RESPIRABLE CRYSTALLINE SILICA STANDARDS FOR GENERAL INDUSTRY (29 CFR 1910.1053), SHIPYARDS (29 CFR 1915.1053) AND CONSTRUCTION (29 CFR 1926.1153)
OMB Control Number – 1218-0266
Expiration Date: July 31, 2026

SUPPORTING STATEMENT FOR THE INFORMATION COLLECTION REQUIREMENTS IN THE RESPIRABLE CRYSTALLINE SILICA STANDARDS FOR GENERAL INDUSTRY (29 CFR 1910.1053), SHIPYARDS (29 CFR 1915.1053) AND CONSTRUCTION (29 CFR 1926.1153)[1]
OFFICE OF MANAGEMENT AND BUDGET (OMB) CONTROL NO. 1218-0266
(April 2026)

The agency is seeking an extension of the currently approved data collection.

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 main objective of the Occupational Safety and Health Act ("OSH Act" or "Act") 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 specifically authorizes "the development and promulgation of occupational safety and health standards" (29 U.S.C. 651). The Act states further that "[t]he Secretary . . . shall prescribe such rules and regulations as [he/she] may deem necessary to carry out [his/her] responsibilities under this Act, including rules and regulations dealing with the inspection of an employer's establishment" (29 U.S.C. 651).

To protect worker health, the OSH Act authorizes the Occupational Safety and Health Administration ("OSHA" or "the agency") to develop standards that provide for "monitoring or measuring employee exposure" to occupational hazards and "prescribe the type and frequency of medical examinations and other tests which shall be made available [by the employer] to employees exposed to such hazards . . . to most effectively determine whether the health of such employees is adversely affected by such exposure" (29 U.S.C. 655). Moreover, the Act directs the agency to "issue regulations requiring employers to maintain accurate records of employee exposures to potentially toxic materials or other harmful physical agents which are required to be monitored and measured," and further specifies that such regulations provide "for each employee or former employee to have access to such records as will indicate [their] own exposure to toxic

[1] The purpose of this Supporting Statement is to analyze and describe the burden hours and costs associated with provisions of the Respirable Crystalline Silica Standards that contain information collection requirements as defined under the Paperwork Reduction Act (PRA) and its regulations (5 CFR 1320, *Controlling Paperwork Burdens on the Public*); this Supporting Statement does not provide information or guidance on how to comply with, or how to enforce, these provisions.

materials or harmful physical agents" (29 U.S.C. 657). In addition, the OSH Act mandates that "[e]ach employer shall make, keep and preserve, and make available to the Secretary [of Labor] . . . such records regarding [his/her] activities relating to this Act as the Secretary . . . may prescribe by regulation as necessary or appropriate for the enforcement of this Act or for developing information regarding the causes and prevention of occupational accidents and illnesses" (29 U.S.C. 657).

Section 6(b)(7) of the Act specifies that "[a]ny standard promulgated under this subsection shall prescribe the use of labels or other appropriate forms of warning as are necessary to ensure that employees are apprised of all hazards to which they are exposed, relevant symptoms and appropriate emergency treatment, and proper conditions and precautions of safe use or exposure." This provision goes on to state that "[t]he Secretary, in consultation with the Secretary of Health and Human Services, may by rule promulgated pursuant to Section 553 of title 5, United States Code, make appropriate modifications in the foregoing requirements relating to the use of labels or other forms of warning . . . as may be warranted by experience, information, or medical or technological developments acquired subsequent to the promulgation of the relevant standard" (29 U.S.C. 655).

Under the authority granted by the OSH Act, OSHA issued standards for occupational exposure to respirable crystalline silica. The standards establish a permissible exposure limit of 50 micrograms per cubic meter of air (50 $\mu g/m^3$) weighted average (referred to hereafter as "TWA") in all industries. The standards also establish an action level (AL) of 25 micrograms per cubic meter of air (25 $\mu g/m^3$), measured as a TWA. In addition, the standards include other provisions to protect employees, such as requirements for exposure assessment, respiratory protection, written exposure control plans, medical surveillance, hazard communication, and recordkeeping.[2]

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.

A. Exposure Assessment (§§ 1910.1053(d) and 1926.1153(d))

1. Exposure Assessment, General

Exposure Assessment, General (General Industry)

[2] Under the construction standard, if the employer fully and properly implements the specified exposure control methods specified for each employee engaged in a task identified on Table 1 of the construction standard (29 CFR 1926.1153), the employer is not required to conduct exposure assessments or otherwise comply with a PEL for those employees. However, if the employer does not follow Table 1 for employees engaged in identified tasks, or if the respirable crystalline silica-generating task is not listed on Table 1, the employer must assess and limit the exposure of employees in accordance with paragraph (d) of the standard for construction.

§ 1910.1053(d)(1) -- General. The employer shall assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level in accordance with either the performance option in paragraph (d)(2) or the scheduled monitoring option in paragraph (d)(3) of this section.

Alternative Exposure Control Methods - Exposure Assessment, General (Construction)

§ 1926.1153(d)(2)(i) – The employer shall assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level in accordance with either the performance option in paragraph (d)(2)(ii) or the scheduled monitoring option in paragraph (d)(2)(iii) of this section.

(Note: Paragraph (d)(2) of the construction standard covers exposure assessments for tasks not listed in Table 1 of the construction standard, or where the employer does not fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1 of the construction standard, as specified in paragraph (c)(1), Specified exposure control methods.)

Purpose: The purposes of requiring an assessment of employee exposures to respirable crystalline silica include: determination of the extent and degree of exposure at the worksite; identification and prevention of employee overexposure; identification of the sources of exposure; collection of exposure data so that the employer can select the proper control methods to be used; and evaluation of the effectiveness of those selected methods. Assessment enables employers to meet their legal obligation to ensure that their employees are not exposed in excess of the permissible exposure limit (PEL) and to ensure employees have access to accurate information about their exposure levels, as required by section 8(c)(3) of the Act, 29 U.S.C. 657(c)(3). In addition, exposure data enables the physicians or other licensed health care professionals (PLHCP) performing medical examinations to be informed of the extent of occupational exposures.

2. Exposure Assessment, Performance Option (General Industry /Shipyards and Construction)

§§ 1910.1053(d)(2) and 1926.1153(d)(2)(ii)) -- Performance option. The employer shall assess the 8-hour TWA exposure for each employee on the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica.

3. Exposure Assessment, Scheduled Monitoring Option

Exposure Assessment, Scheduled Monitoring Option (General Industry)

§ 1910.1053(d)(3)(i) -- The employer shall perform initial monitoring to assess the 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone air samples that

reflect the exposures of employees on each shift, for each job classification, in each work area. Where several employees perform the same tasks on the same shift and in the same work area, the employer may sample a representative fraction of these employees in order to meet this requirement. In representative sampling, the employer shall sample the employee(s) who are expected to have the highest exposure to respirable crystalline silica.

§ 1910.1053(d)(3)(iii) -- Where the most recent exposure monitoring indicates that employee exposures are at or above the action level but at or below the PEL, the employer shall repeat such monitoring within six months of the most recent monitoring.

§ 1910.1053(d)(3)(iv) -- Where the most recent exposure monitoring indicates that employee exposures are above the PEL, the employer shall repeat such monitoring within three months of the most recent monitoring.

§ 1910.1053(d)(3)(v) -- Where the most recent (non-initial) exposure monitoring indicates that employee exposures are below the action level, the employer shall repeat such monitoring within six months of the most recent monitoring until two consecutive measurements, taken 7 or more days apart, are below the action level, at which time the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring, except as otherwise provided in paragraph (d)(4) of this section.

Exposure Assessment, Scheduled Monitoring Option (Construction)

§ 1926.1153(d)(2)(iii)(A) -- Scheduled monitoring option. The employer shall perform initial monitoring to assess the 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, in each work area. Where several employees perform the same tasks on the same shift and in the same work area, the employer may sample a representative fraction of these employees in order to meet this requirement. In representative sampling, the employer shall sample the employee(s) who are expected to have the highest exposure to respirable crystalline silica.

§ 1926.1153(d)(2)(iii)(C) -- Where the most recent exposure monitoring indicates that employee exposures are at or above the action level but at or below the PEL, the employer shall repeat such monitoring within six months of the most recent monitoring.

§ 1926.1153(d)(2)(iii)(D) -- Where the most recent exposure monitoring indicates that employee exposures are above the PEL, the employer shall repeat such monitoring within three months of the most recent monitoring.

