# SUPPORTING STATEMENT – PART A U.S. Department of Commerce U.S. Census Bureau Business **R&D and Innovation** Survey (Forms BRDI-1 and BRDI-1(S)) OMB Control No. 0607-0912

# A. <u>Justification</u>

## 1. <u>Necessity of the Information Collection</u>

The Census Bureau is requesting clearance to conduct the Business R&D and Innovation Survey (BRDIS) for the 2015-2017 survey years with the revisions outlined in this document. Companies are the major performers of research and development (R&D) in the United States, accounting for over 70 percent of total U.S. R&D outlays each year. A consistent business R&D information base is essential to government officials formulating public policy, industry personnel involved in corporate planning, and members of the academic community conducting research. To develop policies designed to promote and enhance science and technology, past trends and the present status of R&D must be known and analyzed. Without comprehensive business R&D statistics, it would be impossible to evaluate the health of science and technology in the United States or to make comparisons between the technological progress of our country and that of other nations.

The National Science Foundation Act of 1950 as amended authorizes and directs the National Science Foundation (NSF) "...to provide a central clearinghouse for the collection, interpretation, and analysis of data on scientific and engineering resources and to provide a source of information for policy formulation by other agencies of the Federal government." One of the methods used by NSF to fulfill this mandate is The Business R&D and Innovation Survey (BRDIS)—the primary federal source of information on R&D in the business sector. NSF together with the Census Bureau, the collecting and compiling agent, analyze the data and publish the resulting statistics.

NSF has published annual R&D statistics collected from the Survey of Industrial Research and Development (1953 – 2007) and BRDIS (2008 – 2014) for 61 years. The results of the surveys are used to assess trends in R&D expenditures by industry sector, investigate productivity determinants, formulate science and tax policy, and compare individual company performance with industry averages. This survey is the Nation's primary source for international comparative statistics on business R&D spending.

BRDIS will continue to collect the following types of information:

- R&D expense based on accounting standards.
- Worldwide R&D of domestic companies.
- Business segment detail.
- R&D related capital expenditures.
- Detailed data about the R&D workforce.
  - R&D strategy and data on the potential impact of R&D on the market.
- R&D directed to application areas of particular national interest.
  - Data measuring innovation and intellectual property protection activities.

The following changes will be made to the 2015-2017 BRDIS compared to the 2014 BRDIS:

- Section 3: Adding question on domestic R&D performed by others and paid for by the Federal Government.
- Section 4: Deleting four questions on R&D with technology focus of photonics / optics.
- Section 4: Adding four questions on the Research/Development split for foreign R&D.

The survey announcements and forms used in the BRDIS are:

*Survey Announcement.* A pre-survey letter (Attachment A-13) will be mailed to approximately 500 of the largest R&D companies to announce the survey collection and to solicit updates to contact information and company status information (merger, acquisition, etc.). Companies are able to update this information electronically via a short online form (Attachment G).

*Form BRDI-1(S).* This form (Attachment C) will be mailed to the vast majority of the sample and contains only the most high-level BRDIS data items.

*Form BRDI-1.* This form (Attachment B) will be mailed to companies with a history of significant R&D and contains the full complement of BRDIS data items.

Information from BRDIS will continue to support the America COMPETES Reauthorization Act of 2010 as well as other R&D-related initiatives introduced during the clearance period. Other initiatives that have used BRDIS statistics include: the <u>Innovation Measurement-Tracking the State of Innovation in the American Economy</u> (U.S. Department of Commerce); <u>Science of Science and Innovation Policy</u> (NSF); and <u>Rising Above the Gathering Storm</u> (National Research Council).

The survey is conducted under the authority of Title 13, United States Code, Sections 8(b), 131, and 182, and Title 42, United States Code, Sections 1861-76 (National Science Foundation Act of 1950, as amended).

