

**SUPPORTING STATEMENT FOR THE
INFORMATION COLLECTION REQUIREMENTS IN
THE INORGANIC ARSENIC STANDARD (29 CFR 1910.1018)¹
(OFFICE OF MANAGEMENT AND BUDGET (OMB)
CONTROL NO. 1218-0104) (December 2011)**

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

The Occupational Safety and Health Act's (OSH Act) main objective is to ". . . assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources" (29 U.S.C. 651). To achieve this objective, the OSH Act authorizes "the development and promulgation of occupational safety and health standards" (29 U.S.C. 651). The OSH Act specifically authorizes information collection by employers as "necessary or appropriate for the enforcement of the Act or for developing information regarding the causes and prevention of occupational accidents and illnesses" (29 U.S.C. 657).

For toxic substances, the OSH Act contains specific statutory language. Thus, as appropriate, health standards must include provisions for monitoring and measuring employee exposure, medical examinations and other tests, control and technological procedures, suitable protective equipment, labels and other appropriate forms of warning, and precautions for safe use or exposure (29 U.S.C. 655 and 657). In this regard, the OSH Act mandates "regulations requiring employers to maintain accurate records of employee exposure to potentially toxic materials or other harmful physical agents which are required to be monitored and measured," and further requires that employers notify employees exposed to concentrations over prescribed limits of this fact, and of the corrective actions they are taking (29 U.S.C. 657).

Under the authority granted by the OSH Act, the Occupational Safety and Health Administration (OSHA) published a health standard governing employee exposure to inorganic arsenic (IA) (29 CFR 1910.1018).² The purpose of the Inorganic Arsenic Standard ("IA Standard" or "Standard") is to reduce the incidence of lung cancer caused among employees exposed to IA. The Standard affects primarily copper smelters and some chemical facilities. The specific information collection requirements of the Standard are fully discussed under items 2 and 12 below.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection,

¹The purpose of this Supporting Statement is to analyze and describe the burden hours and costs associated with provisions of this Standard that contain paperwork requirements; it does not provide information or guidance on how to comply with, or how to enforce the Standard.

²29 CFR 1910.1018 is incorporated by reference into the Construction and Shipyard Employment standards (29 CFR 1926.1118 and 1915.1018, respectively).

indicate the actual use the agency has made of the information received from the current collection.

A. Exposure monitoring (§1910.1018(e))

General §1910.1018(e)(1)(i) - Determinations of airborne exposure levels shall be made from air samples that are representative of each employee's exposure to inorganic arsenic over an eight (8) hour period.

§1910.1018(e)(1)(ii) - For the purposes of this section, employee exposure is that exposure which would occur if the employee were not using a respirator.

§1910.1018(e)(1)(iii) - The employer shall collect full shift (for at least 7 continuous hours) personal samples including at least one sample for each shift for each job classification in each work area.

Initial monitoring §1910.1018(e)(2) - Each employer who has a workplace or work operation covered by this Standard shall monitor each such workplace and work operation to accurately determine the airborne concentration of inorganic arsenic to which employees may be exposed.

Periodic Monitoring §1910.1018(e)(3)(i) - If the initial monitoring reveals employee exposure to be below the action level the measurements need not be repeated except as otherwise provided in paragraph (e)(4) of this section.

§1910.1018(e)(3)(ii) - If the initial monitoring, required by this section, or subsequent monitoring reveals employee exposure to be above the permissible exposure limit, the employer shall repeat monitoring at least quarterly.

§1910.1018(e)(3)(iii) - If the initial monitoring, required by this section, or subsequent monitoring reveals employee exposure to be above the action level and below the permissible exposure limit the employer shall repeat monitoring at least every six months.

§1910.1018(e)(3)(iv) - The employer shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least seven (7) days apart, are below the action level at which time the employer may discontinue monitoring for that employee until such time as any of the events in paragraph (e)(4) of this section occur.

Purpose: Such monitoring allows employers to identify areas and operations that may require additional reduction in inorganic arsenic exposure. Initial exposure monitoring results also assist employers in determining the need for engineering controls, instituting or modifying work practices, and in selecting appropriate respiratory protection to prevent workers from overexposure to inorganic arsenic. Periodic monitoring allows employers to determine if minor changes in processes and materials result in increased inorganic arsenic exposure. If so, periodic monitoring also enables employers to evaluate the effectiveness of selected control methods. In addition, these measurements remind both the employer and workers of the continuing need to protect against the hazards that could result from worker overexposure to inorganic arsenic.

Additional monitoring §1910.1018(e)(4) - Whenever there has been a production, process, control or personal change which may result in new or additional exposure to inorganic arsenic, or whenever the employer has any other reason to suspect a change which may result in new or additional exposures to inorganic arsenic, additional monitoring which complies with paragraph (e) of this section shall be conducted.

Purpose: Additional monitoring ensures that the workplace is safe, or alerts to the need for increased control of inorganic arsenic.

Employee Notification §1910.1018(e)(5)(i) - The employer must, within 15 working days after the receipt of the results of any monitoring performed under this section, notify each affected employee of these results either individually in writing or by posting the results in an appropriate location that is accessible to affected employees.

§1910.1018(e)(5)(ii) - Whenever the results indicate that the representative employee exposure exceeds the permissible exposure limit, the employer shall include in the written notice a statement that the permissible exposure limit was exceeded and a description of the corrective action taken to reduce exposure to or below the permissible exposure limit.

