and gravel----- do	12,942	31,914	11,702	29,562
Stone----- do	15,709	47,669	16,766	50,680
Combined value of cement, clays (ball), gem stones, and items indicated by symbol W	XX	41,026	XX	50,405
Total-----	XX	184,918	XX	186,699
Total 1967 constant dollars-----	XX	94,918	XX	<sup>P</sup> 92,155

<sup>P</sup> Preliminary. W Withheld to avoid disclosing company proprietary data; value included in "Combined value" figure. XX Not applicable.

<sup>1</sup>Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

<sup>2</sup>Excludes ball clay; value included with "Combined value" figure.

Table 2.—Value of mineral production in Maryland, by county<sup>1</sup>

(Thousands)

County	1976	1977	Minerals produced in 1977 in order of value
Allegany -----	W	\$1,089	Stone.
Anne Arundel -----	\$3,118	4,066	Sand and gravel.
Baltimore <sup>2</sup> -----	W	W	Stone, sand and gravel, clays.
Caroline -----	3	W	Sand and gravel.
Carroll -----	W	W	Cement, stone, clays.
Cecil -----	10,395	8,929	Stone, sand and gravel.
Charles -----	W	W	Sand and gravel.
Dorchester -----	W	W	Do.
Frederick -----	W	W	Cement, stone, clays, lime.
Garrett -----	W	W	Stone, sand and gravel, peat.
Harford -----	W	W	Sand and gravel, stone.
Howard -----	1,322	2,406	Stone.
Kent -----	W	19	Clays.
Montgomery -----	W	6,065	Stone.
Prince Georges -----	14,264	12,125	Sand and gravel, clays.
Queen Annes -----		W	Stone.
St. Marys -----	254	451	Sand and gravel.
Washington -----	W	W	Cement, stone, clays.
Wicomico -----	W	W	Sand and gravel.
Worcester -----	860	695	Do.
Undistributed <sup>3</sup> -----	154,702	150,859	
Total -----	184,918	<sup>4</sup> 186,699	

W Withheld to avoid disclosing company proprietary data; included with "Undistributed."

<sup>1</sup>Calvert, Somerset, and Talbot Counties are not listed because no production was reported.<sup>2</sup>Includes Baltimore City.<sup>3</sup>Includes some coal, natural gas, gem stones, and values indicated by symbol W.<sup>4</sup>Data do not add to total shown because of independent rounding.

Table 3.—Indicators of Maryland business activity

	1976	1977 <sup>P</sup>	Change, percent
Employment and labor force, annual average:			
Total civilian labor force ----- thousands	1,892.0	1,947.0	+2.9
Unemployment ----- do	127.0	118.0	-7.1
Employment (nonagricultural):			
Mining ----- do	1.5	1.5	--
Manufacturing ----- do	232.5	235.7	+1.4
Contract construction ----- do	85.9	90.2	+1.5
Transportation and public utilities ----- do	78.0	78.7	+9
Wholesale and retail trade ----- do	360.6	367.9	+2.0
Finance, insurance, real estate ----- do	80.2	82.0	+2.2
Services ----- do	287.0	294.9	+2.7
Government ----- do	372.6	377.7	+1.4
Total nonagricultural employment ----- do	1,501.3	1,528.6	+2
Personal income:			
Total ----- millions	\$28,855	\$31,337	+8.6
Per capita ----- do	\$6,995	\$7,572	+8.2
Construction activity:			
Number of private and public residential units authorized ----- do	26,994	30,431	+12.7
Value of nonresidential construction ----- millions	\$365.5	\$439.0	+20.1
Value of State road contract awards ----- do	\$92.2	\$98.0	+6.3
Shipments of portland and masonry cement to and within the State thousand short tons	1,289	1,368	+6.1
Mineral production value:			
Total crude mineral value ----- millions	\$184.9	\$186.7	+1.0
Value per capita, resident population ----- do	\$45	\$45	--
Value per square mile ----- do	\$17,483	\$17,651	+1.0

<sup>P</sup>Preliminary.