§ 1926.1153(d)(2)(iii)(E) -- Where the most recent (non-initial) exposure monitoring indicates that employee exposures are below the action level, the employer shall repeat such monitoring within six months of the most recent monitoring until two consecutive measurements, taken

seven or more days apart, are below the action level, at which time the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring, except as otherwise provided in paragraph (d)(2)(iv) of this section.

Purpose: The performance option is intended to allow employers flexibility in assessing the respirable crystalline silica exposures of their employees. Where the employer elects this option, the employer must conduct the exposure assessment prior to the time the work commences, and must demonstrate that employee exposures have been accurately characterized. To accurately characterize employee exposures under the performance option, the assessment must reflect the exposures of employees on each shift, for each job classification, in each work area. However, under this option, the employer has flexibility to determine how to achieve this. OSHA has not included specific criteria for implementing the performance option. Since the goal of the performance option is to give employers flexibility to accurately characterize employee exposures using whatever combination of air monitoring data or objective data are most appropriate for their circumstances, OSHA concludes it would be inconsistent to specify in the standard exactly how and when data should be collected. Where employers want a more structured approach for meeting their exposure assessment obligations, OSHA also provides the scheduled monitoring option.

4. Reassessment of Exposures (General Industry and Construction)

§§ 1910.1053(d)(4) and 1926.1153(d)(2)(iv) -- The employer shall reassess exposures whenever a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the action level, or when the employer has any reason to believe that new or additional exposures at or above the action level have occurred.

Purpose: OSHA considers this reevaluation necessary to ensure that the exposure assessment accurately represents existing exposure conditions. The exposure information gained from such assessments will enable the employer to take appropriate action to protect exposed employees, such as instituting additional engineering controls or providing appropriate respiratory protection. OSHA does not intend for employers to conduct additional monitoring simply because a change has been made, so long as the change is not reasonably expected to result in new or additional exposures to respirable crystalline silica at or above the action level.

5. Employee Notification of Assessment Results

Employee Notification of Assessment Results (General Industry)

§ 1910.1053(d)(6)(i) -- Within 15 working days after completing an exposure assessment in accordance with paragraph (d) of this section, the employer shall individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees.

§ 1910.1053(d)(6)(ii) -- Whenever an exposure assessment indicates that employee exposure is above the PEL, the employer shall describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

Purpose: The requirement to inform employees of the corrective actions the employer is taking to reduce the exposure level to or below the PEL is necessary to assure employees that the employer is making efforts to furnish them with a safe and healthy work environment and is required under section 8(c)(3) of the OSH Act. 29 U.S.C. 657(c)(3). Also, notifying employees of their exposures provides them with knowledge that can permit and encourage them to be more proactive in working to control their own exposures through better and safer work practices and more active participation in safety programs. In addition, exposures to respirable crystalline silica below the PEL may still be hazardous, and making employees aware of such exposures may encourage them to take whatever steps they can, as individuals, to reduce their exposures as much as possible.

Employee Notification of Assessment Results (Construction)

§ 1926.1153(d)(2)(vi)(A) -- Within five working days after completing an exposure assessment in accordance with paragraph (d)(2) of this section, the employer shall individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees.

§ 1926.1153(d)(2)(vi)(B) - Whenever an exposure assessment indicates that employee exposure is above the PEL, the employer shall describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

Purpose: The shorter time period for notification provided in the standard for construction addresses the short duration of operations and employment that often occur in this industry sector. Also see the purpose statement above for § 1910.1053(d)(6).

B. Signs

The general industry standard requires the employer to post signs at all entrances to regulated areas that bear the legend specified in paragraph (j)(2).

§ 1910.1053(e)(2)(ii) -- The employer shall post signs at all entrances to regulated areas that bear the legend specified in paragraph (j)(2) of this section.

§ 1910.1053(j)(2) -- Signs. The employer shall post signs at all entrances to regulated areas that bear the following legend:

DANGER

RESPIRABLE CRYSTALLINE SILICA
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
WEAR RESPIRATORY PROTECTION IN THIS AREA
AUTHORIZED PERSONNEL ONLY

The standard provides specific language for the required signs. Therefore, the agency is exempted from estimating the burden hours and costs of this provision under 5 CFR 1320.3(c)(2).

C. Written Exposure Control Plan

1. Establishing and Implementing the Written Exposure Control Plan

Establishing and Implementing the Written Exposure Control Plan (General Industry)

§ 1910.1053(f)(2)(i) -- The employer shall establish and implement a written exposure control plan that contains at least the following elements:

§ 1910.1053(f)(2)(i)(A) -- A description of the tasks in the workplace that involve exposure to respirable crystalline silica;

§ 1910.1053(f)(2)(i)(B) -- A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to respirable crystalline silica for each task; and

§ 1910.1053(f)(2)(i)((C) -- A description of the housekeeping measures used to limit employee exposure to respirable crystalline silica.

Establishing and Implementing the Written Exposure Control Plan (Construction)

§ 1926.1153(g)(1) -- The employer shall establish and implement a written exposure control plan that contains at least the following elements:

§ 1926.1153(g)(1)(i) -- A description of the tasks in the workplace that involve exposure to respirable crystalline silica;

§ 1926.1153(g)(1)(ii) -- A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to respirable crystalline silica for each task;

§ 1926.1153(g)(1)(iii) -- A description of the housekeeping measures used to limit employee exposure to respirable crystalline silica; and

§ 1926.1153(g)(1)(iv) -- A description of the procedures used to restrict access to work areas, when necessary, to minimize the number of employees exposed to respirable crystalline silica and their level of exposure, including exposures generated by other employers or sole proprietors.

Purpose: Even if exposures are below the PEL due to the use of engineering controls or work practices, a systematic approach for ensuring proper function of engineering controls and effective work practices is crucial for ensuring that those controls and practices remain effective. Thus, a written exposure control plan can prevent overexposures from occurring. Requiring employers to articulate conditions resulting in exposure and how those exposures will be controlled will help to ensure that they have a complete understanding of the controls needed to comply with the rule. A written exposure control plan also ensures that employers comprehensively and consistently protect their employees. Even in cases where employees are well trained, the written plan can help to ensure that controls are consistently used and become part of employees' routine skill sets. Employers could also use the plans to ensure that maintenance checks are routinely performed, and optimal conditions are maintained. In addition, written exposure control plans are a useful method for communicating protections to employees.

Paragraph (f)(2)(i)(A) (paragraph (g)(1)(i)) of the standard for construction) requires a description of tasks involving exposures to respirable crystalline silica. It is important for employers to consistently identify tasks resulting in exposure to ensure that appropriate employee protections are applied when needed.

The written exposure control plan must address controls, work practices, and respiratory protection used to manage exposures for each task (paragraph (f)(2)(i)(B) of the standard for general industry, (paragraph (g)(1)(ii) of the standard for construction) to ensure that exposures to respirable crystalline silica hazards are consistently controlled. Therefore, written exposure control plans must include information such as types of controls used (e.g., dust collector with manufacturer's recommended air flow and a filter with 99 percent efficiency), effective work practices (e.g., positioning local exhaust over the exposure source), and if required, appropriate respiratory protection (e.g., a respirator with an assigned protection factor (APF) of 10) for each task. The requirement is consistent with the exposure control plans in the ASTM standards that address implementation of engineering controls and work practices to reduce respirable crystalline silica exposures (Document ID 1466, p. 2; 1504, p. 2). It is also consistent with OSHA's Job Hazard Analysis approach, which is recommended by NIOSH as a model for the exposure control plan and calls for a description of controls (Document ID 2177, Attachment B, p. 16; OSHA document 3071, Revised 2002, Appendix 1 and 3).

Paragraph (f)(2)(i)(C) of the standard for general industry and Shipyards (paragraph (g)(1)(iii) of the l standard for construction) requires a description of housekeeping measures used to limit employee exposures to respirable crystalline silica. Housekeeping needs to be addressed in the written exposure control plan because cleaning accumulations of respirable crystalline silica dust

from surfaces can help to reduce exposures. Also, it is important to ensure that employees are protected from respirable crystalline silica dust that can become airborne while performing housekeeping activities. Ensuring adequate and safe housekeeping methods helps to consistently control exposures and hazards related to respirable crystalline silica. Housekeeping is another type of work practice to be used to limit employee exposures, and thus, it is consistent with the written exposure control plans in the ASTM standards, which call for implementing work practices to decrease exposures (Document ID 1466, p. 2; 1504, p. 2). It is also consistent with OSHA's Job Hazard Analysis approach, which is recommended by NIOSH as a model for the exposure control plan and calls for a description of controls (Document ID 2177, Attachment B, pp. 16-17; OSHA document 3071, Revised 2002, Appendix 1 and 3).