Purpose: Written notices provide assurance that workers are informed about exposure data, and gives workers specific information about the efforts the employer is taking to lower their exposures and furnish them with a safe and healthful workplace in accordance with section 8(c) (3) of the Act.

B. Compliance Program (§1910.1018(g)(2))

§1910.1018(g)(2)(i) - The employer shall establish and implement a written program to reduce exposures to or below the permissible exposure limit by means of engineering and work practice controls.

§1910.1018(g)(2)(ii) - Written plans for these compliance programs shall include at least the following:

§1910.1018(g)(2)(ii)(A) - A description of each operation in which inorganic arsenic is emitted; e.g. machinery used, material processed, controls in place, crew size, operating procedures and maintenance practices;

§1910.1018(g)(2)(ii)(B) - Engineering plans and studies used to determine methods selected for controlling exposure to inorganic arsenic;

§1910.1018(g)(2)(ii)(C) - A report of the technology considered in meeting the permissible exposure limit;

§1910.1018(g)(2)(ii)(D) - Monitoring data;

§1910.1018(g)(2)(ii)(E) - A detailed schedule for implementation of the engineering controls and work practices that cannot be implemented immediately and for the adaptation and implementation of any additional engineering and work practices necessary to meet the permissible exposure limit;

§1910.1018(g)(2)(ii)(F) - Whenever the employer will not achieve the permissible exposure limit with engineering controls and work practices by December 31, 1979, the employer shall include in the compliance plan an analysis of the effectiveness of the various controls, shall install engineering controls and institute work practices on the quickest schedule feasible, and shall include in the compliance plan and implement a program to minimize the discomfort and maximize the effectiveness of respirator use; and

§1910.1018(g)(2)(ii)(G) - Other relevant information.

§1910.1018(g)(2)(iii) - Written plans for such a program shall be submitted upon request to the Assistant Secretary and the Director, and shall be available at the worksite for examination and copying by the Assistant Secretary, Director, any affected employee or authorized employee representatives.

§1910.1018(g)(2)(iv) - The plans required by this paragraph must be revised and updated at least annually to reflect the current status of the program.

Purpose: This requirement commits the employer to evaluating worker exposure and establishing an organized and complete program for reducing worker exposures to or below the PEL. Revising and updating the written program serves to remind employers to implement and maintain the exposure control methods required by the Standard. Providing the written programs to OSHA compliance officers ensures that employers are in compliance with the Standard, while NIOSH may use the information for research purposes. Workers and their designated representatives review the written programs to determine if the programs validly represent current exposure conditions, and if employers are taking appropriate actions to control inorganic arsenic exposures.

C. Respirator Program (§1910.1018(h)(2))

§1910.1018(h)(2)(i) - The employer must implement a respiratory protection program in accordance with 29 CFR 1910.134 (b) through (d) (except (d)(1)(iii)), and (f) through (m).

Purpose: To ensure that employers establish a standardized procedure for selecting, using, and maintaining respirators for each workplace where respirators will be used. Developing written procedures ensures that workers implement a respirator program that meets the needs of their employees. Burden hours and costs resulting from these program requirements are incurred

under the ICR for OSHA's Respiratory-Protection Standard (29 CFR 1910.134), OMB Control Number 1218-0099.

D. Protective work clothing and equipment (§1910.1018(j))

§1910.1018(j)(2)(vi) - The employer shall inform in writing any person who cleans or launders clothing required by this section, of the potentially harmful effects including the carcinogenic effects of exposure to inorganic arsenic.

§1910.1018(j)(2)(vii) - The employer shall assure that the containers of contaminated protective clothing and equipment in the workplace or which are to be removed from the workplace are labeled as follows:

CAUTION: Clothing contaminated with inorganic arsenic; do not remove dust by blowing or shaking. Dispose of inorganic arsenic contaminated wash water in accordance with applicable local, State or Federal regulations.

Purpose: This information allows personnel who handle IA-contaminated clothing and equipment to protect themselves from the potentially harmful effects of IA.

E. Housekeeping (§1910.1018(k))

Housekeeping plan §1910.1018(k)(4) - A written housekeeping and maintenance plan shall be kept which shall list appropriate frequencies for carrying out housekeeping operations, and for cleaning and maintaining dust collection equipment. The plan shall be available for inspection by the Assistant Secretary.

Maintenance of equipment §1910.1018(k)(5) - Periodic cleaning of dust collection and ventilation equipment and checks of their effectiveness shall be carried out to maintain the effectiveness of the system and a notation kept of the last check of effectiveness and cleaning or maintenance.

Purpose: The purpose of this provision is to inform workers who handle inorganic arsenic contaminated items of the potential hazards involved. OSHA believes that it is critically important that workers be made aware of the hazards associated with potential inorganic exposures. By alerting employers and workers who are involved in disposing of inorganic arsenic contaminated material of the potential hazards of inorganic arsenic exposure, they will be better able to implement protective measures.

