

U.S. Environmental Protection Agency

Information Collection Request

Title: RadNet (Renewal)

OMB Control Number: 2060-0015

EPA ICR Number: 0877.15

Abstract: RadNet in this ICR refers to EPA's national environmental radiation monitoring network. The objectives of RadNet are to provide a means of estimating ambient levels of radioactive pollutants in our environment, to follow trends in environmental radioactivity levels, and to detect and assess the impact of fallout and other intrusions of radioactive materials. Data generated from EPA's RadNet have been and are being used to provide the information base for making decisions necessary to ensure the protection of public health. The system enables EPA to determine if additional sampling or other actions are required in particular cases of radioactive releases to the environment, and, where necessary, RadNet can provide ancillary information on population exposure, radiation trends, and other aspects of such releases.

The RadNet network is used to collect air particulate, precipitation, and drinking water samples. RadNet air particulate monitors are capable of measuring radiation from the filter in real-time, sending the data hourly to EPA. The data from analysis of these samples constitute the nation's single major source of environmental radiation data. The component sampling locations are distributed throughout the United States and cover each geographical region, individual states, and most major population centers. Beginning in July 2016, EPA began adding exposure rate measurement to the real-time RadNet air monitors. Exposure rate data provide useful information to the public and general scientists concerning gamma radiation in the environment.

Respondents send samples to NAREL for radiochemical analyses. To ensure that the data generated at NAREL are of known quality, a quality assurance plan (available upon request) is followed during all phases of sample collection and analysis activities.

The utility of RadNet data is evidenced by its extensive use by a number of federal, state and commercial entities. DOE's National Laboratories (including Oak Ridge, Savannah River, Brookhaven, and Argonne) and many universities across the country utilize the data generated by the operation of the RadNet network. RadNet data are also used by the Nuclear Regulatory Commission (NRC) and NRC licensed nuclear power plants and their environmental contractors to establish background data. These data are used by some power plant operators as a baseline to ensure compliance with NRC release limits. The states also use RadNet data to supplement or compare with environmental radiation information generated by their own programs. RadNet data are also available to the public via the EPA website.

Data from this program have been used to measure fallout following atmospheric nuclear weapon tests until 1980, when atmospheric testing of nuclear weapons ceased. During and following the accident at Three Mile Island in 1979, RadNet stations in the adjacent states demonstrated to the public that there were no radioactive materials in their areas as a result of the accident. Increased monitoring following the nuclear incident at Chernobyl in 1986 provided daily reports of atmospheric concentrations of

radionuclides across the United States. Most recently, RadNet was the largest source of radiological data in the U.S. following the Fukushima reactor accidents in 2011. RadNet data are used during responses to smaller events such as the ruthenium-106 detections in Europe in 2017 and the reported detections of man-made radionuclides in the atmosphere in northern Europe in mid-June 2020.

Supporting Statement A

1. NEED AND AUTHORITY FOR THE COLLECTION

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

The legal basis of RadNet originated and resides in Executive Order 10831 and Public Law 86-373. Executive order 10831 was announced to the public on July 31, 1959, and issued August 4, 1959. This order came in response to recommendations contained in a memorandum to the President from Elmer B. Staats on July 31, 1959. As reiterated before the Joint Committee on Atomic Energy by Maurice H. Stans, these recommendations also became a part of the legislative history of the 1959 amendments to the Atomic Energy Act. Radioactive fallout and environmental radiation monitoring became a responsibility of the Department of Health, Education and Welfare (HEW) under these legal mandates. In 1970, Reorganization Plan No. 3 transferred HEW's fallout and radioactive monitoring responsibilities to the Environmental Protection Agency (EPA). On July 1, 1973, through its Office of Radiation Programs (ORP), EPA developed and implemented a new continuous monitoring system. This system, originally called the Environmental Radiation Ambient Monitoring System and now called RadNet, was designed to complete and complement the monitoring system previously instituted by HEW's Public Health Service under Executive Order 10831.

The objectives of RadNet are to provide a means of estimating ambient levels of radioactive pollutants in our environment, to follow trends in environmental radioactivity levels, and to assess the impact of fallout and other intrusions of radioactive materials. Data generated from EPA's RadNet have been and are being used to provide the information base for making decisions necessary to ensure the protection of public health. The system enables EPA to determine if additional sampling or other actions are required in particular cases of radioactive releases to the environment, and, where necessary, RadNet can provide ancillary information on population exposure, radiation trends, and other aspects of such releases.

2. PRACTICAL UTILITY/USERS OF THE DATA

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.

