

Supporting Statement A

Study on Uranium and other trace metals in Bedrock Wells in South-East New Hampshire (NHWELL)

OMB Control Number: 1028-NEW

General Instructions

A completed Supporting Statement A must accompany each request for approval of a collection of information. The Supporting Statement must be prepared in the format described below, and must contain the information specified below. If an item is not applicable, provide a brief explanation. When the question “Does this ICR contain surveys, censuses, or employ statistical methods?” is checked "Yes," then a Supporting Statement B must be completed. OMB reserves the right to require the submission of additional information with respect to any request for approval.

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.

The U.S. Geological Survey (USGS) and the U.S. Environmental Protection Agency (USEPA) are conducting the study with assistance of staff from the USEPA New England Regional Laboratory in Chelmsford, Massachusetts to assess:

- The number of private wells containing raw-water concentrations of uranium and other trace metals that are greater than the current drinking water standards
- The degree to which bedrock units can be associated with concentrations of uranium and other trace metals.

The mission of the USGS New Hampshire - Vermont Water Science Center is to provide the hydrologic information and understanding necessary for the management and use of the Nation's water resources. The WSC fulfills this mission by: (1) Systematically collecting surface-water, ground-water, water-quality and biological data; (2) Conducting interpretive water-resources studies that respond to cooperator and national needs; (3) Developing innovative scientific approaches to various environmental processes and problems to improve our understanding of hydrologic systems; (4) Publishing water data and results of investigations in high-quality reports and (5) Assisting other governmental agencies and the public to understand hydrologic information relevant to the policies and management practices that affect the Nation's water resources.

The authority for this program is mandated by the Water Resources Research Act of 1984 (Public Law 98-242, Dated March 1984) as amended (42USC1031 et seq.), authorizes water research in each state and territory to:

"plan, conduct, or otherwise arrange for competent research that fosters (A) the entry of new research scientists into the water resources fields, (B) the

training and education of future water scientists, engineers, and technicians, (C) the preliminary exploration of new ideas that address water problems or expand understanding of water and water related phenomena, and (D) the dissemination of research results to water managers and the public”

and

"cooperate closely with other colleges and universities in the State that have demonstrated capabilities for research, information dissemination, and graduate training in order to develop a statewide program designed to resolve State and regional water and related land problems."

Source: Public Law 98-242 - http://water.usgs.gov/wrri/WRRA_of_1984_as_amended.pdf [Date retrieved: July 18, 2011]

- 2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection. Be specific. If this collection is a form or a questionnaire, every question needs to be justified.**

Researchers in the USGS will use the information collected from this study to determine the correlations between concentrations of uranium and other trace metals in south-east New Hampshire bedrock wells and surrounding geology. This information will help guide future water-supply development and well-water testing. It will tell local health officials where the areas of concern are in their communities, and provide background concentrations by rock type for use in identifying contamination from human sources.

The questions are grouped into three parts.

PART 1 - Water sources and supplies

This information will help us to understand/determine which water source was used for sample collection and what problems, if any, the owner has with the source. In addition we will learn the water use associated with the source.

PART 2 - Well water sampling and instructions

The respondents will use this information to collect the water sample on site. We will provide detailed instructions outlining the same methods and techniques used by USGS scientists.

PART 3 - Location and time of water sample

This information will identify the sampling location for the water sample and the location code and time of sample will be the unique identifier of each sample. We will provide detailed instructions outlining the same methods and techniques used by USGS scientists.

There will be a request that will be used to solicit the respondents' willingness to participate in a potential follow-up study.

- 3. Describe whether, and to what extent, the collection of information involves the use of**

automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden and specifically how this collection meets GPEA requirements.

This information collection does not intend to use automatic or any other electronic collection methods. A paper copy of the collection instrument and the water sampling containers will be mailed from and returned to the project leader.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

A similar study was conducted in 2009 by the USGS in Massachusetts (OMB Control Number 1028-0086). This study will use the same methods and techniques to collect the water samples. There are no other federal agencies in south-east New Hampshire authorized to collect this type of information. No duplication will occur.