## 2. <u>Need and Uses</u>

Policy officials from many Federal agencies rely on these statistics for essential information. Businesses and trade organizations rely on BRDIS data to benchmark their industry's performance against others. For example, total U.S. R&D expenditures statistics have been used by the Bureau of Economic Analysis (BEA) to update the National Income and Product Accounts (NIPAs) and, in fact, the BEA recently has recognized and incorporated R&D as fixed investment in the NIPA. Accurate R&D data are needed to continue the development and effect subsequent updates to this detailed satellite account. Also, NSF, BEA and the Census Bureau periodically update a data linking project that utilizes BRDIS data to augment global R&D investment information that is obtained from BEA's Foreign Direct Investment (FDI) and U.S. Direct Investment Abroad (USDIA) surveys. Further, the Census Bureau links data collected by BRDIS with other statistical files. At the Census Bureau, historical company-level R&D data are linked to a file that contains information on the outputs and inputs of companies' manufacturing plants. Researchers are able to analyze the relationships between R&D funding and other economic variables by using micro-level data.

Individuals and organizations access the survey statistics via the Internet in annual *InfoBriefs* published by NSF's National Center for Science and Engineering Statistics (NCSES) that announce the availability of statistics from each cycle of BRDIS and detailed statistical table reports that contain all of the **statistics** NSF produces from BRDIS. Information about the kinds of projects that rely on statistics from BRDIS is available from internal records of NSF's NCSES. In addition, survey statistics are regularly cited in trade publications and many researchers use the survey statistics from these secondary sources without directly contacting NSF or the Census Bureau. Some of the users of the survey statistics and the types of information they request are described below.

Information quality is an integral part of the pre-dissemination review of the information disseminated by the Census Bureau (fully described in the Census Bureau's Information Quality Guidelines). Information quality is also integral to the information collections conducted by the Census Bureau and is incorporated into the clearance process required by the Paperwork Reduction Act.

## **Government Users**

Government policy officials who are involved in assessing the role of the Federal government in promoting economic growth use R&D statistics in their decision-making processes since R&D results affect technological and economic progress. Members of Congress make use of R&D statistics in preparing tax legislation, contacting NSF or the Census Bureau directly through their own staffs, through one of the House or Senate science committees, the Congressional Budget Office (CBO), the Congressional Research Service (CRS), or the Congressional Joint Economic Committee.

NSF staff also work closely with the Office of Science and Technology Policy (OSTP), providing R&D statistics and indicators of emerging trends to assist the OSTP staff in their analyses of the status of science and technology in the United States. In addition, NSF has frequent contact with the Office of Management and Budget (OMB).

Statistics produced from BRDIS also have been requested by officials from a host of other Federal government and quasi-governmental agencies. Also, as states and local governments seek to attract high-tech industries to their areas, NSF and the Census Bureau are frequently asked to provide R&D funding and employment figures to state governments and state organizations. Further, information and statistics from BRDIS also are supplied to internal NSF organizations. For example, survey statistics are used in the "Research and Development: National Trends and International Linkages" and "Industry, Technology, and the Global Marketplace" chapters of the Congressionally mandated *Science and Engineering Indicators* series, a biennial report in which the National Science Board continues to describe quantitatively the condition of U.S. science and research. Survey results are also included in NSF's annual *National Patterns of R&D Resources* tabulations and reports.

#### **International Users**

The international community uses R&D spending information as part of its comparisons of the economic performance among nations. U.S. R&D statistics are compiled in a format that can be compared with those of other countries. These statistics are transmitted to the Organization for Economic Cooperation and Development (OECD) that relies on BRDIS as its primary source for comparative business R&D statistics for the United States. Also, R&D statistics are used by multi-national committees and subcommittees studying and maintaining the North American Industry Classification System (NAICS) and North American Product Classification System (NAPCS).

