

Supporting Statement B
Industrial Minerals Surveys
OMB Control Number 1028-0062

Collections of Information Employing Statistical Methods

The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When the question “Does this ICR contain surveys, censuses, or employ statistical methods?” is checked "Yes," the following documentation should be included in Supporting Statement B to the extent that it applies to the methods proposed:

- 1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.**

All canvasses except Construction sand and gravel and crushed and broken stone (USGS Form 9-4142-Q):

These canvasses are conducted as a complete census. No sampling is performed. The total universe is approximately 17,280 respondents that are business or other for-profit institutions (Table 1 below) and approximately 308 respondents that are State, local or tribal government institutions (Table 2 below). The sources used to create the sampling frame are industry directories (such as the annual Skillings North American Mining Directory) and trade periodicals (such as North American Sulfur Services), and U.S. Geological Survey (USGS) commodity specialists’ direct contacts with industry specialists. Once a year, commodity specialists update the frame.

Table 1. Consolidated estimates of annual burden (private sector) (excludes USGS Form 9-4142-Q).

			PRIVATE SECTOR			
	Form No.	Frequency	Number of Respondents	Responses	Completion Time	Burden Hours
1	9-4001-A	Annually	82	82	90 min	123
2	9-4002-A	Annually	10	10	30 min	5
3	9-4004-A	Annually	23	23	1 hour	23
4	9-4005-A	Annually	20	20	30 min	10
5	9-4006-A	Annually	118	118	30 min	59
6	9-4007-A	Annually	5,332	5,332	30 min	2,666
7	9-4008-A	Annually	9,417	9,417	45 min	7,063
8	9-4009-A	Annually	312	312	45 min	234

9	9-4010-A	Annually	120	120	90 min	180
10	9-4011-A	Annually	34	34	30 min	17
11	9-4012-A	Annually	28	28	90 min	42
12	9-4013-A	Annually	65	65	30 min	33
13	9-4014-A	Annually	14	14	30 min	7
14	9-4015-A	Annually	296	296	90 min	444
15	9-4016-A	Annually	57	57	90 min	86
16	9-4017-A	Annually	42	42	90 min	63
17	9-4018-A	Monthly	10	10	45 min	8
18	9-4019-A	Monthly	10	10	45 min	8
19	9-4020-A	Annually	11	11	30 min	6
20	9-4021-A	Annually	21	21	30 min	11
21	9-4022-A	Annually	102	102	15 min	26
22	9-4023-A	Annually	31	31	30 min	16
23	9-4024-A	Annually	11	11	20 min	4
24	9-4025-A	Annually	56	56	1 hour	56
25	9-4026-A	Annually	48	48	30 min	24
26	9-4027-A	Annually	143	143	2 hours	286
27	9-4028-A	Annually	297	297	15 min	74
28	9-4029-M	Monthly	107	1,284	15 min	321
29	9-4030-M	Monthly	10	120	15 min	30
30	9-4031-S	Semiannually	33	66	45 min	50
31	9-4032-A	Annually	17	17	30 min	9
32	9-4033-Q	Quarterly	13	52	15 min	13
33	9-4035-S	Semiannually	15	30	1 hour	30
34	9-4036-A	Annually	16	16	15 min	4
35	9-4039-M	Monthly	87	1,044	30 min	522
36	9-4041-A	Annually	165	165	5 hours	825
37	9-4112-A	Annually	26	26	15 min	7
38	9-4115-A	Annually	16	16	30 min	8
39	9-4144-S	Semiannually	65	130	60 min	130
	TOTALS		17,280	19,676		13,523

Table 2. Consolidated estimates of annual burden (state, local or tribal government sector) (excludes USGS Form 9-4142-Q).

			STATE, LOCAL OR TRIBAL GOVERNMENT SECTOR			
	Form No.	Frequency	Number of Respondents	Responses	Completion Time	Burden Hours
1	9-4007-A	Annually	56	56	30 min	28

2	9-4008-A	Annually	250	250	45 min	188
3	9-4039-M	Monthly	1	12	30 min	6
4	9-4041-A	Annually	1	1	5 hours	5
	TOTALS		308	319		227

The expected response rate for this collection will be at least 82%. This is based on the number of establishments that have traditionally responded to this request for information.

The data collected on these forms are used to publish information on the mineral production for each state, including state rankings. Each state typically has only a limited number of producers for each mineral commodity. In order to have accurate state rankings, it is necessary to canvass all of the producers. For construction aggregates, crushed and broken stone and construction sand and gravel, there are a larger number of producers; however, the USGS publishes data for aggregates showing a breakdown by end use. There is considerable variation among the aggregates producers in the end use of their output; consequently, it is necessary to canvass all the aggregates producers. In addition, the USGS publishes aggregates data for districts within most states. For each district, there are typically only a limited number of aggregates producers.