Paragraph (g)(1)(iv) of the standard for construction requires a description of the procedures used to restrict access to work areas, when necessary, to limit the number of employees exposed and their exposure levels, including exposures generated by other employers or sole proprietors (i.e., self-employed individuals). Restricting access is necessary where respirator use is required under Table 1 of the construction standard or when an exposure assessment reveals that exposures are in excess of the PEL. The competent person[3], who is designated by the employer to implement the written exposure control plan under paragraph (g)(4) of the standard for construction, could further identify situations where limiting access is necessary. For example, limiting access is necessary when an employer or sole proprietor exposes another company's employees to excessive respirable crystalline silica levels that cannot be controlled.

2. Reviewing, Evaluating, and Updating the Written Exposure Control Plan

§ 1910.1053(f)(2)(ii) and 1926.1153(g)(2) -- The employer shall review and evaluate the effectiveness of the written exposure control plan at least annually and update it as necessary.

Purpose: The written exposure control plan needs to be periodically reviewed and updated if needed because work conditions can change (e.g., the employer purchases a new type of equipment). A written exposure control plan will not likely need to be updated often because employees tend to use the same equipment to perform the same tasks at many locations. However, a yearly review is needed to ensure that all current scenarios are captured in the plan.

3. Availability of Written Exposure Control Plan

§§ 1910.1053(f)(2)(iii) and 1926.1153(g)(3) -- The employer shall make the written exposure control plan readily available for examination and copying, upon request, to each employee covered by this section, their designated representatives, the Assistant Secretary and the Director.

[3] Note: Section (b) of the construction standard, "Definitions" indicates: "Competent person" means an individual who can identify existing and foreseeable respirable crystalline silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them. The competent person must have the knowledge and ability necessary to fulfill the responsibilities set forth in paragraph (g) of this section.

Purpose: A written exposure control plan is an effective method for communicating protections to employees and their designated representatives. Making the written plan available to employees and their designated representatives upon request empowers and protects employees by giving them and their representatives the information to question their employers if controls are not fully and properly implemented or maintained. Similarly, making written exposure control plans readily available to OSHA or NIOSH allows them the opportunity to verify effectiveness of employee protections.

Note: OSHA would only review records in the context of an investigation of a particular employer to determine compliance with the Standard. These activities are outside the scope of the PRA. See 5 CFR 1320.4(a)(2). Therefore, the agency has no annualized cost associated with enforcing the standard. While NIOSH may use records collected from employers for research purposes, the agency does not anticipate NIOSH to request employers to make available records during the approval period. Therefore, the burden for the employer to make this information available to NIOSH is zero.

D. Cross-reference to Subpart I

Two sections under subpart I Personal Protective Equipment contain information collection requirements, 29 CFR 1915.151, General Requirements and 1915.154, Respiratory Protection; the information collection requirements contained in these sections are approved by OMB in two separate ICRs titled Personal Protective Equipment (PPE) for Shipyard Employment (29 CFR part 1915, subpart I), OMB Control number 1218-0215 and Respiratory Protection standard (29 CFR 1910.134) OMB Control number, 1218-099 respectively.

Subpart I, 29 CFR 1915.151 includes information collection requirements related to hazard assessments, which state that the employer must: (1) select the type of PPE that will protect the affected worker from the hazards identified in the occupational hazard assessment; (2) communicate selection decisions to affected workers; (3) select PPE that properly fits each affected worker; and (4) verify that they performed the required occupational hazard assessment. The verification must contain the following information: occupation or trade assessed, the date(s) of the hazard assessment, and the name of the person performing the hazard assessment.

OSHA is not taking additional burden hours or costs related to these hazard assessment collections under Items 12 and 13 of this Supporting Statement because the agency does not anticipate new hazard assessments resulting from this standard. The agency has already accounted for the existing hazard assessment information collection requirements in the Personal Protective Equipment (PPE) for Shipyard Employment (29 CFR part 1915, subpart I) ICR.

Subpart I also requires employers engaged in Shipyards work to comply with the general industry respirator standard at 29 CFR 1910.134. There are several information collection requirements required as part of the general industry respirator program requirements, and these

are described and addressed below in Section E., "Respiratory Protection." As explained in Section E, OSHA is not taking additional burden hours or costs related to existing respirator use required by 29 CFR 1910.1053(f)(3) because the agency has already accounted for those information collection requirements in Respiratory Protection standard (29 CFR 1910.134), ICR. Costs for additional respirator use required by abrasive blaster helpers is addressed in Item 12 of this supporting statement, as noted in Section E.

E. Respiratory Protection (§§ 1910.1053(g) and 1926.1153(e))

1. §§ 1910.1053(g)(2) and 1926.1153(e)(2) -- Respiratory Protection Program.

§§ 1910.1053(g)(2) and 1926.1153(e)(2) -- Where respirator use is required by this section, the employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134.

The agency accounts for the collection of information requirements of the Respiratory Protection standard as it relates to respirable crystalline silica exposure in the Respiratory Protection standard ICR, OMB Control Number 1218-0099, unless otherwise accounted for in Items 12 and 13 in this Supporting Statement. In addition, OSHA is not taking additional burden hours or costs under Items 12 and 13 of this Supporting Statement for worker medical evaluations related to the administration of the medical questionnaire for respirator use and follow-up medical examination for respirator use, as required by the Respiratory Protection standard, because these information collection requirements are accounted for in section F of Item 12 of this Supporting Statement, "Medical Surveillance." Furthermore, the information collection requirements of the Respiratory Protection standard for storing and marking emergency-use respirators, certification of inspection records for emergency-use respirators, and maintenance of tags on compressors displaying sorbent-bed and filter change information are not applicable to the types of respirators that employers would use to comply with the standards.

Purpose: The respiratory protection program will ensure that respirators are properly used in the workplace and are effective in protecting employees. The program must include: procedures for selecting respirators for use in the workplace; medical evaluation of employees required to use respirators; fit-testing procedures for tight-fitting respirators; procedures for proper use of respirators in routine and reasonably foreseeable emergency situations; procedures and schedules for maintaining respirators; procedures to ensure adequate quality, quantity, and flow of breathing air for atmosphere-supplying respirators; training of employees in respiratory hazards to which they might be exposed and the proper use of respirators; and procedures for evaluating the effectiveness of the program.

F. Medical Surveillance (§§ 1910.1053(i) and 1926.1153(h))

1. Medical Surveillance – General.

Medical Surveillance – General. (General Industry)

§ 1910.1053(i)(1)(i) -- The employer shall make medical surveillance available at no cost to the employee, and at a reasonable time and place, for each employee who will be occupationally exposed to respirable crystalline silica at or above the action level for 30 or more days per year.[4]

Medical Surveillance – General. (Construction)

§ 1926.1153(h)(1)(i) -- The employer shall make medical surveillance available at no cost to the employee, and at a reasonable time and place, for each employee who will be required under this section to use a respirator under this section for 30 or more days per year.

Purpose: The purpose of medical surveillance for respirable crystalline silica is, where reasonably possible, 1) to determine if an employee can be exposed to respirable crystalline silica in his or her workplace without experiencing adverse health effects, or in other words, to determine if an employee has any condition, regardless of the cause, that might make him or her more sensitive to respirable crystalline silica exposure; 2) to identify respirable crystalline silica-related adverse health effects so that appropriate intervention measures can be taken; and 3) to determine the employee's fitness to use respirators. The inclusion of medical surveillance in this standard is consistent with Section 6(b)(7) of the Occupational Safety and Health (OSH) Act (29 U.S.C. 655(b)(7)) which requires that, where appropriate, medical surveillance programs be included in OSHA standards to determine whether the health of employees is adversely affected by exposure to the hazard addressed by the standard. Almost all other OSHA health standards have also included medical surveillance requirements.

The health effects of respirable crystalline silica are most likely to occur from repeated exposures and OSHA maintains that a trigger for exposure lasting 30-days is an administratively convenient trigger consistent with other OSHA standards, and it is appropriate to exclude employees who are only exposed occasionally and are less likely to experience adverse health effects. The 30-day trigger strikes a reasonable balance between including employees who are regularly exposed and excluding employees who are only occasionally exposed. It is consistent with OSHA standards for construction, including asbestos (29 CFR 1926.1101), cadmium (29 CFR 1926.1127), chromium (VI) (29 CFR 1926.1126), and lead (29 CFR 1926.62.)