Sources: U.S. Department of Commerce, U.S. Department of Labor, Highway and Heavy Construction Magazine, and U.S. Bureau of Mines.

Surface Mine Land Reclamation Fund and provided for certain waivers from the requirements of mining and reclamation plans. The legislature also added a new section to the Natural Resources Article (Section 7-517) that provides for the enjoining of violations and the assessment of civil penalties. This section also permits certain courts to enforce compliance with and enjoin the violation of certain orders of the Department of Natural Resources.

The Federal Bureau of Mines established one of its seven metallurgy research centers on the College Park campus in 1935, on land donated by the University of Maryland. In 1968, the university needed the land for expansion, so the Government returned the land and sold the buildings to the university. Since that time, the Bureau has been occupying the buildings under a 10-year no-cost lease that expires during the summer of 1978. In 1977, the Bureau was going through the process of making final plans for moving its College Park Metallurgy Research Center's activities to the Christian Brothers De LaSalle College, a facility purchased in December 1976, as a replacement for quarters on the University of Maryland campus.

The College Park Metallurgy Research Center's Particulate Mineralogy Unit, established in September 1976, continued to assist local, State, and Federal agencies in the identification and characterization of asbestiform minerals. A report titled "Selected Silicate Minerals and Their Asbestiform Varieties" was published for the purpose of providing precise definitions on asbestos particulates acceptable to mineral

analysts, regulatory personnel, and medical scientists.<sup>3</sup>

The Maryland Coastal Resources Advisory Committee approved Maryland's Coastal Zone Management Program document for Federal review and public hearing on December 16, 1977. The Coastal Zone Management program is based on the premise that existing local, State, and Federal authorities are sufficient to regulate how Maryland's coastal zone is used. The State has developed a mechanism called project evaluation to provide a comprehensive review of proposed projects that could have adverse impacts on the Chesapeake Bay and its tributaries. Project evaluation will bring all the permitting agencies and other interested parties together to assess the potential effects of proposed developments at the beginning of the development approval process. The proposals will be evaluated, using a set of State coastal zone policies as a measuring instrument. These policies, enumerated in the Coastal Zone Management Program, represent the first unified statement of what Maryland hopes to accomplish in managing the bay.

The Maryland Geological Survey has been cooperating with the Federal Bureau of Mines in a limestone sampling and analysis project to evaluate potential uses for abundant limestone resources in the State. The State Survey was also continuing its inventory of mined lands. A mined-land inventory map of Baltimore County was published in 1975; the Anne Arundel County map was published in 1976; and the mined-land inventory of Prince Georges County is currently in progress.

## REVIEW BY MINERAL COMMODITIES

### NONMETALS

**Cement.**—Portland cement sold or used in the State in 1977 increased 4%. The value of sales increased 4% in 1977 compared with the 1976 figures. Masonry cement shipments also increased 12% and its value rose 23% in 1977 over that of 1976.

Maryland's leading portland cement producer continued to be the Union Bridge plant of the Lehigh Portland Cement Co. in Carroll County. Plants at Hagerstown and Lime Kiln were also in operation in 1977. The Flintkote Co. at Frederick and Marquette Cement Manufacturing Co. at Hagerstown were the only producers of mason-

ry cement. Ready-mix companies consumed about 70% of the portland cement sold. Concrete product manufacturers, building material dealers, and highway contractors accounted for the remainder of the purchases.

The cement-manufacturing plants used large quantities of fuel oil, coal, and electric energy to convert the cement rock, limestone, and gypsum materials into cement.

Apparent consumption (shipments) of portland cement in Maryland in 1977 rose to 1.3 million tons, an increase of 6% over that of 1976, and masonry cement shipments to consumers jumped 13% in 1977 to 114,000 tons.

**Clays.**—The production of common clay

and shale rose to 893,000 tons valued at \$2.3 million. The 27% increase was based in large part by the expanded production of shale for lightweight aggregate for block manufacturing at the Lehigh Portland Cement Co.'s Woodsboro pit.

A small amount of ball clay was produced in Baltimore County by Cyprus Industrial Minerals Co.