Other international and foreign entities that have requested statistics on U.S. business R&D expenditures include the Brazilian National Council for Scientific and Technological Development, Canadian Ministry of Treasury and Economics, CARSA (Spain), Central Research Institute of the Electric Power Industry of Japan, Credit Suisse Securities, Delegation of the European Communities, Deloitte-Touche Tohmatsu (Japan), Department of State and Regional Development (Australia), Department of Technology Policy (Austria), European Commission's Joint Research Center, French Embassy, French Federal Institute of Research, Embassy of Finland, Embassy of Germany, Hungarian Academy of Sciences, The Impact Group (Canada), Industry Canada, Instituto Nacional de Estadistica (Madrid), London School of Economics, Natexis Capital (France), National Technology Agency of Finland, Natural Sciences and Engineering Research Council of Canada, Office of Pharmaceutical Industry Research (Japan), Oxford Institute for Energy Studies, Puerto Rico Planning Board, Office of the Representative of the Republic of Taiwan, Queens University (Canada), Research Center for Advanced Science and Technology (Japan), Royal United Services Institute for Defence and Security Studies (UK), Statistics Canada, Statistics Quebec, VM Institute (Japan), and the Universities of Auckland, Campinas (Brazil), Maastricht (Germany), Melbourne, Quebec, Shanghai, Sussex, and Tokyo. Domestic research organizations focusing on international issues also have requested survey statistics. These organizations include the U.S. Council for International Business and the Center for Strategic and International Programs.

### **Business Users**

Although the primary purpose of the survey is to provide accurate R&D statistics for well-informed public policy decisions, business users also benefit from the survey figures. There is a special obligation to keep the survey relevant to industry users particularly because business personnel spend time answering the annual questionnaire. Firms and trade associations in all industries, whether large or small in terms of R&D performance, are interested in making intra-industry comparisons, as well as comparing other industries' performance with their own. Each year the NSF and the Census Bureau receive many requests for R&D information from business users of the statistics.

In addition to industry researchers who utilize the R&D statistics directly from the NSF website and publications, there are many who use BRDIS **statistics** and **information** in their own trade reports. Trade associations that have contacted NSF include Aerospace Industries Association, American Chemical Council, American Entrepreneur Association, American Forestry and Paper Association, American Iron and Steel Institute, American Power Association, American Society for Engineering Education, Center for Automotive Research, Elsevier Engineering Information, Inc., Gas Operations Innovation Alliance, Manufacturers' Alliance, Hartford (CT) Area Business Associates, Industrial Research Institute, National Center for Manufacturing Sciences, Natural Gas Supply Association, Pharmaceutical Research & Manufacturers of America, Refractories Institute, and the Small Business High Tech Institute. Consultants to trade associations and industry also contact NSF. Among them have been: Booz-Allen Hamilton; Boston Consulting Group; DRI, Inc.; Ernst and Young, J. Orban and Company; Mayer, Brown, Rowe, and Associates; McKinsey and Company; Northstar Economics, Inc.; PricewaterhouseCoopers; SRI International; Stroock and Stroock and Lavan LLP; Waldman Associates; William Blair and Company; and the William Burn Company.

R&D statistics also are used by research organizations devoted to the study of industry, R&D, science and technology and related topics. These organizations include the Academy of Technology Entrepreneurs and Innovators; Boston Analytics, Competitiveness Policy Council; Corporation for Enterprise Development; Council for Chemical Research; Council on Competitiveness; Information Technology and Innovation Foundation, National Academy of Sciences' Academy of Engineering, Committee on National Statistics, National Research Council, and Board on Science, Technology, & Economic Policy; National Economic Research Association; Potomac Knowledgeway Project; Research and Development Council; United Technologies Research Center; The Urban Institute, and World Wildlife Federation. The statistics also are the basis for R&D spending projections published by the Battelle Memorial Institute.

#### **Other Users**

Research undertaken at colleges and universities on innovation and economic growth has relied heavily on the detailed R&D time series from NSF's business R&D surveys. Research projects that have used R&D statistics obtained from the surveys have been conducted at a host of colleges and universities including American, Clemson, Columbia, Georgia Institute of Technology, Georgia State, George Mason, Georgetown, George Washington, Harvard, Harvard Business School, Kansas State, Lehigh, Macalester, Marshall, Massachusetts Institute of Technology, Michigan State, New York University Stern School of Business, Ohio State, Pennsylvania State, Princeton, Purdue, Rutgers, Texas A&M, Tufts, Southern Methodist University, Virginia Polytechnic Institute, Yale, and the Universities of California, Delaware, Florida, Georgia, Maryland, Michigan, Minnesota, New York, North Carolina, Oregon, Pittsburgh, South Carolina, Tennessee, Texas, Virginia, and Wisconsin. Some researchers at the institutions above and at others access business R&D data via the Census Center for Economic Studies' network of Research Data Centers throughout the United States.