2. Initial Medical Examination

§§ 1910.1053(i)(2) and 1926.1153(h)(2) -- The employer shall make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has

[4] Note: In the final rule for general industry, "Dates," paragraph (l)(4), provides that the medical surveillance obligations in paragraph (i)(1)(i) shall commence on June 23, 2018, for employees who will be occupationally exposed to respirable crystalline silica above the PEL for 30 or more days per year. Those obligations shall commence on June 23, 2020, for employees who will be occupationally exposed to respirable crystalline silica at or above the action level for 30 or more days per year.

received a medical examination that meets the requirements of this section within the last three years. The examination shall consist of:

§§ 1910.1053(i)(2)(i) and 1926.1153(h)(2)(i) -- A medical and work history, with emphasis on: past, present, and anticipated exposure to respirable crystalline silica, dust, and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (e.g., shortness of breath, cough, wheezing); history of tuberculosis; and smoking status and history;

§§ 1910.1053(i)(2)(ii) and 1926.1153(h)(2)(ii) -- A physical examination with special emphasis on the respiratory system;

§§ 1910.1053(i)(2)(iii) and 1926.1153(h)(2)(iii) -- A chest X-ray (a single posteroanterior radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems), interpreted and classified according to the International Labour Office (ILO) International Classification of Radiographs of Pneumoconioses by a NIOSH-certified B Reader.

§§ 1910.1053(i)(2)(iv) and 1926.1153(h)(2)(iv) -- A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV_1) and FEV_1/FVC ratio, administered by a spirometry technician with current certificate from a NIOSH-approved spirometry course;

§§ 1910.1053(i)(2)(v) and 1926.1153(h)(2)(v) -- Testing for latent tuberculosis infection; and

§§ 1910.1053(i)(2)(vi) and 1926.1153(h)(2)(vi) -- Any other tests deemed appropriate by the PLHCP.

Purpose: The requirement for an initial examination within 30 days of assignment provides a health baseline for future reference and lets employees know of any conditions that could increase their sensitivity to respirable crystalline silica exposure.

OSHA requires medical and work histories because they are efficient and inexpensive means for collecting information that can aid in identifying individuals who are at risk due to hazardous exposures. Recording symptoms is important because, in some cases, symptoms indicating onset of disease can occur in the absence of abnormal laboratory test findings. In addition, aspects of the physical exam, such as visual inspection, palpation, tapping, and listening with a stethoscope, allow the PLHCP to detect abnormalities in chest shape or lung sounds that are associated with compromised lung function; also, the physical exam allows the employee to have a face-to-face interaction with the clinician to talk about symptoms or other concerns.

Pulmonary function testing is useful for obtaining information about the employee's lung capacity and expiratory flow rate and determining baseline lung function status upon which to

assess any subsequent lung function changes. The test for latent tuberculosis infection (paragraph (i)(2)(v) of the standard for general industry and Shipyards, paragraph (h)(2)(v) of the standard for construction) is included because exposure to respirable crystalline silica increases the risk of a latent tuberculosis infection becoming active, even in workers who do not have silicosis. This places not only the employee, but also his or her coworkers at increased risk of acquiring this potentially fatal disease.

The provision for "any other tests," gives the examining PLHCP the flexibility to determine additional tests deemed to be appropriate.

3. Periodic Medical Examination

Periodic Medical Examination (General Industry)

§ 1910.1053(i)(3) -- The employer shall make available medical examinations that include the procedures described in paragraph (i)(2) of this section (except paragraph (i)(2)(v)) at least every three years, or more frequently if recommended by the PLHCP.

Periodic Medical Examination (Construction)

§ 1926.1153(h)(3) -- The employer shall make available medical examinations that include the procedures described in paragraph (h)(2) of this section (except paragraph (h)(2)(v)) at least every three years, or more frequently if recommended by the PLHCP.

Purpose: One of the main goals of periodic medical surveillance for employees exposed to respirable crystalline silica is to detect adverse health effects, such as silicosis and other non-malignant lung diseases, at an early stage so that interventions can be taken to improve health. Consistent with the NIOSH and ATS comments, OSHA finds that medical examinations offered at a frequency of at least every three years are appropriate for most employees exposed to respirable crystalline silica considering the slow progression of most silica-related diseases. This decision is consistent with the ASTM standards (Section 4.6.5), which recommend that medical surveillance be conducted no less than every three years.

4. Information Provided to the PLHCP

§§ 1910.1053(i)(4) and 1926.1153(h)(4) -- The employer shall ensure that the examining PLHCP has a copy of this standard, and shall provide the PLHCP with the following information:

§§ 1910.1053(i)(4)(i) and 1926.1153(h)(4)(i) -- A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica;

§§ 1910.1053(i)(4)(ii) and 1926.1153(h)(4)(ii) -- The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica;

§§ 1910.1053(i)(4)(iii) and 1926.1153(h)(4)(iii) -- A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and

§§ 1910.1053(i)(4)(iv) and 1926.1153(h)(4)(iv) -- Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.

Purpose: This information will aid the PLHCP in the evaluation of the employee's health in relation to assigned duties and fitness to use personal protective equipment. The information that the employer is to provide to the PLHCP, along with information collected as part of the exposure and work history, is relevant because it can assist the PLHCP in determining if symptoms or a health finding may be related to respirable crystalline silica exposure, or the employee may be more sensitive to exposure. The information will also aid the PLHCP's evaluation of the employee's health in relation to recommended limitations on the employee's use of respirators or exposure to respirable crystalline silica.

5. PLHCP's Written Medical Report for the Employee

§§ 1910.1053(i)(5) and 1926.1153(h)(5) -- The employer shall ensure that the PLHCP explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of each medical examination performed. The written report shall contain:

§§ 1910.1053(i)(5)(i) and 1926.1153(h)(5)(i) -- A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment;

§§ 1910.1053(i)(5)(ii) and 1926.1153(h)(5)(ii) -- Any recommended limitations on the employee's use of respirators;

§§ 1910.1053(i)(5)(iii) and 1926.1153(h)(5)(iii) -- Any recommended limitations on the employee's exposure to respirable crystalline silica; and

§§ 1910.1053(i)(5)(iv) -- A statement that the employee should be examined by a specialist (pursuant to paragraph (i)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

§ 1926.1153(h)(5)(iv) -- A statement that the employee should be examined by a specialist (pursuant to paragraph (h)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

Note: To aid PLHCPs regarding compliance with the medical surveillance provisions of the standards, a sample written medical report to provide to the employee is included in Appendix B.

Purpose: The requirements for the PLHCP's report for the employee are consistent with the overall goals of medical surveillance: to let the employee know if he or she can be exposed to respirable crystalline silica in his or her workplace without experiencing adverse health effects; to identify respirable crystalline silica-related adverse health effects so that appropriate intervention measures can be taken; and to determine the employee's fitness to use personal protective equipment, such as respirators. By providing the medical report to employees, those who might be at increased risk of health impairment from respirable crystalline silica exposure will be able to consider interventions, with guidance from the PLHCP. The requirement for a verbal explanation allows the employee to confidentially ask questions or discuss concerns with the PLHCP. The requirement for a written report ensures that the employee receives a record of all findings. In addition, giving the employee the written report will ensure the employee understands medical conditions that require follow-up and could affect decisions of where and how to work; also, employees would be able to provide the written report to future health care providers.

6. PLHCP's Written Medical Opinion for the Employer.

§§ 1910.1053(i)(6)(i) and 1926.1153(h)(6)(i) -- The employer shall obtain a written medical opinion from the PLHCP within 30 days of the medical examination. The written opinion shall contain only the following:

§§ 1910.1053(i)(6)(i)(A) and 1926.1153(h)(6)(i)(A) -- The date of the examination;

§§ 1910.1053(i)(6)(i)(B) and 1926.1153(h)(6)(i)(B) -- A statement that the examination has met the requirements of this section; and

§§ 1910.1053(i)(6)(i)(C) and 1926.1153(h)(6)(i)(C) -- Any recommended limitations on the employee's use of respirators.

