

11. RAW MATERIALS CONSUMED IN THE PRODUCTION OF CLINKER AND FINISHED PORTLAND AND MASONRY CEMENT.

Report quantity of each material consumed during the year at this facility. Check whether the material was mined (M) or purchased (P) by you. The materials (quantities) consumed in the production of finished cement exclude those consumed for the production of clinker. Report quantities in short tons, if possible; otherwise please specify the units used.

Raw material (1)	Code	M	P	QUANTITY TO MAKE		Raw material (1)	Code	M	P	QUANTITY TO MAKE	
				Clinker (1)	Finished cement (2)					Clinker (1)	Finished cement (2)
Clinker (purchased): Imported (foreign).....	533					Siliceous and pozzolanic: Sandstone.....	521				
Domestic.....	534					Silica, other sand..	522				
Calcareous: Cement rock.....	501					Quartzite.....	523				
Limestone.....	502					Calcium silicates...	524				
Marl.....	503					Pumice, tuff.....	516				
Oyster, seashells...	504					Pozzolana.....	563				
Chalk.....	505					Other rock pozzolans.....	577				
Marble.....	506					Other igneous rocks.....	571				
Aragonite.....	507					Rice husk ash.....	583				
Coral.....	508					Silica fume.....	584				
Cement kiln dust...	561					Other micro-crystalline silica..	592				
Lime.....	593					Granulated blast furnace slag.....	586				
Other (specify) _____						Other blast furnace slag.....	587				
Aluminous: Shale and schist....	511					Steel furnace slag.....	589				
Clay (all kinds).....	512					Other slag (specify) _____	591				
Staurolite.....	513					Fly ash.....	536				
Bauxite.....	514					Other ash (specify) _____	598				
Aluminum dross....	515					Other pozzolans and cementitious additives (specify) _____	520				
Alumina.....	518					Other: Gypsum.....	538				
Other (specify) _____						Anhydrite.....	539				
Ferrous: Iron ore (all types).	528					Fluorspar.....					
Pyrite cinder.....	529					Other (specify) _____	540				
Mill scale.....	530										
Other (specify) _____											

12. List any noteworthy changes in quarry or mill equipment made at this plant during the year

13. List any expansions/modernizations to plant/quarry during reporting year

Name of person to be contacted regarding this report _____ Tel. area code _____ No. _____ Ext. _____

Address No. _____ Street _____ City _____ State _____ ZIP Code _____

May tabulations be published which could indirectly reveal the data reported above?
 Value data (1) Yes (2) No Other (including quantity) data (1) Yes (2) No

Signature _____ Title _____ Date _____

Please use additional sheet if needed



UNITED STATES
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
986 NATIONAL CENTER
RESTON, VIRGINIA 20192

PORTLAND AND MASONRY CEMENT

INDIVIDUAL COMPANY DATA - PROPRIETARY

Unless authorization is granted in the section above the signature, the data furnished in this report will be treated in confidence by the Department of the Interior, except that they may be disclosed to Federal defense agencies, or to the Congress upon official request for appropriate purposes. Unless objection is made in writing to the USGS, the information furnished in this report may be disclosed to the respondent's State Geological Survey (or similar State Agency) if the State has appropriate safeguards to prevent disclosing company proprietary data.

FACSIMILE NUMBER
1-800-543-0661

(Please correct if name or address has changed.)

Name of Plant _____
 County _____ State _____
 Nearest city or town _____

Public reporting burden for this voluntary collection of information is estimated to average 5 HOURS per response. A Federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Comments regarding this collection of information should be directed to: U.S. Geological Survey, Statistics and Information Systems Section, 988 National Center, Reston, VA 20192. **Please do not mail canvass forms to this address.**

Collection of nonfuel minerals information is authorized by Public Law 96-479 and the Defense Production Act. This information is used to support executive policy decisions pertaining to emergency preparedness, national defense, and analyses for minerals legislation and industrial trends. The USGS relies on your voluntary and timely response to assure that its information is complete and accurate. Please complete and return a separate form for each plant in the enclosed envelope or fax to the above toll-free number before March 1. REPORT FIGURES TO THE NEAREST SHORT TON UNLESS OTHERWISE SPECIFIED. (Please check appropriate boxes, where applicable.) Use zero (0) when appropriate. Please do not make entries in shaded areas. Additional forms are available upon request.