Seven companies operated nine pits in six counties during 1977. The W. D. Bowman Maryland clay pit in Hartford County was idle.

Frederick County continued to provide the bulk of the clay mined in the State.

**Gem Stones.**—Production of semiprecious stones was limited to small quantities collected by dealers and amateur collectors.

**Gypsum.**—Calcined gypsum continued to be produced. United States Gypsum Co., the major producer, and National Gypsum Co. produced 7% more in 1977.

**Lime.**—Hydrated and quicklime was produced at a plant at Woodsboro in Frederick County. The quantity and value produced in 1977 declined 18% and 10%, respectively. S.

W. Barrick & Sons, Inc., quarried its own limestone for this operation.

**Peat.**—Garrett County Processing & Packaging Corp., near Accident in Garrett County, produced 1,658 tons of reed sedge and 892 tons of humus for a total of 2,550 tons. A substantial reduction in the output of humus caused 1977 total production to decline 12%. However, because of the increase in sales, the total value jumped 20%.

**Perlite.**—National Gypsum Co. continued to produce expanded perlite for use in concrete and plaster aggregate. Output declined 6% for 1977.

**Sand and Gravel.**—A 1.2-million-ton decline in sand and gravel sold or used in 1977 forced the overall value of this commodity to drop \$2.4 million, a decline of 7%. Fifty-six deposits supplied sand and gravel to 48 plants in 12 of Maryland's counties.

Prince Georges, Anne Arundel, and Cecil Counties were the major producing areas. Contee Sand & Gravel Co., Inc. (Prince Georges), York Building Products Co. Inc. (Cecil), and Harry T. Campbell and Sons Co. (Baltimore) were the leading producers.

**Table 4.—Maryland: Construction sand and gravel sold or used by producers, by use**

(Thousand short tons and thousand dollars)

Use	1976		1977	
	Quantity	Value	Quantity	Value
Construction:				
Sand -----	8,310	19,148	7,080	16,918
Gravel -----	4,631	12,766	4,621	12,644
Total <sup>1</sup> -----	12,942	31,914	11,702	29,562

<sup>1</sup>Data may not add to totals shown because of independent rounding.

**Table 5.—Maryland: Construction sand and gravel sold or used, by major use category**

(Thousand short tons and thousand dollars)

Use	1976		1977	
	Quantity	Value	Quantity	Value
Concrete aggregate (residential, nonresidential, highways, bridges, dams, waterworks, airports, etc.) -----	5,130	14,068	5,812	15,581
Concrete products (cement blocks, bricks, pipe, etc.) -----	1,975	5,299	1,635	4,162
Asphaltic concrete aggregates and other bituminous mixtures -----	736	1,846	2,206	5,122
Roadbase and coverings -----	3,554	7,674	955	1,699
Fill -----	873	1,503	585	1,217
Other uses -----	671	1,524	507	1,781
Total <sup>1</sup> -----	12,942	31,914	11,702	29,562

<sup>1</sup>Data may not add to totals shown because of independent rounding.

**Stone.**—State production of stone in 1977 ranked second in value behind coal at about \$50.7 million.

Eleven counties, with Baltimore County as the leading producer, quarried 16.7 million tons of crushed stone and 30,000 tons of dimension stone. In the crushed stone group limestone accounted for 71% of tonnage, followed by traprock at 13%, and granite at 10%. Highway and other construction uses consumed 81% of the crushed stone; cement and lime manufacture, 13%; and miscellaneous other uses, 6%.

Sandstone was the major dimension stone; rough block, irregular-shaped, and rubble constituted 86% of the total of all dimension stone produced.

Serpentinite quarried in the State and sold in the form of crushed stone was reported to contain small quantities of chrysotile asbestos. Asbestos is a known carcinogen. The three serpentinite quarries that were reported to contain asbestiform min-

erals produced about 18% of the crushed stone used in the State.

