**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):*

1. 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.
2. 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.
3. As stated above, for this sampling to be accurate, the total industry census must be known.
4. There are no unusual problems requiring specialized sampling procedures.
5. 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 |
| 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 |