Construction sand and gravel and crushed and broken stone canvass (USGS Form 9-4142-Q):

Data are collected quarterly from approximately 64 companies from among the approximately 6,000 eligible producers (Table 3 and Table 4 below). On average, 95% of establishments respond. Sample size was determined by the need to minimize respondent burden and to ensure the timely processing and publication of data.

The sample panel was selected in a fashion intended to produce the best possible estimates of total production of construction aggregates at the national and state levels. The use of a continuing panel also ensures good estimates of production trends.

Total production of construction aggregates for the current quarter is estimated for each level (national and state) by multiplying the approximate total production figure from the most recent available complete industry census by the trend ratio, which is developed from the sample for that level.

Table 3. Consolidated estimates of annual burden (private sector) (USGS Form 9-4142-Q only).

			PRIVATE SECTOR			
	Form No.	Frequency	Number of Respondents	Responses	Completion Time	Burden Hours
1	9-4142-Q	Quarterly	64	256	10 min	43
	TOTALS		64	256		43

Table 4. Consolidated estimates of annual burden (State, local or tribal government sector) (USGS Form

9-4142-Q only).

			STATE, LOCAL OR TRIBAL GOVERNMENT SECTOR			
	Form No.	Frequency	Number of Respondents	Responses	Completion Time	Burden Hours
1	9-4142-Q	Quarterly	1	4	10 min	1
	TOTALS		1	4		1

2. Describe the procedures for the collection of information including:

- * **Statistical methodology for stratification and sample selection,**
- * **Estimation procedure,**
- * **Degree of accuracy needed for the purpose described in the justification,**
- * **Unusual problems requiring specialized sampling procedures, and**
- * **Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

All canvasses except Construction sand and gravel and crushed and broken stone (USGS Form 9-4142-Q):

These canvasses do not employ sampling techniques. In some cases, individual establishments, by mutual agreement, have converted to reporting on an annual, rather than a monthly, quarterly, or semiannual basis to reduce their burden. For those establishments, a monthly, quarterly, or semiannual response is imputed from their annual response. Data are imputed for all non-responses. The majority of published statistics are rounded to three significant digits. Estimation procedures for non-respondents are described in item 3 below.

Construction sand and gravel and crushed and broken stone canvass (USGS Form 9-4142-Q):

- a) The USGS quarterly canvass of Construction sand and gravel and crushed and broken stone is conducted on a sample basis. Tests have proved that this is the most effective and efficient means of collecting this data. This sample, however, is not a probability sample, but a cutoff-type sample of the largest companies producing construction sand and gravel and/or crushed and broken stone.
- b) Total production of construction aggregates for the current quarter is estimated for each by multiplying the approximate total production figure from the most recent available complete industry census by the trend ratio which is developed from the sample for that level.
- c) As stated above, for this sampling to be accurate, the total industry census must be known.
- d) There are no unusual problems requiring specialized sampling procedures.
- e) The complete industry census is conducted annually. The quarterly data collections are conducted via telephone, facsimile transmission, the MIFORMS web site forms application, and electronic mail and do not reduce the overall burden.

- 3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.**

Paper forms mail-out and facsimile transmissions of paper forms:

Two weeks after the initial request, establishments not responding will receive another copy of the paper form in a second request for information. For larger establishments that still have not responded, statistical assistants or mineral commodity specialists will phone an alternative company contact.

On-line electronic forms, telephone, and electronic mail:

Two weeks after the initial request, statistical assistants will phone establishments that have not responded. For larger establishments that still have not responded, statistical assistants or mineral commodity specialists may phone an alternative company contact.

Non-response:

Several sources of information are used to impute data for non-respondents. One important source of information is the data on the number of employees and employee hours that mining operations are required to submit to the Mine Safety and Health Administration. These employment data are closely related to production. Ratios of employee hours to production can be computed for companies that respond, and those ratios can be used to estimate production for non-respondents.

Forms 10-K or 10-Q filed with the Securities and Exchange Commission (SEC) and company annual reports can also provide valuable sources of information. Publicly traded companies must file annual reports on Form 10-K (OMB Control Number 3235-0063) including comprehensive overviews of their business and financial conditions and audited financial statements. This form may also contain production and sales information. Publicly traded companies sometimes elect to send Form 10-K to shareholders in lieu of less detailed annual reports.

Publicly traded companies must also file Form 10-Q (OMB Control Number 3235-0070) quarterly. Firms include information for the final quarter of a firm's fiscal year in the annual Form 10-K; therefore only three Form 10-Q filings are made each year. Form 10-Q contains similar information to the annual Form 10-K; however, the information is generally less detailed, and the financial statements are generally unaudited.