The Environmental Health Administration of the Maryland Department of Health and Mental Hygiene, the Montgomery County Department of Environmental Protection, and EPA initiated studies in 1977 to determine if the public was being exposed to the asbestos contained in serpentinite rock used on roads in Maryland. The Federal Bureau of Mines analyzed several of the samples collected and reported the results to the agencies conducting the study.

**Vermiculite (Exfoliated).**—A nearly fourfold increase in the demand for loose fill insulation resulted in a 25% increase in the production of exfoliated vermiculite. The W. R. Grace & Co., Prince Georges County plant, also sold vermiculite for use in concrete aggregate, fireproofing, block insulation, and for horticulture. The crude vermiculite was imported from outside the State.

**Table 6.—Maryland: Crushed stone<sup>1</sup> sold or used by producers, by use**

(Thousand short tons and thousand dollars)

Use	1976		1977	
	Quantity	Value	Quantity	Value
Roadstone -----	4,971	14,120	5,036	14,670
Bituminous aggregate -----	2,361	6,494	2,378	6,488
Cement manufacture -----	2,092	2,533	2,062	2,581
Concrete aggregate -----	1,733	5,073	2,413	7,280
Macadam aggregate -----	1,658	4,993	1,667	4,203
Dense-graded roadbase stone -----	1,506	4,520	1,724	4,423
Riprap and jetty stone -----	400	1,435	219	787
Surface treatment aggregate -----	294	850	330	981
Railroad ballast -----	169	411	116	280
Lime manufacture -----	32	74	27	68
Other uses <sup>2</sup> -----	469	6,490	765	8,011
<b>Total<sup>3</sup> -----</b>	<b>15,683</b>	<b>47,000</b>	<b>16,736</b>	<b>49,772</b>

<sup>1</sup>Includes limestone, traprock, granite, miscellaneous stone, and sandstone.

<sup>2</sup>Includes stone used in whitening, soil conditioning, agricultural limestone, refractory stone, abrasives, other fillers and extenders, mineral food, filter stone (1976), asphalt filler (1976), flux stone, and unspecified uses.

<sup>3</sup>Data may not add to totals shown because of independent rounding.

### MINERAL FUELS

**Coal (Bituminous).**—Production in Maryland for 1977 surpassed 3 million tons, the first since 1926, and it continues to be the most valuable mineral commodity mined in the State accounting for 29% of the State's raw mineral wealth.<sup>4</sup> Strip mining has been the main coal mining technique employed in the western part of the State, but lately new technology and economic change have sparked renewed interest in deep mining.

An increasing number of coal operators are executing the Land Reclamations Com-

mittee's revegetation standards for acreage planting and became eligible for early bond release consideration. Close adherence to the reclamation-revegetation plans has permitted the State to release bonds in the minimum amount of time.

**Coke and Coal Chemicals.**—Bethlehem Steel Corp. operated its 10 coke oven batteries totaling 635 ovens to produce coke for its blast furnaces at Sparrows Point. By-product tar, light oil, and ammonia were recovered from the coke oven gas. These byproducts were sold for reprocessing and 20% to 40% of the coke oven gas was

returned to the ovens and burned to produce more coke.

**Natural Gas and Petroleum.**—Columbia LNG Corp., a subsidiary of the Columbia Gas Systems, Inc., continued construction of a liquefied natural gas (LNG) import terminal at Cove Point scheduled for completion in 1978. The offshore platform of the terminal is about 1/2-mile long and 2 miles offshore and is to be capable of mooring two LNG carriers simultaneously. During normal operations, a ship will be unloaded in about 12 hours. Pumps will force the LNG through buried piping to onshore tanks, a distance of about 2 miles including the 6,400-foot underwater tunnel.

Each of the four onshore storage tanks holds 375,000 barrels of LNG, about one-half of the cargo of an LNG carrier. As new supplies of LNG arrive, liquid from the storage tanks is to be pumped to the process area, where it will be revaporized into natural gas. The vaporizers are banks of tubes submerged in a bath of agitated warm water and heated by gas burners. As the liquid converts to gas, it will flow directly into a transmission pipeline for delivery to market. To carry the gas from Cove Point to customers, new pipelines are being constructed and connected to pipeline systems supplying Columbia and Consolidated Natural Gas Co. service areas.