1. Nature of plant operations covered by this report.
 (1) Grinding mill, kiln, and distribution facilities (2) Grinding mill only (3) Distribution facility only

If you checked: (1) Complete ALL Sections. (2) Complete ALL Sections EXCEPT 2 and 10.
 (3) Complete ONLY Sections 4 through 8 (EXCLUDE Columns 1-4 of Section 7), and 11 (if applicable).

2. Actual Clinker Production _____ short tons **Clinker Stockpiles** _____ short tons _____ short tons
 (beginning of year) (end of year)

3. Actual Grinding Capacity _____ short tons **3A. Total Clinker Purchases and/or transfers in** _____ short tons
 (Based on the fineness necessary to grind your normal product mix and making allowances for normal maintenance downtime.)

FINISHED PORTLAND AND BLENDED CEMENT
**** (DO NOT INCLUDE MASONRY, PLASTIC, AND PORTLAND LIME CEMENTS - SEE SECTION 8.) ****

4. Production, receipts, shipments, and stocks of finished portland and blended cement (in short tons).

Item (1) (Include all terminals controlled by reporting facility)	Code	Quantity (2)
Stocks at beginning of year (include stocks at distribution terminals).....	210	
Produced at this plant from clinker (1) <input type="checkbox"/> Gray (2) <input type="checkbox"/> White (3) <input type="checkbox"/> Colored.....	221	
PLUS		
Transfers-in (domestic plant-to-plant within company).....	230	
Purchases from other domestic cement producers.....	231	
Imports from outside the United States and Puerto Rico.....	232	
TOTAL (CODES 210 through 232).....	239	
LESS		
Shipments to final domestic customers (directly from plant and/or from distribution terminals)...	240	
Invoiced shipments to other domestic cement producers and/or cement suppliers.....	241	
Transfers-out (domestic plant-to-plant within company).....	242	
Exports out of the United States and Puerto Rico.....	243	
Portland cement used to produce masonry, PC lime, and/or plastic cement (EXCLUDE any masonry, PC lime, and/or plastic cement produced directly from clinker).....	244	
Consumption at facility, other than that in CODE 244.....	245	
TOTAL (CODES 240 through 245).....	249	
Inventory adjustments (+/-).....	250	
End of year inventory (CODE 239 - 249 +/- 250).....	260	

DO NOT INCLUDE MASONRY, PORTLAND LIME, AND PLASTIC CEMENT IN SECTIONS 5-7

5. Domestic shipments, by type, of finished portland and blended cement. (in short tons)

Mill or terminal net value equals the value of shipments to domestic customers, f.o.b. this reporting facility (i.e., the actual value of shipments less all discounts, allowances, freight charges to customers, and freight charges from domestic producing facilities to distribution facilities.)

Portland and Blended Cement Types (include air-entrained versions) (1)	Code	Gray		White	
		Quantity (2)	Mill Net Value (3)	Quantity (4)	Mill Net Value (5)
Types I, II, general use and moderate heat.....	310				
Type III, high-early-strength.....	320				
Type IV, low-heat.....	330				
Type V, high-sulfate-resistance.....	340				
Block.....	345				
Oil-well (API Spec. 10).....	350				
Portland-natural pozzolan blended.....	360				
Portland-blast furnace slag blended.....	361				
Portland-fly ash blended.....	362				
Portland-silica fume blended.....	363				
Other blended portland (exclude PC Lime).....	365				
Expansive (ASTM C845).....	370				
Regulated fast setting.....	375				
Waterproof.....	380				
Other (please specify)					
TOTAL (equals CODE 240, SECTION 4).....	399		\$		\$

6. Domestic shipments of finished portland and blended cement by customer type. (in short tons)

Type of customer or user (1)	Code	Quantity (2)
Ready-mixed concrete.....	870	
Building material dealers.....	810	
Concrete product manufacturers (please specify below):	820	
Brick/Block.....	821	
Precast/Prestress.....	822	
Pipe.....	823	
Other concrete products.....	824	
Contractors (please specify below):	830	
Airport.....	831	
Road paving.....	832	
Soil cement.....	833	
Other.....	834	
Federal, State, and local government agencies.....	840	
Oil well drilling.....	850	
Mining (other than oil).....	860	
Waste stabilization.....	880	
Other (please specify)		
TOTAL (equals CODE 240, SECTION 4).....	899	

7. Shipments of finished portland and blended cement to final domestic customer by mode of transportation. (in short tons)

Total shipments in SECTION B, CODE 649 should equal CODE 240, SECTION 4.