Data generated by RadNet are used to provide a means of estimating ambient levels of radioactive pollutants in our environment, to follow trends in environmental radioactivity levels, and to detect and assess the impact of fallout and other intrusions of radioactive materials. Data generated from EPA's RadNet have been and are being used to provide the information base for making decisions necessary to ensure the protection of public health. The system enables EPA to determine if additional sampling or other actions are required in particular cases of radioactive releases to the environment and, where necessary, RadNet can provide ancillary information on population exposure, radiation trends, and other aspects of such releases.

The utility of the RadNet data is evidenced by its extensive use by a number of federal, state and commercial entities. DOE's national Laboratories (including Oak Ridge, Savannah River, Brookhaven, and Argonne) and many universities across the country utilize the data generated by the operation of the RadNet network. RadNet data are also used by the Nuclear Regulatory Commission and NRC licensed nuclear power plant operators and their environmental contractors to establish background data. These data are used by some power plant operators as a baseline to ensure compliance with NRC release limits. The states also use RadNet data to supplement or compare with environmental radiation information generated by their own programs.

Data from this program have been used to measure fallout following atmospheric nuclear weapon tests until 1980, when atmospheric testing of nuclear weapons ceased. During and following the accident at Three Mile Island, RadNet stations in the adjacent states demonstrated to the public that there were no radioactive materials in their areas as a result of the accident. Increased monitoring following the nuclear incident at Chernobyl in 1986 provided daily reports of atmospheric concentrations of radionuclides across the United States. RadNet was the largest source of radiological data following the Fukushima reactor accidents in 2011. Most recently, the RadNet air monitoring program responded to detections of ruthenium-106 in Europe in 2017 and the reported detections of man-made radionuclides in the atmosphere in northern Europe in mid-June 2020. RadNet continuously monitors the nation's air for abnormalities.

3. USE OF TECHNOLOGY

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.

The RadNet network involves the collection of a variety of samples including air filters, drinking water, and precipitation samples. Standard Operating Procedures (available upon request) contain the detailed procedures used to ensure uniform collection of the samples and the standard forms filled out by the respondents when they collect the samples. The forms were designed to minimize the burden on the respondents. In most cases only the date of sampling, location of sampling, and the name of the individual taking the sample are required. Since most samples are taken in the field, an electronic means of recording and sending this information is not feasible. To ensure that the sample collection information accompanies the correct sample, the sample and the information need to be sent together. This is best accomplished by including the one-page form with each sample when it is sent to the NAREL.

When the samples and accompanying forms arrive at NAREL, the samples are assigned an identification number. This number and information from the accompanying forms are entered into the NAREL database. The samples are then analyzed for a variety of radionuclides. Data from the analyses performed at NAREL are also entered into the database. The data are available to the public online at the EPA website www.epa.gov/radnet. When necessitated by unique circumstances, data from the RadNet network can be made available daily. The data are verified by at least two individuals at NAREL. To ensure that the data are accurate and reliable, all activities associated with the RadNet network must

conform to the Quality Assurance Manuals, which detail the data quality objectives, project organization and responsibility, internal quality control checks, and other areas relating to quality assurance.

4. EFFORTS TO IDENTIFY DUPLICATION

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.

RadNet has been in operation for over 50 years. During that time, data derived from the system have been disseminated nationally and internationally. The professional/information network developed over the life of RadNet has identified other environmental radiation data systems in the United States, but none have RadNet's national scope or exact collection and analytical structure. This was highlighted during the months following the nuclear reactor accidents in Fukushima, Japan as well as in response to detections of man-made radionuclides in Europe in 2017 and 2020.

Immediately following the accident at Chernobyl in 1986 in the former Soviet Union, the President's order charged EPA with lead responsibility for monitoring possible environmental effects in the United States. It was the unique nationwide monitoring capability of RadNet that helped EPA respond to that Presidential Order. Similarly, during the nine-year EPA follow-up monitoring of the accident at Three Mile Island, RadNet was called upon because of its unique national scope and analytical structure and capability.

5. MINIMIZING BURDEN ON SMALL BUSINESSES AND SMALL ENTITIES

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

This section is not applicable because most respondents are state agencies.

6. CONSEQUENCES OF LESS FREQUENT COLLECTION

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.

Alternate, less frequent collection intervals have been considered but not adopted because these would not provide the continuous current "picture" of the radiation levels across the United States now available with the current system. Less frequent collection would impact RadNet several ways including drastically reducing the ability to determine and respond to elevated radiation levels soon after they occur, decreasing the ability to map trends in radiation data, and reducing data availability significantly.