## METALS

**Aluminum.**—Although bauxite or other aluminum ore is not mined in Maryland, a significant amount of metallic aluminum is produced at two facilities in the State—Eastalco Aluminum Co. (Howmet Corp.) in Frederick County and Tomke Aluminum Co. in Baltimore County. At the Eastalco plant, site preparation work was initiated in 1977 after environmental and construction permits were obtained for a third potline. Alumax, Inc., is to own 65% of the potline, which is to have a capacity of 91,000 tons per year, and Mitsui & Co., Ltd., is to own the rest. The metal to be produced by the additional capacity is to be used to meet the growing market requirements of the 1980's.

The Maryland Bureau of Air Quality Control (AQC) and Eastalco Aluminum Co. have been formulating an agreement to correct pollution problems at the plant's bake oven and casthouse and thus avoid involved and expensive court litigation. The State's clean air officials and attorney general's office have written a delayed com-

pliance schedule for Eastalco to follow the correct emission control shortcomings uncovered in July 1977 by the AQC investigators. The compliance schedule allowed the company until March 1, 1978, to complete purchase orders for the equipment and until July 1, 1979, to install it.

The agreement requires Eastalco to install baghouse equipment on its bake oven building, similar to that attached to its potlines to keep fluorides and other emissions from escaping the plantsite. A new casting process is being required in the casthouse to eliminate periodic emissions which occur whenever a solid flux is added to molten aluminum metal. Under the new control orders, the fluxing would be controlled in a degassing box.

**Copper.**—Kennecott Refining Corp. at Hawkins Point, Anne Arundel County, is the only copper refinery now operating in the State.

**Iron and Steel.**—Bethlehem Steel Corp.'s Sparrows Point plant continues to be one of the largest steel plants in the United States. In 1977, the last two of five 265,000-deadweight-ton tankers, the largest ships ever built in the United States, were built at the company's shipyard.

During 1977, the company had under construction a \$200 million 8,000-ton-per-day blast furnace. This facility will be the first in the United States of the world's new generation of furnaces.

**Lead.**—Five companies in Baltimore County purchased 488 tons of secondary lead in 1977 (contained in soft lead, antimonial lead, and lead in alloys) which was smelted and used in producing type metal, cable covering, solder, and annealing. The list of producers was headed by Industrial Metal Melting Co. Inc., and followed by Signode Corp., Western Electric Co. Inc., Crown Cork & Seal Co. Inc., and Locke Insulators Inc.

Hearings were held by the Occupational Safety and Health Administration (OSHA) in the spring of 1977 on a proposed standard for lead in air inside plants to control health hazards for workers. The proposal would reduce the current limit of 200 micrograms of lead per cubic meter of air to 100 micrograms per cubic meter based on an 8-hour average. An additional hearing was held in November to take testimony about job security for workers moved to other jobs to preserve their health after exposure to lead. EPA in December proposed an ambient air quality standard for lead of 1.5

micrograms per cubic meter by 1982. Although the major source of lead in air is gasoline, the proposed restriction may require control of fugitive lead emissions from smelters, according to EPA.

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<sup>2</sup>Program assistant, State Liaison Office, Maryland and Delaware, Bureau of Mines, Washington, D.C.

<sup>3</sup>Campbell, W. J., R. L. Blake, L. L. Brown, E. E. Cather, and J. J. Sjoberg. Selected Silicate Minerals and Their Asbestiform Varieties. Mineralogical Definitions and Identification-Characterization. BuMines IC 8751, 1977, 56 pp.

<sup>4</sup>Maryland Bureau of Mines. Fifty-fifth Annual Report, Calendar Year 1977.