Mode of transportation (includes pick-up by customer)	Code	A. Shipments to terminal as first destination		B. Shipments to final customer (COLUMNS 3-6 should equal LINE 240, SECTION 4)			
		Plant to terminal		Plant to final customer		Terminal to final customer	
		Bulk (1)	Bag or package (2)	Bulk (3)	Bag or package (4)	Bulk (5)	Bag or package (6)
Rail.....	610						
Truck.....	620						
Barge or Ship.....	630						
Other (please specify)							
	649						

PREPARED MASONRY, PORTLAND LIME, AND PLASTIC CEMENT

Report the quantity of prepared masonry, portland lime and/or plastic cement actually produced, received, and shipped. Mill or terminal net value equals the value of shipments to domestic customers, f.o.b. this reporting facility (i.e., the actual value of shipments less all discounts, allowances, freight charges to customers, and freight charges from domestic producing facilities to distribution facilities.)

8. Production, receipts, shipments, and stocks of prepared masonry, portland lime, and/or plastic cement. (in short tons)

(400) Specify in percent, the quantity produced as: Gray _____% White _____% Colored _____%

Item (1) (Include all terminals controlled by reporting facility)	Code	Quantity (2)	Mill Net Value (3)
Stocks at beginning of year (include stocks at distribution terminals).....	410		
Produced at this plant: From clinker.....	421		
From portland and blended cement.....	422		
PLUS			
Transfers-in (domestic plant-to-plant within company).....	430		
Purchases from other domestic producers.....	431		
Imports from outside the United States and Puerto Rico.....	432		
TOTAL (CODES 410 through 432).....	439		
LESS			
Shipments to final domestic customer (from plant and/or from distribution terminal).....	440		\$
Invoiced shipments to other domestic cement producers and/or cement suppliers.....	441		
Transfers-out (domestic plant-to-plant within company).....	442		
Exports out of the United States and Puerto Rico.....	443		
Consumption at facility.....	444		
TOTAL (CODES 440 through 444).....	449		
Inventory adjustments (+/-).....	450		
End of year inventory (CODE 439 - 449 +/- 450).....	460		

PRODUCTION FACILITY INFORMATION

9. Fuel and energy used at this plant for all operations during the year. (exclude fuels used at distribution facilities)

Item (1)	Code	Unit of measure (2)	Quantity (3)	Million BTU's (4)	Fuel used for:			
					Kiln	Power plant	Dryer	Other
Natural gas.....	901	Thousand cubic feet (MCF)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fuel oil.....	902	Thousand gallons			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coal								
Bituminous.....	903	Thousand short tons			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anthracite.....	904	Thousand short tons			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coke (from coal)...	905	Thousand short tons			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Petroleum coke.....	906	Thousand short tons			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waste fuel:					Specify type of waste fuel:			
Tires.....	921	Thousand short tons						
Other solid.....	922	Thousand short tons						
Liquid.....	923	Thousand gallons						
Electric energy								
Generated.....	916	Thousand kilowatt hours						
Purchased.....	917	Thousand kilowatt hours						

10. Kiln data for the report year.

Please list each kiln separately. Exclude data for idle kilns that cannot be restarted in less than six months.

Code	Number of days NOT in production			Total length of each kiln (feet) (4)	Internal diameter of lined kiln (feet)		Maximum output for each kiln per 24 hour day (short tons) (7)	Pollution control equipment (number)		Pre-heater (10)	Pre-calciner (11)	Type of process	
	Total (COL. 2 + 3) (1)	Routine maintenance downtime ONLY (2)	Other days NOT in production (3)		Upper end (5)	Lower end (6)		Glass bag house (8)	Electrostatic precipitator (9)			Wet (12)	Dry (13)
701										<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
702										<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
703										<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
704										<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
705										<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D15

GENERAL INSTRUCTIONS

These instructions are provided as assistance in filling out the annual U.S. Geological Survey Form 9-4041-A. **If questions still exist after reviewing the form and associated instructions, please call the Cement Specialist at the U.S. Geological Survey, at (703) 648-7712.**

SPECIFIC INSTRUCTIONS

SECTION 1. NATURE OF PLANT OPERATIONS COVERED BY THIS REPORT.

- (1) **Grinding mill, kiln, and distribution facility.** Full integrated production facility; includes kiln grinding, and distribution operations. Please include terminals controlled by your facility.
- (2) **Grinding mill only.** Production of finished cement by grinding of clinker; no active production of clinker at this facility.
- (3) **Distribution facility only.** No active clinker or grinding operations but includes facilities for distribution of domestic (including purchased) and/or imported cement. May include some blending operations.