In addition, inquiries are regularly received from the news media. Inquiries have been received from: Aviation Daily, Business Week, Chemical & Engineering News, Chemical Week, Chicago Tribune, DRI/McGraw-Hill Publications Co., Elseveer Science Publishing, Forbes, flatironreport.com, Fortune, Indianapolis Star, Information Week, Journal of Commerce, Los Angeles Times, Manufacturer, Manufacturing News, Modern Maturity Magazine, National Geographic, Newsweek, New York Times, Owner-Manager Magazine, Physics Today, Research & Development, Research and Technology Management, Science, Science & Government Report, USA Today, U.S. News & World Report, Wall Street Journal, Washington Post, and Washington Times. And finally, Internet sites continue to link with NSF's business survey results.

In summary, each item in BRDIS has been the subject of research by someone interested in business R&D performance. Although the consumers of the R&D statistics from BRDIS are diverse, there is one common element underlying all the uses of the survey statistics—an attempt to gain a better understanding of some aspect of the nation's scientific and technological resources. The detailed statistics provided by BRDIS are the most complete set of elements for assessing the impact of R&D on business development and the nation's economy.

## 3. <u>Use of Information Technology</u>

Most respondents (about 70%) receive a letter and brochure (Attachments A1 and A10 or A3 and A12) in their initial mail packet. These materials provide respondents with instructions to respond electronically via Centurion, the Census Bureau's internet reporting option. The remaining respondents receive the questionnaire (Attachment C) in their initial mail packet. Explanatory materials accompanying the questionnaire (Attachments A2 and A11) notify respondents of the benefits of reporting online and provide instructions on how to do so.

Advantages to using Centurion include: reduced time and expense to report, improved data quality through automatic data checks, the ability to exit the form and resume at a later time without losing the data already entered, the ability to save an electronic version (pdf) of the completed form for their own use, and the ability to consolidate and upload data directly from Excel spreadsheet versions of the survey.

Respondents will also be able to use the Business Help Site to access the following information: the Secure Messaging Center where respondents can communicate with the Census Bureau in a secure environment, general information regarding the BRDIS, frequently asked questions, sample questionnaires, and Excel worksheets for each section designed to allow respondents the ability to email the section to the appropriate person within their company to obtain the information. Respondents are also able to access a Self-Service area of the web site where they can request an extension, check their filing status, and request that a paper form be mailed to them.

## 4. Efforts to Identify Duplication

The Census Bureau and NSF jointly assess results of discussions with respondents who also participate in other surveys to avoid possible duplication of R&D data collection. In addition, the Census Bureau and NSF maintain close liaison and share information with other Government agencies that have an interest in R&D statistics to ensure that duplication of data collection does not occur.

The Survey is the only annual survey measuring total national business R&D spending. The Securities and Exchange Commission (SEC) collects only partial data on R&D expenditures and R&D scientists and engineers employed by U.S. companies on Forms 10-K and 10-Q and these data are not aggregated to a national total. In addition, privately held companies, regulated utilities, transportation companies, and companies with only small amounts of R&D spending do not report R&D expenditures to the SEC.

Occasionally, various interested groups, such as the Aerospace Industries Association, Pharmaceutical Manufacturers Association, and the Industrial Research Institute conduct R&D canvasses of their own members. These studies cannot, however, be used as the basis for national R&D totals, nor do they have the variety of R&D detail necessary for policy decisions. There is, therefore, no other source for the R&D data collected by BRDIS.