<sup>1</sup>State Liaison Officer—Maryland and Delaware, Bu-

Table 7.—Principal producers

Commodity and company	Address	Type of activity	County
<b>Cement:</b>			
<b>Portland:</b>			
Alpha Portland Cement Co. <sup>1</sup>	15 South 3d St. Easton, PA 18042	Plant -----	Frederick.
Lehigh Portland Cement Co. <sup>2</sup>	718 Hamilton St. Allentown, PA 18101	-----do -----	Carroll.
<b>Portland and masonry:</b>			
Marquette Cement Manufacturing Co. <sup>1</sup>	First American Center Nashville, TN 37238	-----do -----	Washington.
<b>Masonry:</b>			
M. J. Grove Lime Co. <sup>1</sup> -----	Frederick, MD 21701 -----	-----do -----	Frederick.
<b>Clays:</b>			
Baltimore Brick Co -----	501 St. Paul Pl. Baltimore, MD 21202	Pits -----	Baltimore and Frederick.
Cyprus Industrial Materials Co.	555 South Flower St. Los Angeles, CA 90071	Pit -----	Baltimore.
Victor Cushwa & Sons, Inc -----	201 West Potomac St. Williamsport, MD 21795	Pit -----	Washington.
<b>Coal:</b>			
Buffalo Coal Co -----	Box 275 Bayard, WV 26707	5 strip mines -----	Garrett.
Grafton Coal Co -----	Box 188 Mountain Lake Park, MD 21550	3 strip mines -----	Do.
Moran Coal Co., Inc -----	Drawer E Westernport, MD 21562	Strip mine -----	Do.
Winner Bros. Coal Co., Inc.	Box 300 Frostburg, MD 21532	5 strip mines -----	Allegany.
<b>Gypsum (calcined):</b>			
National Gypsum Co -----	325 Delaware Ave. Buffalo, NY 14202	Plant -----	Baltimore.
United States Gypsum Co.	101 South Wacker Dr. Chicago, ILL 60606	-----do -----	Do.
<b>Iron oxide pigments, finished (natural and manufactured):</b>			
Minerals Pigments Corp -----	7011 Muirkirk Rd. Beltsville, MD 20705	-----do -----	Prince Georges.
<b>Lime:</b>			
S. W. Barrick & Sons, Inc -----	Woodsboro, MD 21798 -----	-----do -----	Frederick.
<b>Peat:</b>			
Garrett County Processing & Packaging Corp.	R.F.D. No. 1 Accident, MD 21520	Bog -----	Garrett.
<b>Petroleum refineries:</b>			
Amoco Oil Co -----	910 South Michigan Ave. Chicago, ILL 60680	Refinery -----	Baltimore.
Chevron Asphalt Co -----	Baltimore, MD 21200 -----	-----do -----	Do.
<b>Sand and gravel:</b>			
Campbell Sand and Gravel, Inc	4911 Calvert Rd. College Park, MD 20740	Pit -----	Prince Georges.
Charles City Sand & Gravel Co., Inc.	Waldorf Industrial Center Box 322 Waldorf, MD 20601	Dredges -----	Charles.
Contee Sand & Gravel Co., Inc ..	Box 460 Laurel, MD 20810	Pit -----	Prince Georges.
Harry T. Campbell and Sons Co., a division of The Flintkote Co.	White Marsh Plant Towson, MD 21225	Pits -----	Baltimore.
York Building Products Co., Inc.	Box 1708 York, PA 17405	Pit -----	Cecil.

See footnotes at end of table.

Table 7.—Principal producers —Continued

Commodity and company	Address	Type of activity	County
Stone:			
Arundel Corp -----	501 St. Paul Pl. Baltimore, MD 21202	Quarries -----	Baltimore, Harford, Howard.
Martin-Marietta Aggregates --	66 Long Clove Rd. Congers, NY 10920	Quarry -----	Washington.
Maryland Materials, Inc ----	Box W North East, MD 21901	---do-----	Cecil.
Rockville Crushed Stone, Inc.	Box 407 Rockville, MD 20850	---do-----	Montgomery.
D. M. Stoltzfus & Sons, Inc ---	Talmage, PA 17580-----	Quarries -----	Cecil and Harford.

<sup>1</sup>Also stone.<sup>2</sup>Also clays and stone.