F. Medical Surveillance (§1910.1018(n))

§1910.1018(n)(1)(i) - Employees covered. The employer shall institute a medical surveillance program for the following employees:

§1910.1018(n)(1)(i)(A) - All employees who are or will be exposed above the action level, without regard to the use of respirators, at least 30 days per year; and

§1910.1018(n)(1)(i)(B) - All employees who have been exposed above the action level, without regard to respirator use, for 30 days or more per year for a total of 10 years or more of combined employment with the employer or predecessor employers prior to or after the effective date of this Standard. The determination of exposures prior to the effective date of this standard shall be based upon prior exposure records, comparison with the first measurements taken after the effective date of this standard, or comparison with records of exposures in areas with similar processes, extent of engineering controls utilized and materials used by that employer.

Initial examinations §1910.1018 (n)(2) - By December 1, 1978, for employees initially covered by the medical provisions of this section, or thereafter at the time of initial assignment to an area where the employee is likely to be exposed over the action level at least 30 days per year, the employer shall provide each affected employee an opportunity for a medical examination, including at least the following elements:

§1910.1018(n)(2)(i) - A work history and a medical history which shall include a smoking history and the presence and degree of respiratory symptoms such as breathlessness, cough, sputum production and wheezing.

§1910.1018(n)(2)(ii) - A medical examination which shall include at least the following:

§1910.1018(n)(2)(ii)(A) - A standard posterior-anterior chest x-ray;

§1910.1018(n)(2)(ii)(B) - A nasal and skin examination; and

§1910.1018(n)(2)(ii)(C) - Other examinations which the physician believes appropriate because of the employees exposure to inorganic arsenic or because of required respirator use.

Periodic examinations §1910.1018(n)(3)

§1910.1018(n)(3)(i) - Examinations must be provided in accordance with this paragraph at least annually.

§1910.1018(n)(3)(ii) - Whenever a covered employee has not taken the examinations specified in paragraphs (n)(2)(i) and (n)(2)(ii) of this section within six (6) months preceding the termination of employment, the employer shall provide such examinations to the employee upon termination of employment.

Additional examinations §1910.1018(n)(4)

If the employee for any reason develops signs or symptoms commonly associated with exposure to inorganic arsenic the employer shall provide an appropriate examination and emergency medical treatment.

Purpose: The medical surveillance program specified by the Standard enables employers to determine if any workers have underlying health conditions that place them at increased risk if exposed to inorganic arsenic so that they can take appropriate preventive measures; and identify any diseases that occur as a result of inorganic arsenic exposure.

Documentation and maintenance of medical surveillance results provide a continuous record of worker health. A physician may use these records to determine the extent to which workers, subsequent to their last medical examination, experience health effects related to inorganic arsenic exposure. Further, if symptoms appear potentially as the result of inorganic arsenic exposure, the physician often needs information about a worker's previous medical conditions to make an accurate diagnosis of the new condition, ascertain its apparent cause, and identify a course of treatment. Medical records also permit workers to determine whether or not they need treatment, or to evaluate the effectiveness of their employer's exposure-reduction program.

Information provided to the physician §1910.1018(n)(5) – The employer shall provide the following information to the examining physician:

§1910.1018(n)(5)(i) - A copy of this Standard and its appendices;

§1910.1018(n)(5)(ii) - A description of the affected employee's duties as they relate to the employee's exposure;

§1910.1018(n)(5)(iii) - The employee's representative exposure level or anticipated exposure level;

§1910.1018(n)(5)(iv) - A description of any personal protective equipment used or to be used; and

§1910.1018(n)(5)(v) - Information from previous medical examinations of the affected employee which is not readily available to the examining physician.

Purpose: Making the required information available to the physician will aid in the evaluation of the worker's health and fitness for particular job assignments involving inorganic arsenic exposure. If symptoms of organic damage appear, the physician often needs information about a worker's previous medical conditions to make an accurate diagnosis of the new condition, to ascertain its apparent cause, and to identify a course of treatment. Workers can use these records to determine whether or not they need treatment and to evaluate the effectiveness of their employer's exposure-control program.

Physician's written opinion §1910.1018(n)(6)

§1910.1018(n)(6)(i) - The employer shall obtain a written opinion from the examining physician which shall include:

§1910.1018(n)(6)(i)(A) - The results of the medical examination and tests performed;

§1910.1018(n)(6)(i)(B) - The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from exposure to inorganic arsenic;

§1910.1018(n)(6)(i)(C) - Any recommended limitations upon the employee's exposure to inorganic arsenic or upon the use of protective clothing or equipment such as respirators; and

§1910.1018(n)(6)(i)(D) - A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further explanation or treatment.

§1910.1018(n)(6)(ii) - The employer shall instruct the physician not to reveal in the written opinion specific findings or diagnoses unrelated to occupational exposure.

§1910.1018(n)(6)(iii) - The employer shall provide a copy of the written opinion to the affected employee.

Purpose: To aid in determining the initial placement of workers, and to assess a worker's ability to use protective clothing and equipment. The physician's written opinion will also provide information to the employer about whether or not the worker has a medical condition indicating overexposure to IA. The requirement that the physician's opinion be written will ensure that the information is properly memorialized for later reference. The requirement that workers be provided with a copy of the medical opinion will ensure that they are informed of the results of the medical examination so that they can assist in determining the need for, and evaluate the effectiveness of, treatment or other interventions.

G. Employee information and training (§1910.1018(o))

Training Program §1910.1018(o)(1)

§1910.1018(o)(1)(i) - The employer shall institute a training program for all employees who are subject to exposure to inorganic arsenic above the action level without regard to respirator use, or for whom there is the possibility of skin or eye irritation from inorganic arsenic. The employer shall assure that those employees participate in the training program.