SECTION 2. ACTUAL CLINKER PRODUCTION.

Include production for the full calendar year in short tons (*not clinker tons*). If not possible, provide an estimate for the full calendar year and mark with an e/ (estimate). Report beginning and end of year clinker stockpiles, to the nearest short ton. If necessary, provide estimate and mark with an e/.

SECTION 3. ANNUAL GRINDING CAPACITY.

Annual grinding capacity reflects full working year (365 days minus "normal" downtime). Normal downtime is the number of days the grinding mills are not operating for regular maintenance. This does not include downtime related to slack market conditions, strikes, etc. The capacity should be with respect to grinding of the facility's expected product mix. It is the amount of finished ground product you can make, not the amount of clinker you can grind.

SECTION 4. PRODUCTION, RECEIPTS, SHIPMENTS, AND STOCKS OF FINISHED PORTLAND AND BLENDED CEMENT.

**** Note: *DO NOT INCLUDE masonry, portland lime, or plastic cements. These are reported only in SECTION 8.***

- CODE 210. Stocks at beginning of year.** Stocks at distribution terminals are stocks stored at distribution terminals sent from or controlled by this reporting facility.
- CODE 221. Produced at this plant from clinker.** Report total tonnage of finished portland and blended cement produced at this facility from clinker, including that from clinker brought in from an outside source, including imports. Indicate color(s) of finished cement produced.
- CODE 230. Transfers in (plant-to-plant within company).** Include inventory transfers from company's other plants.
- CODE 231. Purchases from other domestic cement producers.** Purchases of finished and blended cement, not clinker. Exclude purchases from other plants owned by your company. Include material brought in as "swaps" where a matching "swap" is included in CODE 241.
- CODE 232. Imports from outside the United States and Puerto Rico.** Include only imports of finished portland cement. Imports of clinker are not included. Include purchased imported and domestic clinker in SECTION 11, Raw materials consumed, CODES 501 and 502.
- CODE 240. Shipments to final customer (directly from plant and/or from distribution terminal).** Shipments to final domestic customers (directly from plant and/or from terminals). Excludes masonry, portland lime, and plastic cements. Includes all shipments handled by reporting facility to final domestic customers, whether the cement was produced domestically, imported, or made from imported clinker. Includes all shipments sourced from reporting facility. Final customer or end user are entities listed in SECTION 6. **Exclude all invoiced shipments to other cement producers and/or cement suppliers or intra-company transfers.**
- CODE 241. Invoiced shipments to other domestic cement producers and/or cement suppliers.** Shipments of finished portland and blended cement to other than final customer for which an invoiced billing is issued. These shipments would include a "broker" only if they take title. Include "swap" shipments.
- CODE 242. Transfers out (plant-to-plant within company).** Include inventory transfers from the reporting facility to the company's other cement plants. (The cement shipments under CODES 241 and 242 would be counted on the survey form(s) [CODE 240] of the plants to which the cement was transferred and then sold to final customers.)
- CODE 243. Exports out of the United States and Puerto Rico.** Include all shipments of finished portland and blended cement from all 50 States, the District of Columbia, and Puerto Rico, to other areas of the world.
- CODE 244. Portland cement used in the production of masonry, PC lime, and/or plastic cement.** Report portland and/or blended cement (not clinker) used in making masonry, portland lime, and/or plastic cement. **Report masonry cement (will be a larger quantity) made from this portland cement in SECTION 8, CODE 422.**
- CODE 245. Consumption at facility.** Report portland and blended cement consumed at facility, **except** that reported in CODE 244 used to manufacture masonry, portland lime, and plastic cement.
- CODE 250. Inventory adjustments.** Include inventory losses, undercounting, shrinkage, damage, etc.
- CODE 260. End of year inventory.** Reflects inventory at plant and material from plant and imports held at terminals. CODE 239 minus CODE 249, plus or minus CODE 250 should equal CODE 260.

OVER

SECTION 5. DOMESTIC SHIPMENTS, BY TYPE, OF FINISHED PORTLAND AND BLENDED CEMENT.

This section **excludes** masonry, portland lime, and plastic cements. The shipments in this section include all shipments made during the year to final domestic customers, whether the cement was produced domestically, imported, or made from imported clinker. Exclude all invoiced shipments to other cement producers and/or suppliers or intra-company transfers. **Total shipments should equal the amount shown on CODE 240 of SECTION 4.** Please provide mill or terminal net value (including bagging charges) only for the total shipments (CODE 399) of gray and white portland cement, not for individual cement types.