# 5. <u>Minimizing Burden</u>

R&D is a rare activity in businesses. Many companies surveyed by BRDIS have no R&D activity. Companies with R&D have a highly skewed distribution with the vast majority of BRDIS R&D estimates coming from

a relatively small number of companies. Rather than send the full 48-page Form BRDI-1 to all companies sampled by BRDIS, NSF and the Census Bureau developed a much less burdensome, 8-page form (Form BRDI-1(S)) to administer to companies with less than \$1 million of R&D.

Companies completing Form BRDI-1(S) report only the most high-level BRDIS data items. Those companies reporting greater than \$1 million of R&D on Form BRDI-1(S) are subsequently mailed Form BRDI-1 to collect additional detail.

Additionally, the sampling methodology is based on selection probabilities that are proportional to a measure of size. The measure of size is R&D costs for companies that are known to perform or fund R&D and is annual payroll for companies with unknown R&D activity. This makes smaller companies less likely to be selected for the sample. More information on the sample design can be found in Part B of the Supporting Statement.

### 6. <u>Consequences of Less Frequent Collection</u>

Users who depend on BRDIS statistics in NSF's annual Business R&D and Innovation detailed statistical tables reports, the National Patterns of R&D Resources reports, and the National Science Board's Science and Engineering Indicators reports require annual updates to create and analyze the size of and trends in the national R&D enterprise. Also, the Department of Commerce's Bureau of Economic Analysis (BEA) has emphasized the crucial importance of an annually updated series for the R&D portion of the National Income and Product Accounts (NIPAs), Industry Economic Accounts (IEAs) and linkages with the BEA Foreign Direct Investment and U.S. Direct Investment Abroad data. Without annual BRDIS data, BEA would be unable to estimate R&D investment and output in its accounts.

#### 7. <u>Special Circumstances</u>

This information collection will be conducted in a manner consistent with OMB guidelines and there are no special circumstances.

#### 8. <u>Consultations Outside the Agency</u>

On June 10, 2015 the Census Bureau published a notice in the Federal Register (Volume 80, No. 111, pages 32932-32933) inviting the general public and other Federal agencies to comment on plans to submit this request. Two letters were received during the 60-day comment period.

The BEA submitted a letter dated July 14, 2015 that strongly supported this data collection. BEA also requested that additional detail be collected on BRDIS related to royalties and licensing fees as well as transactions between U.S. companies and foreign persons. We thank the BEA for its continued support of this program. BEA's proposed changes to BRDIS will be placed on the agenda of future meetings for discussion and consideration by Census and NCSES survey managers.

In a letter dated August 7, 2015, Professor Andrew Reamer at The George Washington Institute of Public Policy expressed support for the BRDIS data collection as an important source of information for determining U.S. competitiveness. Professor Reamer encouraged the Census Bureau and the National Center for Science and Engineering Statistics to consult with federal staff and other experts involved in emerging efforts to measure global value chains and international trade in value-added. We thank Professor Reamer for his statement of support for BRDIS. Professor Reamer's suggestions will be discussed and considered during future meetings between Census and NCSES survey managers.

The Census Bureau and the NSF conduct annual debriefings with respondents to the survey. These debriefings inform the agencies on potential improvements to the survey or survey processes. NSF and the Census Bureau routinely present research findings at various conferences both internal and external.

### 9. <u>Paying Respondents</u>

No payments or gifts are given to respondents of BRDIS.

## 10. <u>Assurance of Confidentiality</u>

The information collected in this survey is confidential under Title 13, United States Code, Section 9. Title 13, United States Code, Sections 224 and 225 make reporting mandatory.

Respondents are informed of the confidentiality of their response and the mandatory nature of the survey in our cover letter (Attachments A1-A3), follow-up letters (Attachments A4-A9), forms (Attachments B and C), Electronic Instrument (Attachment D), and Business Help Site (Attachment E).

## 11. Justification for Sensitive Questions

There are no questions on BRDIS that are commonly considered sensitive. **Estimate of Hour Burden** 

12.

The total annual burden estimate we are requesting for this collection is 126,625 hours.