7. GENERAL GUIDELINES

Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

The respondents are requested to supply precipitation samples and air filters and accompanying forms more often than on a quarterly basis. This is done so that elevated levels of radiation will be detected as soon as possible so as to allow for the quickest response possible to potential health threats.

The respondents submit sample collection information on a one-page form that accompanies the sample to the NAREL. Since most samples are collected in the field, electronic means of recording or sending the information are not feasible. In addition, to avoid assigning incorrect sampling information to a sample, the sample and sampling information need to be linked when they are sent to the lab. The most effective means to do this is to attach a form with the information to the sample.

Respondents only submit the original form and are not requested to maintain any records themselves.

8. PUBLIC COMMENT AND CONSULTATIONS

8a. Public Comment

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 describe actions taken by the Agency in response to these comments. Specifically address comments received on cost and hour burden.

The first Federal Register (FR) notice was published June 19, 2023. No public comments were received. The second Federal Register (FR) notice will be completed and published by 11/30/2023.

8b. Consultations

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 3 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.

The National Analytical Radiation Environmental Laboratory (NAREL) is involved in telephone and written communication with the respondents who supply the samples. In addition, NAREL is an active participant in the Council of Radiation Control Program Directors (CRCPD), which is an association of state radiation protection directors and staff from all fifty states. These individuals and their associates make up a significant number of routine RadNet data users. NAREL's participation in this association allows for frequent consultations on a variety of issues involving RadNet with many RadNet data users. Comments from federal and state agencies and other organizations concerning RadNet are welcomed and are noted at NAREL.

9. PAYMENTS OR GIFTS TO RESPONDENTS

Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

No payment for collectors was considered but EPA provides collectors with tools to assist in collection of the sample and associated information, such as clipboards to make recording information easier in the field.

10. ASSURANCE OF CONFIDENTIALITY

Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or Agency policy. If the collection requires a systems of records notice (SORN) or privacy impact assessment (PIA), those should be cited and described here.

The section on confidentiality and sensitive questions does not apply to RadNet. The respondents do not supply confidential or sensitive information.

11. JUSTIFICATION FOR SENSITIVE QUESTIONS

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 section on confidentiality and sensitive questions does not apply to RadNet. The respondents do not supply confidential or sensitive information.

12. RESPONDENT BURDEN HOURS & LABOR COSTS

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. 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 the 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 as O&M costs under non-labor costs covered under question 13.*
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12a. Respondents/NAICS Codes

All fifty states, primarily Public Health Departments (NAICS Code 92312), send samples along with one page sample collection forms to NAREL. The respondents were chosen for two basic reasons: most of them routinely collect samples of this type as part of their normal activities, and in order to obtain meaningful information concerning ambient radiation levels for the entire United States, samples must be collected from as many parts of the country as feasible.

12b. Information Requested

Respondents provide actual samples of air, precipitation, and drinking water. Respondents provide descriptive information about their samples on one page forms (see Attachment). The respondents are not requested or required to maintain records. Since the forms, as shown in the attachment, have had only very minor changes over time, expiration dates are not included on them.

12c. Respondent Activities

RadNet respondents perform the following tasks in order to provide samples to NAREL:

- Read instructions concerning the sampling process
- Collect samples in appropriate containers
- Mail/ship samples to NAREL in Montgomery, Alabama
- Complete description forms regarding samples

Most respondents are employees of state or local health agencies and may routinely perform sampling of their own that is analogous to RadNet sampling.

Listed below are the requested sample collection frequencies that require completion of sample collection forms.

<u>Sample</u>	<u>Requested Collection Frequency</u>
Drinking water	Quarterly
Precipitation	As measurable precipitation occurs
Air filters	Two times per week *

* Many variables including site-specific conditions may preclude predicting a specific number of filters changed by a respondent weekly. For example, operator safety may be compromised by construction or severe weather, which may preclude routine air sample collection. Reduced operator availability may cause reduced filter change frequency if an operator's non-volunteer job duties increase, or if frequency of their visits to a RadNet site decreases, such as may occur with sites at remote locations generally visited in conjunction with non-volunteer job duties. The RadNet Quality Assurance Project Plan contains a detailed discussion of these conditions. It is important to recognize that these variations do not affect the quality of the results of the analyses.

In the rare case of an emergency, such as Three Mile Island, Chernobyl, or Fukushima, EPA may request an increased sample collection frequency.