§1910.1018(o)(1)(ii) - The training program shall be provided by October 1, 1978, for employees covered by this provision, at the time of initial assignment for those subsequently covered by this provision, and at least annually for other covered employees thereafter; and the employer shall assure that each employee is informed of the following:

§1910.1018(o)(1)(ii)(A) - The information contained in Appendix A;

§1910.1018(o)(1)(ii)(B) - The quantity, location, manner of use, storage, sources of exposure, and the specific nature of operations which could result in exposure to inorganic arsenic as well as any necessary protective steps;

§1910.1018(o)(1)(ii)(C) - The purpose, proper use, and limitation of respirators;

§1910.1018(o)(1)(ii)(D) - The purpose and a description of the medical surveillance program as required by paragraph (n) of this section;

§1910.1018(o)(1)(ii)(E) - The engineering controls and work practices associated with the employee's job assignment; and

§1910.1018(o)(1)(ii)(F) - A review of this Standard.

Purpose: Training is essential to inform workers of the hazards to which they are exposed, including the location and sources of inorganic arsenic exposure; the training also provides them with information they can use to minimize the health hazards of inorganic arsenic, such as effective work practices. Training also serves to explain and reinforce the information presented to workers on signs, labels, and material safety data sheets (MSDSs), which will be useful and effective only when workers understand the health hazards of inorganic arsenic and are aware of the actions they can take to avoid or minimize inorganic arsenic exposures.

Access to training materials §1910.1018(o)(2)

§1910.1018(o)(2)(i) - The employer shall make readily available to all affected employees a copy of this Standard and its appendices.

§1910.1018(o)(2)(ii) - The employer shall provide; upon request, all materials relating to the employee information and training program to the Assistant Secretary and the Director.

Purpose: This provision reinforces the requirements of the training program, and permits OSHA to determine the extent to which an employer is complying with these requirements.

H. Signs and labels (§1910.1018(p))

Signs §1910.1018(p)(2)(i) - The employer shall post signs demarcating regulated areas bearing the legend; "DANGER: INORGANIC ARSENIC- CANCER HAZARD. AUTHORIZED PERSONNEL ONLY. NO SMOKING OR EATING. RESPIRATOR REQUIRED."

Labels §1910.1018(p)(3) - The employer shall apply precautionary labels to all shipping and storage containers of inorganic arsenic, and to all products containing inorganic arsenic except when the inorganic arsenic in the product is bound in such a manner so as to make unlikely the possibility of airborne exposure to inorganic arsenic. (Possible examples of products not requiring labels are semiconductors, light emitting diodes and glass). The label shall bear the following legend; “DANGER: CONTAINS INORGANIC ARSENIC-CANCER HAZARD. HARMFUL IF INHALED OR SWALLOWED. USE ONLY WITH ADEQUATE VENTILATION OR RESPIRATORY PROTECTION.”

Purpose: Warning signs and labels inform workers that they are near a hazardous area, and that they are permitted to enter the area only if they are authorized to do so. Warning signs and labels also supplement the training workers receive under the Standard.

I. Recordkeeping (§1910.1018(q))

Exposure monitoring §1910.1018(q)(1)(i) - The employer shall establish and maintain an accurate record of all monitoring required by paragraph (e) of this section.

§1910.1018(q)(1)(ii) - This record shall include:

§1910.1018(q)(1)(ii)(A) - The date(s), number, duration location, and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure where applicable;

§1910.1018(q)(1)(ii)(B) - A description of the sampling and analytical methods used and evidence of their accuracy;

§1910.1018(q)(1)(ii)(C) - The type of respiratory protective devices worn, if any;

§1910.1018(q)(1)(ii)(D) - Name, social security number, and job classification of the employees monitored and of all other employees whose exposure the measurement is intended to represent; and

§1910.1018(q)(1)(ii)(E) - The environmental variables that could affect the measurement of the employee's exposure.

§1910.1018(q)(1)(iii) - The employer shall maintain these monitoring records for at least 40 years or for the duration of employment plus 20 years, whichever, is longer.

Medical surveillance §1910.1018(q)(2)

§1910.1018(q)(2)(i) - The employer shall establish and maintain an accurate record for each employee subject to medical surveillance as required by paragraph (n) of this section.

§1910.1018(q)(2)(ii) - This record shall include:

§1910.1018(q)(2)(ii)(A) - The name, social security number, and description of duties of the employee;

§1910.1018(q)(2)(ii)(B) - A copy of the physician's written opinions;

§1910.1018(q)(2)(ii)(C) - Results of any exposure monitoring done for that employee and the representative exposure levels supplied to the physician; and

§1910.1018(q)(2)(ii)(D) - Any employee medical complaints related to exposure to inorganic arsenic.

§1910.1018(q)(2)(iii) - The employer shall in addition keep, or assure that the examining physician keeps, the following medical records;

§1910.1018(q)(2)(iii)(A) - A copy of the medical examination results including medical and work history required under paragraph (n) of this section;

§1910.1018(q)(2)(iii)(B) - A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information;

§1910.1018(q)(2)(iii)(C) - The initial X-ray;

§1910.1018(q)(2)(iii)(D) - The X-rays for the most recent 5 years; and

§1910.1018(q)(2)(iii)(E) - Any X-rays with a demonstrated abnormality and all subsequent X-rays;

§1910.1018(q)(2)(iv) - The employer shall maintain or assure that the physician maintains those medical records for at least 40 years, or for the duration of employment plus 20 years whichever is longer.