For the 2015-2017 BRDIS, approximately 7,000 companies will receive Form BRDI-1 (Attachment B) and approximately 38,000 companies will receive Form BRD-1(S) (Attachment C), for a total sample size of approximately 45,000 companies. See Tables A and B for details of the burden estimates. Table B includes BRD-1S respondents who reported greater than \$1 million of R&D that were mailed a BRDI-1 form the same year. Using the average wage rate for a staff level accountant from the BLS website of \$38.48 per hour, the total dollar cost for all respondents annually surveyed will be approximately (126,625 \* 38.48) = \$4,872,530. The average burden per response is developed through discussions with respondents. Additionally, we periodically include a question on the form asking the length of time it took to complete the survey.

Changes to the form - four new questions on foreign R&D, one new question on domestic R&D performed by others and funded by the federal government, and four questions removed on photonics/optics technology focus - apply to a small number of companies surveyed and should not have a substantive effect on burden.

Beginning in 2016, we will mail a pre-survey letter to collect advance information (updates to contact information and company structure updates such as mergers/acquisitions/etc.) from approximately 500 of our largest R&D performers. We estimate this short form (Attachment G) to take respondents 15 minutes to complete. This change will add 125 hours to the total survey burden for 2016 and 2017. This advance letter was not discussed in the Federal Register Notice dated August 7, 2015; it was an oversight.

## Table A: BRDI-1

Type of Respondent	Companies	Burden Estimate	Total Burden Hrs.
Companies that were Out of Business or	500	.5 Hrs.	250
Merged Zero R&D	1,000	.5 Hrs.	500
Companies with R&D Expense and Funded R&D	600	25 Hrs.	15,000
Companies with ONLY Funded R&D	500	18 Hrs.	9,000
Companies with ONLY R&D Expense	4,400	18 Hrs.	79,200
Total	7,000		103,950

Average Burden (rounded) = 15 Hours

# Table B: BRDI-1(S)

Type of Respondent	Companies	Burden	Total Burden
		Estimate	Hrs.
Companies that were	1,200	.5 Hrs.	600
Out of Business or			
Merged			
Zero R&D	30,000	.5 Hrs.	15,000
Companies with R&D	300	1.5 Hrs.	450
Expense and Funded			
R&D			
Companies with ONLY	300	1 Hrs.	300
Funded R&D			
Companies with ONLY	6,200	1 Hrs	6,200
R&D Expense			
Total	38,000		22,550

Average Burden (rounded) = 35 Minutes

# 13. Estimated Cost to Respondents

It is expected that respondents will not incur any cost other than that of their time to respond. The information requested is of the type and scope normally carried in agency records and no special hardware or software is necessary to provide answers to this information collection. Therefore, respondents are not expected to incur any capital and startup costs or systems maintenance cost in responding. Further, purchasing of outside information collection services, if performed by the respondent, is part of usual and customary business practices and not specifically required for this information collection.

# 14. <u>Costs to the Federal Government</u>

We expect the total cost to the Federal Government to be approximately \$5 million per survey year. This cost is expected to be relatively constant for 2015-2017. The U.S. Census Bureau pays 20% of costs and the National Science Foundation pays 80%.

## 15. <u>Reason for Change in Burden</u>

The slight increase in burden is due to the addition of the pre-survey collection.

### 16. <u>Project Schedule</u>

Task	Time Frame
2015 Questionnaire Complete	July 2015
2015 BRDI-1(S) Mail-out (Attachment A2, A11&C –or– A3&A12)	Jan – Feb 2016
2015 BRDI-1 Mail-out (Attachment A1&A10)	Mar 2016
2015 Non-response Follow-up – BRDI-1(S) (Attachment A6 Then A7 Then A8&C)	Mar – Jul 2016
2015 Threshold Mail-out – BRDI-1 mailed to respondents reporting GT \$1 Mil R&D on BRDI-1(S) (Attachment A9&B)	Apr – Oct 2016
2015 Non-response follow-up – BRDI-1 (Attachment A4 Then A5&B)	Jun – Aug 2016
2015 Micro Data Review	Feb – Oct 2016
2015 Macro Data Review	Oct - Dec 2016
2015 Table/Disclosure Review	Jan - Mar 2017
2015 Data Tables Delivered to NSF	Mar – Jun 2017
2016 Questionnaire Complete	July 2016