§§ 1910.1053(i)(6)(ii) and 1926.1153(h)(6)(ii) -- If the employee provides written authorization, the written opinion shall also contain either or both of the following:

§§ 1910.1053(i)(6)(ii)(A) and 1926.1153(h)(6)(ii)(A) -- Any recommended limitations on the employee's exposure to respirable crystalline silica;

§§ 1910.1053(i)(6)(ii)(B) -- A statement that the employee should be examined by a specialist (pursuant to paragraph (i)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

§ 1926.1153(h)(6)(ii)(B) -- A statement that the employee should be examined by a specialist (pursuant to paragraph (h)(7) of this section) if the chest X-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

§ 1910.1053(i)(6)(iii) -- The employer shall ensure that each employee receives a copy of the written medical opinion described in paragraph (i)(6)(i) and (ii) of this section within 30 days of each medical examination performed.

§ 1926.1153(h)(6)(iii) -- The employer shall ensure that each employee receives a copy of the written medical opinion described in paragraph (h)(6)(i) and (ii) of this section within 30 days of each medical examination performed.

Note: The written authorization requirements in 1910.1053(i)(6)(ii) and 1926.1153(h)(6)(ii) are performance-oriented; no format is required to be obtained by the PLHCP. The agency expects that the written authorization could easily be accomplished by the PLHCP using a form that allows the employee to clarify what information the employee is authorizing to be released to the employer, by checking, initialing, or otherwise indicating which (if any) of these items the employee wishes to be included in the opinion to the employer. A sample written authorization form and written medical opinion for the employer are included in Appendix B.

The burden hours and costs related to a PLHCP (or specialist) obtaining this written authorization from the employee is contained in the general medical examination and recordkeeping burden hours and costs in the Supporting Statement. The cost for the employer to make the PLHCP (or specialist) aware of the written authorization requirements of the standards is included in the general cost to the employer to provide information to the PLHCP (or specialist).

Purpose: The date and statement about the examination meeting the requirements of this section are to provide both the employer and employee with evidence that requirements for medical surveillance are current. Employees would be able to show this opinion to future employers to demonstrate that they have received the medical examination. The agency notes that the limitation on respirator use is consistent with information provided to the employer under the respiratory protection standard (29 CFR 1910.134).

OSHA is convinced that routinely including recommended limitations on respirable crystalline silica exposure and specialist referrals in written medical opinions provided to the employer could adversely affect employees' willingness to participate in medical surveillance. If an

employee does not sign an authorization, then the employer will not know and cannot facilitate the referral to a Specialist and is not required to pay for the Specialist's examination. In the rare case where an employee is diagnosed with acute or accelerated silicosis, co-workers are likely to be at significant risk of developing those diseases because of inadequate controls in the workplace. In this case, the PLHCP and/or Specialist should explain this concern to the affected employee and make a determined effort to obtain written authorization from the employee so that the PLHCP and/or Specialist can contact the employer.

7. Additional Examinations

§§ 1910.1053(i)(7)(i) and 1926.1153(h)(7)(i) -- If the PLHCP's written medical opinion indicates that an employee should be examined by a specialist, the employer shall make available a medical examination by a specialist within 30 days after receiving the PLHCP's written opinion.

Purpose: The requirement for examination by a specialist ensures that employees with abnormal findings can be given the opportunity to be seen by a professional with expertise in pulmonary disease or occupational medicine, who can provide not only expert medical judgment, but also counseling regarding work practices and personal habits that could affect these individuals' respiratory health. The agency believes that the 30-day deadline will ensure that employees receive timely examinations.

Additional Examinations - Information Provided to the Specialist (General Industry)

§ 1910.1053(i)(7)(ii) -- The employer shall ensure that the examining specialist is provided with all of the information that the employer is obligated to provide to the PLHCP in accordance with paragraph (i)(4) of this section.

Additional Examinations - Information Provided to the Specialist (Construction)

§ 1926.1153(h)(7)(ii) -- The employer shall ensure that the examining specialist is provided with all of the information that the employer is obligated to provide to the PLHCP in accordance with paragraph (h)(4) of this section.

Purpose: The employer must provide the specialist with the same information that the employer provides to the original PLHCP. The reasons why the specialist should receive this information are the same as those for providing the information to the PLHCP. (See the purpose statement above for "Information Provided to the PLHCP.")

8. Additional Examinations - Specialist's Written Medical Report for the Employee

Additional Examinations - Specialist's Written Medical Report (General Industry)

§ 1910.1053(i)(7)(iii) -- The employer shall ensure that the specialist explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of the examination. The written report shall meet the requirements of paragraph (i)(5) (except paragraph (i)(5)(iv)) of this section.

Additional Examinations - Specialist's Written Medical Report (Construction)

§ 1926.1153(h)(7)(iii) -- The employer shall ensure that the specialist explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of the examination. The written report shall meet the requirements of paragraph (h)(5) (except paragraph (h)(5)(iv)) of this section.

Purpose: The reasons why the specialist is to give the employee this information is discussed above, under the requirements for the PLHCP's report. (See the purpose statement above for "PLHCP's Written Medical Report for the Employee.")

9. Additional Examinations - Specialist's Written Medical Opinion for the Employer

Additional Examinations - Specialist's Written Medical Opinion (General Industry)

§§ 1910.1053(i)(7)(iv) -- The employer shall obtain a written opinion from the specialist within 30 days of the medical examination. The written opinion shall meet the requirements of paragraph (i)(6) (except paragraph (i)(6)(i)(B) and (ii)(B)) of this section.

Additional Examinations - Specialist's Written Medical Opinion (Construction)

§ 1926.1153(h)(7)(iv) -- The employer shall obtain a written opinion from the specialist within 30 days of the medical examination. The written opinion shall meet the requirements of paragraph (h)(6) (except paragraph (h)(6)(i)(B) and (ii)(B)) of this section.

Purpose: The reasons why the specialist must provide this information to the employer are the same as those for the PLHCP and are addressed above. (See the purpose statement above for "PLHCP's Written Medical Opinion.")

G. Communication of Respirable Crystalline Silica Hazards to Employees (§§ 1910.1053(j) and 1926.1153(i))

1. Hazard Communication

§§ 1910.1053(j)(1) and 1926.1153(i)(1) -- The employer shall include respirable crystalline silica in the program established to comply with the Hazard Communication standard (HCS) (29 CFR 1910.1200). The employer shall ensure that each employee has access to labels on containers of

crystalline silica and safety data sheets. The employer shall ensure that at least the following hazards are addressed: Cancer, lung effects, immune system effects, and kidney effects.

In the Final Economic Analysis (FEA), the agency notes that there is an existing OSHA PEL for respirable crystalline silica that covers the same group of employers, and an existing OSHA hazard communication standard (HCS) that covers all workplace exposures, including respirable crystalline silica. Accordingly, the agency already accounts for the burden hours and costs associated with HCS compliance by manufacturing establishments and non-manufacturing establishments handling products potentially containing respirable crystalline silica under the Information Collection Request (ICR) for the HCS, OMB Control No. 1218-0072. Under that ICR, the burden hours and costs for new and existing establishments include developing written hazard communication programs, classifying hazards, revising, and sending labels, obtaining and maintaining Safety Data Sheets (SDSs), labeling shipping and in-plant containers, and employee access to written programs and SDSs.

Note: For a discussion of § 1910.1053(j)(2) – Signs, see Item 2. B., "Signs" above.

2. Employee Information and Training

Employee Information and Training (General Industry)

§ 1910.1053(j)(3)(i) -- The employer shall ensure that each employee covered by this section can demonstrate knowledge and understanding of at least the following:

§ 1910.1053(j)(3)(i)(A) -- The health hazards associated with exposure to respirable crystalline silica;

§ 1910.1053(j)(3)(i)(B) -- Specific tasks in the workplace that could result in exposure to respirable crystalline silica;

§ 1910.1053(j)(3)(i)(C) -- Specific measures the employer has implemented to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used;

§ 1910.1053(j)(3)(i)(D) -- The contents of this section; and

§ 1910.1053(j)(3)(i)(E) -- The purpose and a description of the medical surveillance program required by paragraph (i) of this section.

Employee Information and Training (Construction)

§ 1926.1153(i)(2)(i) -- The employer shall ensure that each employee covered by this section can demonstrate knowledge and understanding of at least the following:

§ 1926.1153(i)(2)(i)(A) -- The health hazards associated with exposure to respirable crystalline silica;

§ 1926.1153(i)(2)(i)(B) -- Specific tasks in the workplace that could result in exposure to respirable crystalline silica;

§ 1926.1153(i)(2)(i)(C) -- Specific measures the employer has implemented to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used;

§ 1926.1153(i)(2)(i)(D) -- The contents of this section;

§ 1926.1153(i)(2)(i)(E) -- The identity of the competent person designated by the employer in accordance with paragraph (g)(4) of this section; and

§ 1926.1153(i)(2)(i)(F) -- The purpose and a description of the medical surveillance program required by paragraph (h) of this section.