Purpose: Medical and exposure-monitoring records are maintained principally for worker access, but also are designed to provide valuable information to both workers and employers. The medical and exposure-monitoring records required by this Standard will aid the worker and their physicians in determining whether or not treatment or other interventions are needed as a result of worker exposure to inorganic arsenic. The information also will enable employers to better ensure that workers are not being overexposed to inorganic arsenic; such information may alert the employer that steps must be taken to reduce inorganic arsenic exposures.

Availability §1910.1018(q)(3)

§1910.1018(q)(3)(i) - The employer shall make available upon request all records required to be maintained by paragraph (q) of this section to the Assistant Secretary and the Director for examination and copying.

§1910.1018(q)(3)(ii) - Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1910.1020(a)-(e) and (g)-(i).

Purpose: The OSHA compliance officer uses these records to assess employer compliance with the major exposure monitoring and medical surveillance requirements of the Standard, while NIOSH may compile these records for research purposes. Workers and their designated representatives use exposure monitoring and medical surveillance records to assess a worker's medical status over the course of employment, to evaluate the effectiveness of the employer's exposure reduction program, and for other reasons.

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.

Employers may use improved information technology as appropriate when making, keeping, and preserving required records. The Standard is written in performance-oriented language, i.e., in terms of what data must be collected rather than how data must be collected.

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 A. 2 above.

The information required to be collected and maintained is specific to each employer and employee involved, and is not available or duplicated by another source. The information required by this Standard is available only from employers. At this time, there is no indication that any alternate information source is available.

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

The information collection does not have a significant impact on a substantial number of small entities.

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

The information collection frequencies specified by the Standard are the minimum OSHA believes are necessary to ensure that employers and OSHA can effectively monitor the exposure and health status of employees exposed to inorganic arsenic.

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 secret, or other confidential information unless the agency can prove that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

Employers are required to inform each employee in writing or by posting of the exposure-monitoring results that represent the employee's exposures within 15 working days after receiving the results. If these results indicate that the employee has been exposed above the PEL, this written notification must also include a statement that the PEL was exceeded and a description of the corrective action the employer has taken to reduce the employee's exposure to or below the PEL.

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 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, revealed 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.

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3506(c)(2)(A)), OSHA published a notice in the *Federal Register* on October 20, 2011 (76 FR 65217) soliciting comments from the public and other interested parties on the information collection requirements contained in the Inorganic Arsenic Standard (29 CFR 1910.1018) (Docket No.OSHA-2011-0186). The notice was part of a preclearance consultation program that provided interested parties with the opportunity to comment on OSHA's request for an extension by the Office of

Management and Budget (OMB) of a previous approval of the information-collection requirements found in the Inorganic Arsenic Standard. The Agency did not receive any comments regarding the proposed information collection request.

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

The Agency will not provide payments or gifts to the respondents.

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

The paperwork requirement specified by the Standard does not involve confidential information.

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 provision in the Standard does not require sensitive information.

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.

Table 1
Summary of Burden Hours and Cost Estimates

Information Collection Requirement	Existing Burden Hours	Requested Burden Hours	Change	Estimated Cost
(A) Exposure monitoring				
1. Initial and periodic monitoring	2	3	+1	\$106
2. Additional monitoring	1	1	0	\$35
3. Employee notification	1	2	+1	\$40
(B) Compliance program	36	60	+24	\$1,810
(C) Respirator program	0	0	0	0
(D) Protective work clothing and equipment	1	1	0	\$20
(E) Housekeeping	2	4	+2	\$113
(F) Medical surveillance				
1. General	262	436	+174	\$9,234
2. Information provided to the physician	13	21	+8	\$421
3. Physician's written opinion	13	21	+8	\$421
(G) Employee information and training	0	0	0	0
(H) Signs and labels	0	0	0	0
(I) Recordkeeping				
1. Exposure monitoring and medical surveillance	52	86	+34	\$1,725
2. Availability	1	2	+1	\$41
TOTAL	384	637	253	\$13,966

The following wages have been adjusted to reflect the fact that fringe benefits comprise roughly 30.4 percent of total employee (worker) compensation in the private sector.³ The costs of labor used in this analysis are therefore estimates of total hourly compensation. These hourly wages are:

³Source: Bureau of Labor Statistics. *Employer Costs for Employee Compensation – March 2011*.

Professional/Manager/Supervisor	\$35.22 ⁴
Worker	\$21.18 ⁵
Clerical/Secretary	\$20.06 ⁶

The following sections summarize the methodology used for estimating the number of burden hours associated with information collection.

(A) Exposure monitoring (§ 1910.1018(e))

1. Initial and Periodic Monitoring

The Agency estimates that all five covered employers⁷ will have workers exposed above the PEL.⁸ OSHA also assumes that employers use vapor badges to collect exposure-monitoring samples, and that a supervisor, earning \$35.22 per hour, will take 10 minutes (.17 hour) to administer and collect vapor badges.

Burden hours: 5 employers × 4 samples/year × .17 hours = 3 hours
Cost: 3 hours × \$35.22 = \$106

⁴This mean hourly wage rate corresponds to SOC code 51-1011, “First-Line Supervisors/Managers of Production and Operating Workers.” (Source: *May 2010 National Occupational Employment and Wage Estimates, United States*, U.S. Department of Labor, Bureau of Labor Statistics.)