CODES 360-365. Blended Cements: Report portland-based blended cements within the context of ASTM codes C 595 and 1157. Include air-entrained versions. Exclude sales of pure ground granulated blast furnace slag (slag cement).

CODE 360. Portland-based blended cements incorporating natural rock pozzolans (including tuffs, burnt clays or shales, diatomaceous earth, etc.)

CODE 362. Portland-based blended cements incorporating granulated blast furnace slag.

CODE 363. Portland-based blended cements incorporating fly ash.

CODE 364. Portland-based blended cements incorporating silica fume.

CODE 365. Other portland-based blended cements; includes blends with cement kiln dust.

SECTION 6. DOMESTIC SHIPMENTS OF FINISHED PORTLAND AND BLENDED CEMENT BY CUSTOMER TYPE.

This section **excludes** masonry, portland lime, and plastic cements. The shipments in this section include all shipments made during the year to final customers whether the cement was produced domestically, imported, or made from imported clinker. Exclude all invoiced shipments to other cement producers and/or suppliers or intra-company transfers to avoid double-counting. **Total shipments (CODE 899) should equal the amount shown on CODE 240 of SECTION 4.**

Please report sales to concrete product manufacturers, by type, under CODES 821 - 824, and to contractors under CODES 831 - 834. If necessary, report estimate(s) and mark with an e/.

SECTION 7. SHIPMENTS OF FINISHED PORTLAND AND BLENDED CEMENT TO FINAL DOMESTIC CUSTOMER BY MODE OF TRANSPORTATION.

This section **excludes** masonry, portland lime, and plastic cements. The shipments in this section include all shipments made during the year to final customers, whether the cement was produced domestically, imported, or made from imported clinker. SECTION 7A includes only the interim shipments of portland and blended cement from plant to terminals, not to final customer; exclude imported cement. In SECTION 7B, report only shipments of portland and blended cement to final customer; include imported cement. Bag and package shipments are defined as any form of packaged shipments **including** jumbo bags or super sacks. **In SECTION 7B, COLUMNS 3-6 totals for CODE 649 should equal, in sum, CODE 240, SECTION 4.**

SECTION 8. PRODUCTION, RECEIPTS, SHIPMENTS, AND STOCKS OF PREPARED MASONRY, PORTLAND LIME, AND/OR PLASTIC CEMENT.

Report only prepared masonry, portland lime, and plastic cements in this section. Do not report shipments or stocks of finished portland cement in this section. On CODES 421 and 422, report production of masonry, portland lime, and plastic cement from clinker, and that from portland and/or blended cement, respectively.

SECTION 9. FUEL AND ENERGY USED AT THIS PLANT FOR ALL OPERATIONS DURING THE YEAR.

For the purposes of this report, include the quarry in the definition of plant, if it exists at the plant location. Report quantity of fuels used in the calendar year in COLUMN (3) in the exact unit of measure stated in SECTION 9, COLUMN (2). Also, please report the total BTU's realized (in millions of BTU's) by type of fuel, COLUMN (4). Distinguish between metallurgical coke (from coal) and petroleum coke. Report tires (CODE 921) and solid waste fuels (CODE 922) in thousands of short tons. If unable to report in the units specified, please note units used.

SECTION 10. KILN DATA FOR THE REPORT YEAR.

Please report data for each kiln in active status, including kilns that were idle for part of the year. Exclude idle kilns that, for economic, technical, or permitting reasons, cannot be restarted within 6 months. Please list data for each kiln on a separate line. If more than 5 kilns are in operation, please supply data for these additional kilns on a separate page.

The routine maintenance downtime data (COLUMN 2) and kiln daily capacity data (COLUMN 7) allow the computation of annual capacity and capacity utilization for the kiln(s), based on a 365-day year minus the routine down days multiplied by the reported daily capacity. Routine maintenance downtime (COLUMN 2) is only that for planned, normal, routine maintenance. It would not be expected to change dramatically from year to year. Shutdowns for major plant upgrades are included only to the extent that they coincide with the normal, routine maintenance period(s). Other days not in production (COLUMN 3) refers to shutdowns for emergency or unanticipated repairs, extended repairs or upgrades, slow demand conditions, strikes, etc.

SECTION 11. CONSUMPTION OF RAW MATERIALS.

This section differentiates raw materials consumed to produce clinker from those used subsequently in the grinding/milling circuits to produce finished cement. This breakout allows better enumeration of the consumption of pozzolan and inert cement extenders, and allows differentiation of the same from similar materials used as kiln feed.