These knowledge/training requirements are not considered to be a collection of information under the PRA; therefore, no burden hours or costs are assessed for this activity under Items 12 or 13 of this Supporting Statement.

3. Making a Copy of the Standard Available to Employees

§§ 1910.1053(j)(3)(ii) and 1926.1153(i)(2)(ii) -- The employer shall make a copy of this section readily available without cost to each employee covered by this section.

OSHA is taking no burden hours or costs under Items 12 or 13 of this Supporting Statement for the requirement to make a copy of the standards available to affected workers. OSHA provides the employer with the language of the standards for disclosure. Therefore, in accordance with 5 CFR 1320.3(c)(2), this requirement does not fall within the definition of a collection of information because it is a public disclosure of information originally supplied by the Federal government to the employer for the purpose of disclosure.

H. Recordkeeping (§§ 1910.1053(k) and 1926.1153(j))

The standards' recordkeeping requirements are in accordance with Section 8(c) of the OSH Act (29 U.S.C. 657(c)), which authorizes OSHA to require employers to keep and make available records as necessary or appropriate for the enforcement of the Act, or for developing information regarding the causes and prevention of occupational accidents and illnesses.

Employers must maintain and provide access to air-monitoring data, objective data, and medical-surveillance records in accordance with OSHA's standard addressing access to worker-exposure and medical records (29 CFR 1910.1020). That standard, specifically 29 CFR 1910.1020(d), requires employers to ensure the preservation and retention of employee exposure and medical records.

1. Air-Monitoring Data Records

Air-Monitoring Data Records (General Industry)

§ 1910.1053(k)(1)(i) -- The employer shall make and maintain an accurate record of all exposure measurements taken to assess employee exposure to respirable crystalline silica, as prescribed in paragraph (d) of this section.

§ 1910.1053(k)(1)(ii) -- This record shall include at least the following information:

§ 1910.1053(k)(1)(ii)(A) -- The date of measurement for each sample taken;

§ 1910.1053(k)(1)(ii)(B) -- The task monitored;

§ 1910.1053(k)(1)(ii)(C) -- Sampling and analytical methods used;

§ 1910.1053(k)(1)(ii)(D) -- Number, duration, and results of samples taken;

§ 1910.1053(k)(1)(ii)(E) -- Identity of the laboratory that performed the analysis;

§ 1910.1053(k)(1)(ii)(F) -- Type of personal protective equipment, such as respirators, worn by the employees monitored; and

§ 1910.1053(k)(1)(ii)(G) – Name and job classification of all employees represented by the monitoring, indicating which employees were monitored.

Air-Monitoring Data Records (Construction)

§ 1926.1153(j)(1)(i) -- Air monitoring data. The employer shall make and maintain an accurate record of all exposure measurements taken to assess employee exposure to respirable crystalline silica, as prescribed in paragraph (d)(2) of this section.

§ 1926.1153(j)(1)(ii) -- This record shall include at least the following information:

§ 1926.1153(j)(1)(A) -- The date of measurement for each sample taken;

§ 1926.1153(j)(1)(B) -- The task monitored;

§ 1926.1153(j)(1)(C) -- Sampling and analytical methods used;

§ 1926.1153(j)(1)(D) -- Number, duration, and results of samples taken;

§ 1926.1153(j)(1)(E) -- Identity of the laboratory that performed the analysis;

§ 1926.1153(j)(1)(F) -- Type of personal protective equipment, such as respirators, worn by the employees monitored; and

§ 1926.1153(j)(1)(G) – Name and job classification of all employees represented by the monitoring, indicating which employees were monitored.

Purpose: OSHA believes that exposure records are necessary and appropriate for protection of worker health, enforcement of the standards, and development of information regarding the causes and prevention of occupational illnesses. Also, the agency and others can use the records to identify illnesses and deaths that may be attributable to respirable crystalline silica exposure, evaluate compliance programs, and assess the efficacy of the standards. Establishing and maintaining records of air-monitoring data permit employers, workers, OSHA, and other interested parties (i.e., industry trade associations and worker unions or comparable organizations) to identify the levels, durations, and extent of respirable crystalline silica exposure. The records will allow interested parties to determine if existing controls are protecting workers or whether additional controls are necessary to provide the required protection. These records also allow OSHA to ascertain whether employers are complying with the standards, thereby ensuring that workers are receiving adequate protection from respirable crystalline silica exposure.

The requirements of the provision generally are consistent with those requirements found in other OSHA standards, such as Methylene Chloride (29 CFR 1910.1052) and Chromium (VI) (29 CFR 1910.1026). The additional requirement of the identity of the laboratory that performed the exposure analysis is included because analysis of crystalline silica samples must conform with the requirements listed in each standard (i.e., in Appendix A), and that can only be determined by knowing the identity of the laboratory that performed the analysis.

Air-Monitoring Data Records - Maintenance and Availability

§§ 1910.1053(k)(1)(iii) and 1926.1153(j)(1)(iii). The employer shall ensure that exposure records are maintained and made available in accordance with 29 CFR 1910.1020.

The costs and burden hours associated with compliance with 29 CFR 1910.1020 are taken in the Access to Employee Exposure and Medical Records ICR, OMB Number 1218-0065.

Purpose: Employers must maintain exposure records, and make them available, in accordance with 29 CFR 1910.1020. OSHA considers air-monitoring data to be a worker-exposure record that employers must maintain for at least 30 years in accordance with 29 CFR 1910.1020(d)(1)(ii).

The maintenance and access provisions incorporated from 29 CFR 1910.1020 ensure that records are available to workers so that they may examine the employer's exposure assessments and assure themselves that they are receiving adequate protection. Moreover, compliance with the requirement to maintain records of exposure data will enable the employer to show, at least for the duration of the retention-of-records period, that the exposure assessment was accurate and conducted in an appropriate manner. A lengthy record-retention period is necessary because of the long latency period commonly associated with silica-related diseases. Furthermore, determining causality of disease in workers is aided by, and in some cases, requires examining present and past exposure data, as well as the results of present and past medical examinations.

2. Objective Data Records

Objective Data Records (General Industry)

§ 1910.1053(k)(2)(i) -- The employer shall make and maintain an accurate record of all objective data relied upon to comply with the requirements of this section.

§ 1910.1053(k)(2)(ii) -- This record shall include at least the following information:

§ 1910.1053(k)(2)(ii)(A) -- The crystalline silica-containing material in question;

§ 1910.1053(k)(2)(ii)(B) -- The source of the objective data;

§ 1910.1053(k)(2)(ii)(C) -- The testing protocol and results of testing;

§ 1910.1053(k)(2)(ii)(D) -- A description of the process, task, or activity on which the objective data were based; and

§ 1910.1053(k)(2)(ii)(E) -- Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

Objective Data Records (Construction)

§ 1926.1153(j)(2)(i) -- The employer shall make and maintain an accurate record of all objective data relied upon to comply with the requirements of this section.

§ 1926.1153(j)(2)(ii) -- This record shall include at least the following information:

§ 1926.1153(j)(2)(ii)(A) -- The crystalline silica-containing material in question;

§ 1926.1153(j)(2)(ii)(B) -- The source of the objective data;

§ 1926.1153(j)(2)(ii)(C) -- The testing protocol and results of testing;

§ 1926.1153(j)(2)(ii)(D) -- A description of the process, task, or activity on which the objective data were based; and

§ 1926.1153(j)(2)(ii)(E) -- Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

Purpose: Since the standard allows objective data to be used to exempt the employer from monitoring requirements or to provide a basis for selection of respirators, OSHA considers it critical that the use of objective data be documented. As authorized in the standard, reliance on objective data is intended to provide the same degree of assurance that employer monitoring of employee exposures by taking air samples does. The specified content elements are required to ensure that the records can demonstrate to OSHA a reasonable basis for the conclusions drawn by the employer from the objective data.

Objective Data Records – Maintenance and Availability

§§ 1910.1053(k)(2)(iii) and 1926.1153(j)(2)(iii) -- The employer shall ensure that objective data are maintained and made available in accordance with 29 CFR 1910.1020.