⁵This mean hourly wage rate corresponds to SOC code 51-0000, “Production Occupations.” (Source: *May 2010 National Occupational Employment and Wage Estimates, United States*, U.S. Department of Labor, Bureau of Labor Statistics.)

⁶This mean hourly wage rate corresponds to SOC code 43-6014, “Secretaries, Except Legal, Medical, and Executive.” (Source: *May 2010 National Occupational Employment and Wage Estimates, United States*, U.S. Department of Labor, Bureau of Labor Statistics.)

⁷EPA’s 2008 Reregistration Eligibility Decision for Chromated Arsenicals (pg. 9) The Agency believes that the two additional firms are not new establishments.

⁸The Agency assumed in previous ICR updates that, based on information from the Inflationary Impact Statements for this Standard, 26.9% of employers covered by this ICR have workers exposed to inorganic arsenic above the action level. Additionally, an OSHA report cited in previous ICR updates and titled “Sampling Activity by Substance” determined that 14.1% of establishments have inorganic arsenic exposures that exceeded the PEL; the Agency assumed in previous ICR updates that the 14.1% of employers whose workers are exposed to inorganic arsenic above the PEL will perform exposure monitoring once a quarter. To determine the number of employers with workers exposed above the action level, but at or below the PEL, the Agency previously subtracted the 14.1% percent of workers exposed above the PEL from 26.9%, resulting in 12.8%. It was assumed that those employers will perform semi-annual exposure monitoring because their workers are exposed to inorganic arsenic between the action level and the PEL.

Given the dramatic decrease in the number of employers and workers covered by the Standard, OSHA assumed conservatively that all employers would have workers exposed above the action level but at or below the PEL, as well as workers exposed above the PEL. As such, each employer would perform exposure monitoring once a quarter.

2. Additional Monitoring

The Agency assumes that 10% of employers each year will have a change in inorganic arsenic production, processes, controls, or personnel that may result in new or additional exposure to inorganic arsenic, and that this change will require one airborne sample to assess the inorganic arsenic level in the affected work area. OSHA also assumes that employers use vapor badges to collect exposure-monitoring samples, and that a supervisor, earning \$35.22 per hour, will take 10 minutes (.17 hour) to administer and collect vapor badges.

Burden hours: $5 \text{ employers} \times 10\% \times 1 \text{ sample/year} \times .17 \text{ hour} = 1 \text{ hour}$
(rounded up)

Cost: $1 \text{ hour} \times \$35.22 = \35

3. Worker Notification

Employers must provide written notification or posting of exposure-monitoring results to each worker exposed to inorganic arsenic above the action level. As discussed under “Initial and Periodic Monitoring,” the Agency estimates that 5 employers have exposure limits above the PEL requiring quarterly monitoring. Finally, one employer ($5 \times 10\%$; rounded up) will conduct additional monitoring. OSHA estimates that a secretary, earning \$20.06 per hour, will take 5 minutes (.08 hour) to prepare and post each notification.

Burden hours: $((5 \text{ employers} \times 4 \text{ samples/year}) + 1 \text{ employer}) \times .08 \text{ hour} = 2 \text{ hour}$

Cost: $2 \text{ hours} \times \$20.06 = 40$

(B) Compliance program (§ 1910.1018(g)(2))

Employers must establish and implement a written compliance program to reduce inorganic arsenic exposures to or below the PEL using engineering and work-practice controls. The written compliance plans for these programs must be updated annually. The plans must include the information specified in paragraph (g)(2)(ii). As the Standard has been effective since 1978, OSHA assumes that these plans have already been developed, and must only be updated. According to the analysis performed under “Initial and Periodic Monitoring” above, the Agency estimates that five employers have worker exposures above the PELs. OSHA estimates that 8 hours of supervisory time (at \$35.22 per hour) and 4 hours of secretarial time (at \$20.06 per hour) are needed to update each plan once.

Burden hour: $(8 \text{ hours} + 4 \text{ hours}) \times 5 \text{ employers} \times 1 \text{ updates/year} = 60 \text{ hours}$

Cost: $((5 \text{ employers} \times 8 \text{ hours} \times \$35.22) + (5 \text{ employers} \times 4 \text{ hours} \times \$20.06)) \times 1 \text{ updates/year} = \$1,810$

(C) Respirator program (§1910.1018(h)(2))

The Standard requires employers to implement a respiratory protection program in accordance with the provisions of OSHA's Respiratory Protection Standard (29 CFR 1910.134). The burden for this requirement is taken under the ICR for the Respiratory Protection Standard, OMB Control Number 1218-0099.

(D) Protective work clothing and equipment (§1910.1018(j)(vi))

Employers must notify anyone who cleans protective clothing or equipment of the hazards from inorganic arsenic exposure. OSHA assumes that each employer would provide this notification in writing once a year, and that a secretary (at a wage rate of \$20.06 per hour) would take 5 minutes (.08 hour) to type and deliver the notice.