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

We have made efforts to keep the amount of information requested to a minimum for all of our respondents. This request for information is limited to individual households using a well system and it will not affect small businesses or other small entities.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

Failure to collect this information would mean that the occurrence and distribution of uranium and other trace metals in bedrock wells would remain unknown in south-east New Hampshire. This would decrease the ability to select contaminant-free water supplies in the future. Mapping water quality in bedrock aquifers is within the mission of the Water Resources Division of the USGS.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- * **Requiring respondents to report information to the agency more often than quarterly;**
- * **requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- * **requiring respondents to submit more than an original and two copies of any document;**
- * **requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;**
- * **in connection with a statistical survey that is not designed to produce valid and reliable results that can be generalized to the universe of study;**

- * **requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
- * **that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
- * **requiring respondents to submit proprietary trade secrets, or other confidential information, unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law**

This request contains no special circumstances that would require this information collection to be conducted in a manner that is inconsistent with OMB guidelines. Additionally, this collection does not include a pledge of confidentiality. Finally, this collection does not require proprietary, trade secret, or other confidential information not protected by agency procedures.

- 8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and in response to the PRA statement associated with the collection over the past three years, and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.**

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every three years — even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

On August 9, 2011 (76 FR 48882), we solicited public comments for 60 days, ending on October 11, 2011. We did not receive any comments in response to this notice.

We solicited comments from other researchers and survey developers about clarity of instruction, the number and types of questions asked and the length and intended use of the questionnaire. The respondents said that the instructions were clearly written. The peer-reviewers estimated the burden for this collection to be approximately 10 minutes to take the survey and 10 minutes to locate and collect the water needed for the sample. The total estimate is 20 minutes. The people we contacted are listed in Table 1 below.

Table 1. Individuals Contacted Outside the Agency

| Individuals | Contact information |
|-------------|---------------------|
|-------------|---------------------|

| | |
|----------------|---|
| Paul Susca | New Hampshire Department of Environmental Services Drinking Water and Groundwater Bureau 603 271-7061 Paul.Susca@des.nh.gov |
| David Gordon | New Hampshire Department of Environmental Services Environmental Health Program 603 271-4608 David.Gordon@des.nh.gov |
| Rosemary Caron | University of New Hampshire Department of Health Management and Policy 603 862-3653 Rosemary.Caron@unh.edu |
| Brandon Kernen | New Hampshire Department of Environmental Services Drinking Water and Groundwater Bureau 603 271-0660 Brandon.Kernen@des.nh.gov |
| Paul Wintrob | Communications and Information Unit EPA New England 617 918-1514 Paul.Wintrob@epamail.epa.gov |

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

No payments or gifts are given to respondents. However, the results will be provided to the respondents at the end of the study.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

No assurance of confidentiality is given to participants.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

The collection does not include sensitive questions.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- * **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**
- * **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.**
- * **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included under “Annual Cost to Federal Government.”**

Our estimates are based on the outreach described in item 8. We expect to receive approximately 350 responses, taking each respondent approximately 20 minutes to complete the survey and sample collection, totaling 117 burden hours. We anticipate that it will take approximately 10 minutes to take the survey and 10 minutes to locate and collect the water needed for the sample. Therefore, the total annual burden for this collection will be 117 hours.

We estimate the total dollar value of the annual burden hours for this collection to be \$4,563. This estimate is based on a \$28.10 per hour for private industry workers. This wage figure in the table below includes the multiplier of 1.4 to account for benefits and is based on the National Compensation Survey: Occupational Wages in the United States published by the Bureau of Labor Statistics (BLS) Occupation and Wages, (BLS news release USDL-11-0849) for Employer Costs for Employee Compensation—March 2011 (accessed on July 8, 2011 at <http://www.bls.gov/news.release/pdf/ecec.pdf>).