Purpose: OSHA considers objective data to be a worker-exposure record that employers must maintain for at least 30 years in accordance with 29 CFR 1910.1020(d)(1)(ii). (See the purpose statement above for paragraph (j)(1)(iii) in this section of this Supporting Statement.)

3. Medical Surveillance Records

Medical Surveillance Records (General Industry)

§ 1910.1053(k)(3)(i) -- The employer shall make and maintain an accurate record for each employee covered by medical surveillance under paragraph (i) of this section.

§ 1910.1053(k)(3)(ii) -- The record shall include the following information about the employee:

§ 1910.1053(k)(3)(ii)(A) – Name;

§ 1910.1053(k)(3)(ii)(B) -- A copy of the PLHCPs' and specialists' written medical opinions; and

§ 1910.1053(k)(3)(ii)(C) -- A copy of the information provided to the PLHCPs and specialists.

Medical Surveillance Records (Construction)

§ 1926.1153(j)(3)(i) -- The employer shall make and maintain an accurate record for each employee covered by medical surveillance under paragraph (h) of this section.

§ 1926.1153(j)(3)(ii) -- The record shall include the following information about the employee:

§ 1926.1153(j)(3)(ii)(A) – Name;

§ 1926.1153(j)(3)(ii)(B) -- A copy of the PLHCPs' and specialists' written medical opinions; and

§ 1926.1153(j)(3)(ii)(C) -- A copy of the information provided to the PLHCPs and specialists.

Purpose: OSHA believes that medical-surveillance records, like exposure records, are necessary and appropriate for protection of worker health, enforcement of the standards, and development of information regarding the causes and prevention of occupational illnesses. Worker access to medical-surveillance records helps protect workers because such records contribute to the evaluation of workers' health and enable workers and their health care providers to make informed health care decisions. Finally, the agency and others can use the records to identify illnesses and deaths that may be attributable to respirable crystalline silica exposure, evaluate compliance programs, and assess the efficacy of the standards.

Medical Surveillance Records - Maintenance and Availability

§§ 1910.1053(k)(3)(iii) and 1926.1153(j)(3)(iii). The employer shall ensure that medical records are maintained and made available in accordance with 29 CFR 1910.1020. [5]

[5] As noted in the final rule, pursuant to 29 CFR 1910.1020(d)(1)(i)(C), medical records of employees who have worked for less than one year for the employer need not be retained beyond the term of employment if they are provided to the employee upon the termination of employment. This exception allows employers flexibility and the option not to retain medical records in these circumstances (53 FR 38140, 38153-38155 (9/29/88)). This provision greatly reduces the recordkeeping burden on employers of short-term employees, including many construction employees covered by this rule. Neither this rule nor 29 CFR 1910.1020 prohibits employers from keeping the medical records of employees who worked less than one year, and some employers may choose to keep the records. Employers have the option to keep records in electronic or paper form.

The employer is responsible for the maintenance of records in his or her possession (e.g., the written medical opinion described in paragraph (i)(6) of the standard for general industry and shipyards (paragraph (h)(6) of the standard for construction)). The employer is also responsible for ensuring the retention of records in the possession of the PLHCP (e.g., the written medical report described in paragraph (i)(5) of the standard for general industry and shipyards (paragraph (h)(5) of the standard for construction)) that are created pursuant to this rule's medical surveillance requirements. This responsibility, which derives from 29 CFR 1910.1020(b), means that employers must ensure that the PLHCP retains a copy of medical records for the employee's duration of employment plus 30 years. The employer can generally fulfill this obligation by including the retention requirement in the agreement between the employer and the PLHCP.

The costs and burden hours associated with compliance with 29 CFR 1910.1020 are taken in the Access to Employee Exposure and Medical Records ICR, OMB Number 1218-0065.

Purpose: Employers must maintain medical records for at least the duration of employment plus 30 years, in accordance with 29 CFR 1910.1020(d)(1)(i). (See purpose statement above for paragraphs (k)(1)(iii) and (j)(1)(iii) in this section of this Supporting Statement.)

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 to adopt this means of collection. Also, describe any consideration of using information technology to reduce the burden.

Employers may use improved information technology when establishing and maintaining the required records. The agency wrote the collection of information requirements of the standards in performance-oriented language, i.e., in terms of what data to collect, not how to record the data.

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

The information collection requirements in the standards are specific to each employer and worker involved, and no other source or agency duplicates these requirements or can make the required information available to the agency (i.e., the required information is available only from employers).

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

The agency offers various materials to assist employers in understanding and complying with the standards. These include guidance materials such as fact sheets and other summary materials on the standards; an OSHA dedicated silica webpage that contains outreach and compliance assistance products; and a small business compliance guide to provide additional guidance and ease familiarization and compliance with the standards.

Medical surveillance for a transient workforce may be challenging, especially for small companies. The requirement to offer medical examinations every three years reduces these costs and burdens considerably.

"Methods of compliance," Table 1 of the construction standard provides a list of construction

tasks that expose workers to crystalline silica, as well as engineering and work-practice controls that reduce those exposures. Employers are not required to develop exposure assessment records for employees performing Table 1 of the construction standard tasks if they use the controls on Table 1 of the construction standard.

6. Describe the consequences 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.

The information collection frequencies specified by the standards are the minimum frequencies that the agency believes are necessary to ensure that employers and OSHA can effectively monitor the exposure and health status of workers, thereby preventing serious illness or death resulting from hazardous respirable crystalline silica exposure.

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 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.**

Under paragraph (d)(6)(1) of the general industry standard, employers must inform workers, in writing or by posting, of the exposure-assessment results no later than 15 working days after completing the assessment. Under paragraph (d)(2)(vi)(A) of the construction standard, employers must inform workers, in writing or by posting, of the exposure-assessment results no later than 5 working days after completing the assessment. If these results indicate that a worker's exposures are above the PEL, the notification must state what corrective actions the employer is taking to reduce the worker's exposure to or below the PEL. Additionally, paragraphs (k)(1)(iii), (k)(2)(iii) and (k)(3)(iii) of the general industry standard and (j)(1)(iii), (j)(2)(iii) and (j)(3)(iii) of the construction standard require employers to maintain records for 30 years in accordance with 29 CFR 1910.1020. Item 2 of this Supporting Statement provides the rationale for these requirements.

8. If applicable, provide a copy and identify the data 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, 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.

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 December 17, 2025 (90 FR 58625) soliciting public comments on its proposed extension of the information collection requirements contained in the Respirable crystalline silica Standard (29 CFR 1910.1053) under Docket No. OSHA-2019-0002. This notice was part of a preclearance consultation program intended to provide those interested parties 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 above Standard.

When OSHA promulgated its silica standards in 2016, the agency provided an extensive economic analysis of the rule to comply with the OSH Act and additional statutes and Executive Orders. Pursuant to the Paperwork Reduction Act (PRA) of 1995, OSHA also provided additional analysis of the information collections required by the standards, the amount of time associated with each collection, and the overall cost expected for the information collections.

OSHA submitted its PRA analysis to the Office of Management and Budget (OMB) along with a Supporting Statement of over seventy pages (plus appendices) that included a detailed explanation of all of that information, and also solicited public comment on its estimates. This process required OSHA to demonstrate, among other things, that each collection of information is necessary for the proper performance of the functions of the agency and that the agency has taken steps to reduce the burden of the information collections. 44 U.S.C. 3506(c). Ultimately, after reviewing the supporting statement and public comments, OMB approved the collections of information for the requirements of the silica standards under OMB Control Number 1218-0266. The PRA requires periodic reviews and updates of the covered information collections. OSHA therefore publishes PRA extension requests and seeks public comment on those requests every few years, after which it sends the paperwork package to OMB for its approval. As part of this cycle, on December 17, 2025, OSHA published a Federal Register notice requesting public comments on the agency's proposal to extend the information collection requirements in the silica standards. As it did for the initial information collection request, OSHA provided an extensive supporting statement to accompany the proposed extension.

OSHA received one public comment in response to the request for an extension. The comment, which was submitted by the American Conservative Union Foundation's Center for Regulatory Freedom ("CRF"), argues that OSHA's PRA analysis is deficient in a number of ways (Docket No. OSHA-2019-0002-0009 ("Docket ID 0009")).

CRF makes multiple arguments related to OSHA's estimates of the costs incurred by firms to continue complying with the information collection requirements of the silica standards. CRF first claims that OSHA failed to offer a transparent analysis of those costs. CRF focuses primarily on the labor costs associated with the 8,186,825 burden hours OSHA estimated will be required to comply, arguing that the notice "does not provide a clear, accessible monetization of the labor hours embedded in the eight-million-hour estimate" (Docket ID 0009, p. 4). However, it is clear from CRF's comment that CRF did not review OSHA's supporting statement for the paperwork analysis, which describes that monetization in great detail.