Burden hours: 5 employers × 1 notification/year × .08 hour = 1 hour
Cost: 1 hour × \$20.06 = \$20

(E) Housekeeping plans (§1910.1018(k)(4))

Employers must keep a written housekeeping and maintenance plan that lists appropriate frequencies for specific housekeeping activities and for maintaining dust-collection equipment. As the Standard has been effective since 1978, OSHA assumes that these plans have already been developed, and must only be updated periodically (on average, about once a year); therefore, no cost has been incurred for developing the plans. OSHA estimates that updating and maintaining the plans once each year takes a supervisor (at a wage rate of \$35.22 per hour) 30 minutes (.5 hour) and a secretary (earning \$20.06 an hour) 15 minutes (.25 hour).

Burden hours: (.5 hour + .25 hour) × 5 employers × 1 update/year = 4 hours
Cost: ((5 employers × .5 hour × \$35.22) + (5 employers × .25 hours × \$20.06)) × 1 update/year = \$113

(F) Medical surveillance (§1910.1018(n))

1. General

The Standard requires annual medical examinations for workers exposed to levels of inorganic arsenic above the action level. The Agency estimates that 880 workers are exposed to inorganic arsenic.⁹ Using exposure percentages described under "Initial and Periodic Monitoring," of the 880 exposed workers; 14.1% (124) are exposed above the PEL, and 12.8% (113) are exposed above the action level but below the PEL. Also, OSHA assumes that 10% of the 237 workers exposed above the action level (24) will require additional medical examinations. These examinations are administered if a worker has not had an examination within 6 months of

⁹The previous ICR's estimated an average of 176 workers per employer update estimated that there were 7,400 exposed workers employed in 42 establishments, or an average of 176 workers per employer. OSHA assumed that this ratio of workers per employer has remained stable since the previous ICR update.

terminating employment or if the worker develops signs or symptoms of an inorganic arsenic-related disease.

The burden hours for medical examinations represents the time a worker is away from the job. For the examinations administered under this Standard, the Agency estimates that a worker (at a wage rate of \$21.18 per hour) will be away from the job 1 hour and 40 minutes (1.67 hours).

Burden hours: 261 medical examinations × 1.67 hours = 436 hours
Cost: 436 hours × \$21.18 = \$9,234

2. Information provided to the physician

Employers must provide the examining physician with specific information on each worker who receives a medical examination. The Agency assumes that, for each medical examination administered to a covered worker, it takes a secretary (at a wage rate of \$20.06 per hour) 5 minutes (.08 hour) to compile the required information and provide it to the physician. Based on the analysis performed under “General Medical Surveillance” above, this Standard requires that 261 medical examinations be administered each year.

Burden hours: 261 examinations × .08 hour = 21 hours
Cost: 21 hours × \$20.06 = \$421

3. Physician’s written opinion

OSHA assumes a secretary earning \$20.06 an hour will take 5 minutes (.08 hour) for a secretary to deliver a copy of the physician’s written opinion to each covered worker. Based on the analysis performed under “Media Surveillance, General” above, 261 medical examinations will be administered each year, resulting in the same number of opinions that must be delivered to covered workers.

Burden hours: 261 examinations × .08 hour = 21 hours
Cost: 21 hours × \$20.06 = \$421

(G) Employee information and training (§1910.1018(o))

The Standard’s training requirements are performance-oriented; therefore, no burden hours are incurred from this provision.

(H) Signs and labels (§1910.1018(p))

The Standard requires that warning signs demarcate regulated areas. The Standard also requires that all containers used to ship or store inorganic arsenic, and most products consisting of Inorganic arsenic, have warning labels. The Standard provides specific language for the required signs and labels; therefore no burden has been taken for this provision because OSHA is providing the required information. (See the final rule entitled “Controlling Paperwork Burden

on the Public,” 5 CFR 1320.3(c)(2).)

(I) Recordkeeping (§1910.1018(q))

1. Exposure monitoring and Medical surveillance

Employers must establish and maintain an accurate record of all exposure monitoring and medical examinations required by the Standard. Based on the estimated worker exposure levels previously discussed under “Medical surveillance, General” above, OSHA estimates that 124 workers are exposed above the PEL requiring that quarterly monitoring records be generated for these workers. Also, another 113 workers are exposed above the action level but below the PEL and requiring semi-annual exposure monitoring records. In addition, the Agency estimates that 10% of the 880 workers (88 workers) are monitored as a result of “Additional monitoring.”

As described in the analysis described under “Medical surveillance, General” above, a physician administers 261 medical examinations annually. OSHA estimates that a secretary (at a wage rate of \$20.06 per hour) will spend 5 minutes (.08 hour) annually developing and maintaining each record.

Burden hours:	$((124 \text{ workers} \times 4 \text{ samples/year}) + (113 \text{ workers} \times 2 \text{ samples/year}) + (88 \text{ workers} \times 1 \text{ sample/year}) + 261 \text{ medical examinations} \times .08)$ = 86 hours
Cost:	86 hours \times \$20.06 = \$1,725

2. Availability

Employers must provide, on request, all records required by the Standard to OSHA compliance officers and NIOSH for examination and copying. In addition, employers must provide worker medical and exposure-monitoring records to workers and worker representatives on request. The Agency estimates that compliance officers make a request for inorganic arsenic-related records during one inspection annually, and that professional, at a wage rate of \$35.22 per hour, will spend 5 minutes (.08 hour) informing an OSHA compliance officer of the location of requested records during an inspection.¹⁰ In addition, the Agency assumes that 10% of the covered workers (those workers exposed above the action level, as well as their representatives and former workers) will request medical and exposure-monitoring records each year. Based on the analysis performed under “Medical Surveillance” above, the total number of covered workers is 237; 10% of this total is 24 workers. OSHA estimates that it will take a secretary (at a wage rate \$20.06 per hour) 5 minutes (.08 hour) to make these records available to these workers.