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2016 Pre-Survey (Attachments A-13 & G)	Dec 2016 – Jan 2017
2016 BRDI-1(S) Mail-out	Jan – Feb 2017
(Attachment A2, A11&C –or– A3&A12)	
2016 BRDI-1 Mail-out (Attachment A1&A10)	Mar 2017
2016 Non-response Follow-up – BRDI-1(S)	Mar – Jul 2017
(Attachment A6 Then A7 Then A8&C)	Mar – Jul 2017
2016 Threshold Mail-out – BRDI-1 mailed to respondents	
reporting GT \$1 Mil R&D on BRDI-1(S)	Apr – Oct 2017
(Attachment A9&B)	
2016 Non-response follow-up – BRDI-1	
(Attachment A4 Then A5&B)	Jun – Aug 2017
2016 Micro Data Review	Feb – Oct 2017
2016 Macro Data Review	Oct - Dec 2017
2016 Table/Disclosure Review	Jan - Mar 2018
2016 Data Tables Delivered to NSF	Mar – Jun 2018
2017 Questionnaire Complete	July 2017
<b>_</b>	July 2017
2017 Pre-Survey (Attachments A-13 & G)	Dec 2017 – Jan 2018
	Dec 2017 – Jan 2018
2017 Pre-Survey (Attachments A-13 & G)	
2017 Pre-Survey (Attachments A-13 & G) 2017 BRDI-1(S) Mail-out	Dec 2017 – Jan 2018
2017 Pre-Survey (Attachments A-13 & G) 2017 BRDI-1(S) Mail-out (Attachment A2, A11&C –or– A3&A12)	Dec 2017 – Jan 2018 Jan – Feb 2018 Mar 2018
2017 Pre-Survey (Attachments A-13 & G) 2017 BRDI-1(S) Mail-out (Attachment A2, A11&C –or– A3&A12) 2017 BRDI-1 Mail-out (Attachment A1&A10)	Dec 2017 – Jan 2018 Jan – Feb 2018
2017 Pre-Survey (Attachments A-13 & G)2017 BRDI-1(S) Mail-out(Attachment A2, A11&C -or- A3&A12)2017 BRDI-1 Mail-out (Attachment A1&A10)2017 Non-response Follow-up - BRDI-1(S)	Dec 2017 – Jan 2018 Jan – Feb 2018 Mar 2018
2017 Pre-Survey (Attachments A-13 & G)2017 BRDI-1(S) Mail-out(Attachment A2, A11&C -or- A3&A12)2017 BRDI-1 Mail-out (Attachment A1&A10)2017 Non-response Follow-up - BRDI-1(S)(Attachment A6 Then A7 Then A8&C)	Dec 2017 – Jan 2018 Jan – Feb 2018 Mar 2018
2017 Pre-Survey (Attachments A-13 & G)2017 BRDI-1(S) Mail-out (Attachment A2, A11&C -or- A3&A12)2017 BRDI-1 Mail-out (Attachment A1&A10)2017 Non-response Follow-up - BRDI-1(S) (Attachment A6 Then A7 Then A8&C)2017 Threshold Mail-out - BRDI-1 mailed to respondents	Dec 2017 – Jan 2018 Jan – Feb 2018 Mar 2018 Mar – Jul 2018
2017 Pre-Survey (Attachments A-13 & G) 2017 BRDI-1(S) Mail-out (Attachment A2, A11&C -or- A3&A12) 2017 BRDI-1 Mail-out (Attachment A1&A10) 2017 Non-response Follow-up – BRDI-1(S) (Attachment A6 Then A7 Then A8&C) 2017 Threshold Mail-out – BRDI-1 mailed to respondents reporting GT \$1 Mil R&D on BRDI-1(S)	Dec 2017 - Jan 2018 Jan - Feb 2018 Mar 2018 Mar - Jul 2018 Apr - Oct 2018