The particular values utilized are:

- Individuals. Average hourly wage is \$28.10 multiplied by 1.4 to account for benefits (\$39.34).

Table 2. Estimated Dollar Value of Annual Burden Hours

| Description of Respondents | Number of annual Responses | Estimated Completion Time per Response (minutes) | Total Annual Burden Hours | Hourly Pay Rate (\$/hr est.) | Hourly Rate Including Benefits (1.4 x hourly pay rate) | Total Dollar Value of Annual Burden Hours* |
|----------------------------|----------------------------|--|---------------------------|------------------------------|--|--|
| Individuals/ Households | 350 | 20 | 117 | \$28.10 | \$39.34 | \$4,603 |

13. Provide an estimate of the total annual non-hour cost burden to respondents or record-keepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected in item 12.)

*** The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life) and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information (including filing fees paid for form processing). Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**

*** If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**

*** Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government or (4) as part of customary and usual business or private practices.**

There is no non-hour cost burden for respondents under this collection. The return postage and the sampling collection kits will be provided by the USGS.

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information.

The total estimated cost to the Federal Government for processing and reviewing information received as a result of this collection is \$58,237 (see Table 4 & 5 below). Table 4 below shows Federal staff and grade levels performing various tasks associated with this information collection. We used the Office of Personnel Management Salary Table 2011-DCB (http://www.opm.gov/oca/11tables/pdf/dcb_h.pdf) to determine the hourly rate. We multiplied the hourly rate by 1.5 to account for benefits (as implied by the BLS news release USDL-10-10-0774). The total estimated cost to the federal government for preparing water-collection kits and for shipping these kits to the homeowner, including return postage is shown in table 5. We estimate it will cost about \$2,400 for the USGS to purchase the kits and cost about \$2,000 to ship the individual kits to the homeowners and pay the shipping costs of the returned bottles. An extra 50 water sampling kits will be acquired to account for damage or lost kits during mailing.

Table 4. Annual Cost to the Federal Government

| Federal Position | Grade/ Step | Hourly Rate | Hourly Rate incl. benefits (1.5 x hourly pay rate) | Estimated time spent by Federal Employees (annualized hours) | Estimated Federal employee salary/benefit annualized costs |
|-------------------------|--------------------|--------------------|---|---|---|
| Hydrologist | 13/5 | \$48.35 | \$72.53 | 120 | \$8,704 |
| Hydrologist | 12/7 | \$43.23 | \$60.99 | 740 | \$45,133 |
| | | | | | \$53,837 |

Table 5. Annual cost for supplies and postage

| Overhead | Unit | Cost Per Unit | Estimated Costs |
|----------------------------|-------------|----------------------|------------------------|
| Postage | 400 | 5.00 | \$2,000 |
| Water Sampling Kits | 400 | 6.00 | \$2,400 |
| | | Total | \$4,400 |

15. Explain the reasons for any program changes or adjustments in hour or cost burden.

This is a new collection.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

The first step will be to assemble a database of owner names from the list of selected wells, to be done from November - December 2011. The second step will be to mail the sample packets to the well owners from January – May 2012. The homeowners will then ship the samples back to the USGS during the period February – June 2012. The shipped samples will be processed by the USGS and then delivered to the USEPA Water Laboratory in Chelmsford, MA for analysis of selected trace metals (arsenic, iron, lead, manganese, and uranium). The water-quality results for these trace metals will be reviewed by the USGS during February – July 2012. The trace metal data will be analyzed to determine if significant relations occur between their concentrations and bedrock geology and land-use near the well. The results of this analysis will

be published online as a USGS Scientific Investigations Report by May, 2013. The results will be used by the USGS Water Resources Division and the New Hampshire Department of Environmental Sciences for future water management planning. We will send an executive summary of the Scientific Investigations report to the survey to each respondent. Finally, the full report will be available on the public USGS Water Resources website.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate

We are not seeking approval to not display the expiration date for OMB approval of the information collection. We will display the expiration date on the form.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

There are no exceptions to the certification statement.