¹⁰OSHA estimated the number of inspections by determining the inspection rate (1.4%) for all facilities under the jurisdiction of the OSH Act (including both Federal OSHA and approved state-plan agencies), and then multiplied the total number of facilities regulated by the inorganic arsenic Standard (5) by this percentage (i.e., $.014 \times 5 = .04$ inspections (rounded to 1)).

Burden hours: $(1 \text{ inspection} \times .08 \text{ hour}) + (24 \text{ workers} \times .08 \text{ hour}) = 2 \text{ hours}$
Cost: $(1 \text{ inspection} \times .08 \text{ hour} \times \$35.22) + (24 \text{ workers} \times .08 \text{ hour} \times \$20.06) = \$41$

13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14).

- 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. 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.

CAPITAL COST DETERMINATIONS

1. Exposure monitoring

Employers are required to conduct initial exposure monitoring to determine if any workers are exposed to inorganic arsenic in excess of the action level. Results from initial exposure monitoring will determine if further monitoring is required. If exposure levels are above the action level but below the PEL, the employer must conduct exposure monitoring at least once every 6 months (semiannually); for workers exposed above the PEL, the employer must perform exposure monitoring at least quarterly. Employers must also conduct additional monitoring if a change occurs in inorganic arsenic production, processes, controls, or personal that may result in new or additional worker exposures to inorganic arsenic, or if they suspect that a change may result in new or additional worker exposures to inorganic arsenic.

OSHA assumes that vapor badges will be used for exposure monitoring; based on estimates in previous ICRs, the cost of each badge, including laboratory analyses, is \$104 for each sample

(Wearing the monitoring badge is not expected to affect the worker's work.).¹¹ According to the analysis performed under "Exposure Monitoring" above, employers collect 4 samples each year.

Cost: $5 \times 4 \text{ samples} \times \$104 = \$2,080$

2. Additional monitoring

The agency assumes that 10% of employers will conduct additional monitoring if a change occurs in inorganic arsenic production, processes, controls, or personal that may result in new or additional worker exposures to inorganic arsenic each year. This change will require one airborne sample to assess the inorganic level in the affected work area.

Burden hours: $5 \text{ employers} \times 10\% \times 1 \text{ sample/year} \times \$104 = \$52$

2. Medical Examinations

Depending on the worker's length of exposure to inorganic arsenic above the action level, medical examinations must be administered annually. In addition, examinations must be provided to workers who have not had an examination within 6 months of terminating employment, or if they develop signs or symptoms of inorganic arsenic-related disease. The Agency estimates the cost of the basic medical examination at \$145, and the cost for one chest x-ray at \$61.¹² Only 1 chest x-ray is required annually for each of these employees, regardless of the frequency specified for the medical examinations. Based on the analysis conducted under "Medical Records" above, 261 medical examinations are administered to 237 covered workers each year.

Cost: $(261 \text{ medical examinations} \times \$145) + (237 \text{ chest x-rays} \times \$60) = \$52,065.$

- 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. Agencies also may aggregate cost estimates from Items 12, 13, and 14 in a single table.**

OSHA does not take costs for other occupational expenses, such as equipment, overhead, and support staff expenses, because these costs are normal operating expenses and would have occurred without these collections of information requirements. OSHA estimates that an OSHA compliance officer (GS-12/5), with an hourly wage rate of \$37.37, spends 5 minutes (.08 hour)

¹¹The Consumer Price Index (CPI) indicated a 6.3% increase in the price of professional medical services from 2005 to 2007. The previous ICR estimated that the cost of each badge, including laboratory analysis, was \$92; given the 6.3% increase in the price of professional medical services, it was assumed that the cost of each badge and laboratory analysis increased by 6.3% as well.

¹²The previous ICR assumed that each medical examination would include the following: basic medical examination costing \$130 dollars; which includes the urinary cytology and one x-ray costing \$54.40. The total cost per examination was \$184.40. The Consumer Price Index indicated an 11.2% increase in the price of professional medical services from 2008 to March 2011; the cost of a medical examination was assumed to have increased by 11.2% as well. The costs are now \$145 for the medical exam and \$60 for the x-ray.

reviewing Inorganic arsenic-related information during an inspection. Based on the analysis performed under "Availability" above, OSHA determined that employers covered by the Inorganic arsenic Standard receive 1 inspection each year.

Burden hours: 1 inspection x .08 hour = 1 hour

Cost: 1 hour x \$37.37 = \$37

15. Explain the reasons for any program changes or adjustments.

Based on information taken from *EPA's 2008 Reregistration Eligibility Decision for Chromated Arsenicals*, the Agency increased the number of employers covered by the standard from three to five. As a result, there is an adjustment in the burden hours from 384 to 637 hours. The total cost burden also increased from \$31,165 to \$54,197, due primarily to an increase in the costs of medical examinations including chest x-rays from \$196 to \$210.

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 information collected under the Inorganic Arsenic Standard will not be published.

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.

OSHA is not seeking such approval.

18. Explain each exception to the certification statement.

OSHA is not requesting an exception to the certification statement in Item 19.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

There are no collections of information employing statistical methods.