The USGS also retrieves from company Web sites state-of-the-company annual shareholder reports containing financial data, results of continuing operations, market segment information, new product plans, subsidiary activities, and research and development activities on future programs.

The USGS believes that there is no significant non-response bias because of the suitable information on which to base imputations. This Information Collection Request does not contain canvasses of opinion.

Industry acceptance of these canvasses and response to the USGS publication of the data continue to be extremely positive.

- 4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more**

respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.

Many of the USGS' information customers are also businesses that respond to the canvasses in this information collection. USGS mineral commodity specialists are in frequent contact with companies by way of industry associations and conferences [for example, the Portland Cement Association, Inc., the National Lime Association, Inc., and the Gypsum Association, Inc.; the USGS attends The Fertilizer Institute's annual outlook meeting].

Informal communications during periodic contacts with our customers allow us to determine if the published canvass data are meeting their needs. Any feedback concerning this information collection discussed during these communications or non-response follow-up telephone contacts is used as suggestions that might facilitate clarification or ease respondent burden. Respondents are also encouraged to submit comments via a feedback link on the Web site at <https://miforms.er.usgs.gov/General/FeedBackForm.asp>. An annual letter is sent to our voluntary canvass respondents thanking them for their support and encouraging them to view our data products. At present, no formal tests are in progress that would require clearance.

5. Provide the names and telephone numbers of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

For further information concerning this information collection, please contact:

- Jeffrey P. Busse, Statistician, 703-648-4914, jbusse@usgs.gov,
- Joyce A. Ober, Assistant Chief, Mineral Commodities Section, 703-648-4976, jober@usgs.gov, or
- Carleen Kostick, Chief, Data Collection and Coordination Section, 703-648-7940, ckostick@usgs.gov.

List and Titles of Forms

Form No.	Frequency	Canvass Code	Title
9-4001-A	Annually	D19	Lime
9-4002-A	Annually	D05	Byproduct Sulfuric Acid
9-4004-A	Annually	D08	Pumice and Pumicite (including Volcanic Ash)
9-4005-A	Annually	D11	Exfoliated Vermiculite
9-4006-A	Annually	C83	Gypsum
9-4007-A	Annually	D63	Stone - Crushed and Broken
9-4008-A	Annually	G10	Construction Sand and Gravel - Sold or Used
9-4009-A	Annually	D50	Dimension Stone - Including Slate
9-4010-A	Annually	G09	Industrial Sand and Gravel - Sold or Used
9-4011-A	Annually	D22	Barite
9-4012-A	Annually	D2G	Salt Company Report
9-4013-A	Annually	D27	Salt Plant Report
9-4014-A	Annually	D32	Quartz Crystal
9-4015-A	Annually	D39A	Common Clay and Shale and Fire Clay
9-4016-A	Annually	D39B	Bentonite and Fuller's Earth
9-4017-A	Annually	D39C	Ball Clay and Kaolin
9-4018-A	Annually	D41	Ground Mica, including Sericite
9-4019-A	Annually	D42	Mica Splittings
9-4020-A	Annually	D55	Crude Mica
9-4021-A	Annually	D56	Talc, Soapstone, and Pyrophyllite
9-4022-A	Annually	D59	Natural Graphite Consumption
9-4023-A	Annually	D60	Crude Iodine
9-4024-A	Annually	D61	Crude Perlite
9-4025-A	Annually	D62	Expanded Perlite
9-4026-A	Annually	B38	Peat
9-4027-A	Annually	D72	Sulfur and Sulfuric Acid
9-4028-A	Annually	G34	Natural and Synthetic Gem Material
9-4029-M	Monthly	D30	Elemental Sulfur (Purity of 97% or better)
9-4030-M	Monthly	D70	Marketable Phosphate Rock

Form No.	Frequency	Canvass Code	Title
9-4031-S	Semiannually	C82	Gypsum
9-4032-A	Annually	D58	Feldspar
9-4033-Q	Quarterly	D06	Metallic Abrasives
9-4035-S	Semiannually	D36	Phosphate Rock and Phosphoric Acid
9-4036-A	Annually	D07	Diatomite
9-4039-M	Monthly	D16	Portland and Masonry Cement
9-4041-A	Annually	D15	Portland and Masonry Cement
9-4112-A	Annually	D64	Synthetic Graphite
9-4115-A	Annually	D74	Production of Natural Zeolites
9-4142-Q	Quarterly	CS1, AG1	Construction Sand and Gravel and Crushed and Broken Stone
9-4144-S	Semiannually	D76	Fertilizer Materials