12d. Respondent Burden Hours and Labor Costs

Total individual respondent burden for RadNet is estimated to be 3,640 hours annually. This 2.2 percent reduction in burden from 3,722 hours annually indicates that the RadNet network is fully established and operating with essentially no changes expected with the exception of the loss of 30% of the drinking water sampling locations during the COVID-19 pandemic. EPA continues to look for ways to reduce operator burden.

Burden hour estimates are based primarily on sample collection times tested by NAREL personnel and informal telephone conversations with respondents over the years. Additional information used in estimating burden hours was obtained through discussions of NAREL personnel with personnel from state radiation departments at Council of Radiation Control Program Directors (CRCPD) meetings. Discussions with respondents and RadNet management revealed that the technical labor category is the most appropriate one for all RadNet burden activities.

Although the respondent burden assumes 213 total sampling locations, there can be times when the actual number of stations reporting is less than that, mainly due to unexpected nonparticipation by some station operators. However, participation is not anticipated to decrease by more than 5 percent in any single year.

Total respondent cost for RadNet is estimated to be about \$159,395 annually. This represents an 8.6 percent increase in cost from \$146,759 annually, even though there are fewer respondents, is caused by increasing the hourly salary estimate for the respondents as discussed in the next paragraph.

Informal conversations and discussions with respondents and RadNet management have revealed that the technical labor category is the correct one for all RadNet respondent burden activities. Since the hourly wages of the respondents depend on years of employment and the pay scales of their respective states, an actual average hourly wage would require obtaining confidential information from the respondents. Based on our informal discussions with respondents and RadNet managers, the hourly rate at the GS-9(1) level, 43.79 dollars/hour (\$27.37 per hour times a 1.6 overhead multiplication factor, based upon OPM salary tables for “rest of U.S.” effective April 2023 as displayed at https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2023/RUS_h.pdf, is a good approximation of the respondents’ hourly wage for this technical labor category.

The respondents are not asked or required to keep records, and all supplies and materials relating to RadNet activities are provided by the NAREL at no cost to the respondents.

13. RESPONDENT CAPITAL AND O&M COSTS

Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected on the burden worksheet).

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 consider costs associated with generating, maintaining, and disclosing or providing the information. 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 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 collections services should be a part of this cost burden estimate.

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 are no capital costs for sample collectors (respondents). All equipment and materials are supplied by NAREL.

14. AGENCY COSTS

Provide estimates of annualized costs 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.

14a. Agency Activities

The following functions are EPA's inventory of Agency activities:

- Maintain a master database
- Answer respondent questions
- Coordinate respondent sample submissions
- Maintain records of sample submissions
- Publish and disseminate data from sample analyses
- Analyze samples submitted by respondents
- Prepare and send sampling supplies
- Provide maintenance and or replacements for sampling instruments

14b. Agency Labor Cost

Our agency burden estimates are based on our years of experience in operating the RadNet network. Since the activities for the operation of RadNet involve workers at various GS levels, we used composite burden hours and calculated hourly costs at the GS-13 level (step 1) times 1.6 (the overhead multiplication factor) to be 75.52 dollars/hour.

The estimated agency burden remains 27,672 hours as in the previous ICR because operations are essentially constant. The 10.9% estimated increase in agency personnel cost from \$1,831,176 to \$2,031,271 annually reflects updated civil service salaries to 2023 levels. The estimate of hours and cost of agency personnel devoted to RadNet are shown in Table 2.

14c. Agency Non-Labor Costs

Additionally, the EPA estimates the cost for supplies for the RadNet program to be \$77,700 annually. This 11.0% increase in supplies cost from \$70,000 to \$77,700 reflects increased costs of supplies. Finally, the Agency estimates the capital costs to increase from \$462,300 to about \$513,153 due to increased costs. Hence, the total burden for capital costs on the agency is \$590,853, as shown in Table 3.

15) REASONS FOR CHANGE IN BURDEN

Explain the reasons for any program changes or adjustments reported in the burden or capital/O&M cost estimates.

Total respondent burden remains essentially unchanged, with exception of fewer respondents due to the COVID-19 pandemic. Otherwise, the system has been operating steadily with minimal changes for the past six years. EPA will continue to look for ways to reduce burden while maintaining an effective monitoring program.

16) PUBLICATION OF DATA

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.

Portions of the collection information (sample collection date and time) are published monthly on the EPA's RadNet internet site, www.epa.gov/radnet. There are no complex analytical techniques used in the tabulation of the data. The project has been ongoing for over 45 years and is expected to continue throughout the period of this ICR.

17) DISPLAY OF EXPIRATION DATE

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

Approval to not display the expiration date for OMB approval is not being sought.

18) CERTIFICATION STATEMENT

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

There are no exceptions to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