2017 Pre-Survey (Attachments A-13 & G) 2017 BRDI-1(S) Mail-out (Attachment A2, A11&C -or- A3&A12) 2017 BRDI-1 Mail-out (Attachment A1&A10) 2017 Non-response Follow-up – BRDI-1(S) (Attachment A6 Then A7 Then A8&C) 2017 Threshold Mail-out – BRDI-1 mailed to respondents reporting GT \$1 Mil R&D on BRDI-1(S) (Attachment A9&B)	Dec 2017 – Jan 2018 Jan – Feb 2018 Mar 2018 Mar – Jul 2018
2017 Pre-Survey (Attachments A-13 & G) 2017 BRDI-1(S) Mail-out (Attachment A2, A11&C -or- A3&A12) 2017 BRDI-1 Mail-out (Attachment A1&A10) 2017 Non-response Follow-up – BRDI-1(S) (Attachment A6 Then A7 Then A8&C) 2017 Threshold Mail-out – BRDI-1 mailed to respondents reporting GT \$1 Mil R&D on BRDI-1(S) (Attachment A9&B) 2017 Non-response follow-up – BRDI-1	Dec 2017 - Jan 2018 Jan - Feb 2018 Mar 2018 Mar - Jul 2018 Apr - Oct 2018
2017 Pre-Survey (Attachments A-13 & G) 2017 BRDI-1(S) Mail-out (Attachment A2, A11&C -or- A3&A12) 2017 BRDI-1 Mail-out (Attachment A1&A10) 2017 Non-response Follow-up – BRDI-1(S) (Attachment A6 Then A7 Then A8&C) 2017 Threshold Mail-out – BRDI-1 mailed to respondents reporting GT \$1 Mil R&D on BRDI-1(S) (Attachment A9&B) 2017 Non-response follow-up – BRDI-1 (Attachment A4 Then A5&B)	Dec 2017 - Jan 2018 Jan - Feb 2018 Mar 2018 Mar - Jul 2018 Apr - Oct 2018 Jun - Aug 2018
2017 Pre-Survey (Attachments A-13 & G) 2017 BRDI-1(S) Mail-out (Attachment A2, A11&C -or- A3&A12) 2017 BRDI-1 Mail-out (Attachment A1&A10) 2017 Non-response Follow-up – BRDI-1(S) (Attachment A6 Then A7 Then A8&C) 2017 Threshold Mail-out – BRDI-1 mailed to respondents reporting GT \$1 Mil R&D on BRDI-1(S) (Attachment A9&B) 2017 Non-response follow-up – BRDI-1 (Attachment A4 Then A5&B) 2017 Micro Data Review	Dec 2017 – Jan 2018 Jan – Feb 2018 Mar 2018 Mar – Jul 2018 Apr – Oct 2018 Jun – Aug 2018 Feb – Oct 2018
2017 Pre-Survey (Attachments A-13 & G) 2017 BRDI-1(S) Mail-out (Attachment A2, A11&C -or- A3&A12) 2017 BRDI-1 Mail-out (Attachment A1&A10) 2017 Non-response Follow-up – BRDI-1(S) (Attachment A6 Then A7 Then A8&C) 2017 Threshold Mail-out – BRDI-1 mailed to respondents reporting GT \$1 Mil R&D on BRDI-1(S) (Attachment A9&B) 2017 Non-response follow-up – BRDI-1 (Attachment A4 Then A5&B) 2017 Micro Data Review 2017 Macro Data Review	Dec 2017 – Jan 2018 Jan – Feb 2018 Mar 2018 Mar – Jul 2018 Apr – Oct 2018 Jun – Aug 2018 Feb – Oct 2018 Oct - Dec 2018

# 17. <u>Request to Not Display the Expiration Date</u>

The expiration date of OMB approval will be displayed on questionnaires.

# 18. <u>Exceptions to the Certification</u>

The collection of information for BRDIS complies with 5 CFR 1320.9 without exception.