As noted above, when OSHA publishes a request for comments on a PRA extension, the agency typically provides the underlying data and analysis in a supporting statement, which is placed in the same docket as the Federal Register notice. This case was no different – OSHA posted the supporting statement for the silica PRA extension request in the same docket as the Federal Register notice the day after the notice was published (*see* Docket No. OSHA-2019-0002-0008). The silica supporting statement is a 180-page document containing 50 pages of data and analysis solely on the number of burden hours and related monetization of those hours (*see* Docket ID 0008, Item 12, pp. 29-79). It provides "explicit, fully loaded wage assumptions and transparent monetization of the reported burden hours," as requested by CRF (Docket ID 0009, p. 4), leading to an estimated cost of $465,866,173 (Docket ID 0008, Item 12, p. 79). The supporting statement also addresses capital costs (apart from burden hours) incurred by employers complying with the standards, and includes an explanation of how costs changed from the prior OMB-approved paperwork package (*see* Docket ID 0008, Items 13 and 15, pp. 80-91). As

explained earlier, this supporting statement reflects updates to previous supporting statements, which have already gone through notice and comment and been approved by OMB. In any case, OSHA believes that the supporting statement provides exactly the type of detailed analysis and transparency that CRF stated were lacking from the extension notice.

CRF also made a number of other cost-related arguments, including that OSHA should apply small business multipliers, add opportunity costs, and estimate how compliance with the information collection requirements of the silica standards increases the costs of goods and services. Beyond being extremely difficult to implement, these types of analyses go beyond what the PRA actually requires. The PRA defines "burden" as the "time, effort, or financial resources" to generate or maintain the required information; "burden" covers tasks such as "reviewing instructions," "searching data sources," "completing and reviewing the collection of information," and "transmitting, or otherwise disclosing the information" (44 U.S.C. 3502(2); *see also* 5 CFR 1320.3(b)). Activities that are "usual and customary" for businesses are excluded from burden under the PRA (5 CFR 1320.3(b)(2)). Thus the extra analyses requested by CRF go beyond the parameters of the PRA.

OSHA does not apply a blanket small business "multiplier" to its information collection burden estimates, as CRF requested. Nor does OSHA apply a blanket small business multiplier to its cost estimates for compliance with the non-paperwork aspects of the standard. OSHA does, however, account in other ways for the size of the business when estimating average costs for PRA compliance (*see, e.g.,* Docket ID 0008, Item 12, Table C, and 13, pp. 62-79). OSHA's estimated costs for smaller businesses are often lower than for larger businesses, simply because small businesses have fewer silica-generating operations and fewer employees to protect. In the supporting statement, OSHA also details the actions OSHA has taken to reduce the burden on small businesses affected by the silica standards, from publishing a small business compliance guide to allowing compliance with Table 1 of the construction standard, which reduces paperwork requirements along with other compliance burdens (*see* Docket ID 0008, Item 5, p. 26).

CRF's final argument about costs relates to the burden hours estimate that OSHA provided, which underlies the monetized estimate of compliance costs. CRF claims that the increase of approximately 390,000 burden hours estimated in the extension package reflects "regulatory accumulation" and indicates the need for OSHA to reevaluate the silica standards' administrative burdens. CRF recognizes that the increase in burden hours derives largely from the expansion in the number of firms covered by the standards, as OSHA states in the Federal Register notice. However, CRF does not appear to acknowledge that as the number of firms covered by the silica standards increases, so does the number of workers who are exposed to silica and its potentially life-threatening health effects. The estimated increase in burden hours is therefore not an abstract accumulation of new requirements; it is simply the result of scaling the existing protections to match the growing worker population. Because the burden calculations depend on the number of required information collections, which are derived from the number of workers performing tasks that trigger information collection requirements, an increase in the number of

covered workers will typically result in an overall increase in burden, as occurred here. The increase in overall burden hours does not suggest that individual firms would need to take additional time to comply with the information collection requirements of the silica standards.

CRF also argues that OSHA is required, but failed, to demonstrate the benefits that flow from the silica standards' paperwork requirements, as distinct from the benefits that come from the PEL and engineering controls. What CRF requests not only goes beyond what OSHA is required to do to renew a paperwork package under the PRA, it goes beyond what OSHA was required to do to promulgate this standard in the first instance, either under the OSH Act or Executive Order 12866. Furthermore, deriving separate benefits from individual provisions would require reliable data that does not currently exist and likely cannot be produced. The paperwork requirements related to silica exposure are essential parts of the silica standards' regulatory scheme and their benefits are inextricably linked to the benefits of the required exposure limit and the controls used to get to that limit. For example, documentation of measured silica exposure levels allows employers to evaluate the effectiveness of various controls used to limit the amount of respirable silica in employees' breathing zones, which subsequently leads to increased protection for workers; the physical controls and the information collection requirements work hand-in-hand
.
Lastly, CRF suggests that OSHA consider changes to the documentation requirements of the silica standards in order to alleviate the paperwork burden. The organization suggests changes such as standardized reporting platforms and tiered or risk-based documentation requirements. These types of changes would likely require modifications to the silica standards themselves. Revisions to the silica standards would require notice and comment rulemaking; as with some of the other changes requested by the CRF, these suggested changes go beyond the confines of the PRA.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration 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 information collection requirements contained in the standards do not collect personally identifiable information; the Privacy Act does not apply to these requirements. Since medical records contain information that may be considered private, OSHA has taken steps to ensure that the data are kept private to the extent allowed by law. Rules of agency practice and procedure governing OSHA access to worker medical records are contained in 29 CFR 1913.10. The legal authority for these procedural regulations is found in sections 8(c)(1) and 8(g)(2) of the Occupational Safety and Health Act, 29 U.S.C. 657.

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 information collection requirements specified by the standards do not require the collection of 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 costs 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 in Item 13.**

RESPONDENT BURDEN-HOUR AND COST BURDEN DETERMINATIONS

OSHA based these determinations on the 2016 FEA, including the "Technical and Analytical Support for OSHA's Final Economic Analysis for Final Respirable Crystalline Silica Standard: Excel Spreadsheets Supporting the FEA" (Document ID 4248) which is available in the rulemaking docket.[6] The full explanation of these determinations is included in the FEA. Tables 1-28, referenced in this Supporting Statement, are included at the end of this document and may be downloaded from www.reginfo.gov. These tables list the detailed data from the FEA and spreadsheets used to make these determinations.

[6] The rulemaking docket is available at *http://www.regulations.gov* (Docket Number: OSHA-2010-0034).

For this ICR extension, the agency updated data sources and adopted several new methods to estimate affected establishments and employees and the costs they may incur. In the FEA and prior ICRs, the agency used respondent data from the 2012 U.S. Census Bureau County Business Patterns (CBP) survey (https://www.census.gov/programs-surveys/cbp.html). In this update, OSHA used 2022 establishment and employee data from the U.S. Census Bureau Statistics of U.S. Businesses (SUSB) (https://www.census.gov/data/tables/2022/econ/susb/2022-susb-annual.html).[7] SUSB was selected for this update because it provides a more comprehensive accounting of employees by employer size category than CBP. http://www.regulations.gov/

The agency maintained the estimates of exposure risk used in the FEA. In those instances, in which it was necessary to estimate the number of employees or establishments at a certain exposure level, the proportion of establishments or employees at that exposure level to total establishments or employees as used in the FEA was applied to the new SUSB data. This methodology preserved the underlying exposure data used in the FEA while extrapolating them to more current respondent data.

This ICR is also updated to reflect how cost and respondent estimates may have changed now that the rule has been implemented. In prior ICRs, cost estimates for provisions that would affect establishments or employees only during implementation of the rule included all affected establishments or employees. For instance, estimates of initial exposure assessments counted all establishments that may conduct initial exposure assessments of their existing workers. This ICR provides estimates for coming years, once those initial tests have already been completed. Where appropriate, those estimates have been updated to include only newly formed establishments and newly hired employees. Establishment formation rates are from the 2022 U.S. Census Bureau Business Formation Statistics (https://www.census.gov/econ/bfs/current/index.html). Hiring rates for new employees are from the Bureau of Labor Statistics, U.S. Department of Labor, Job Openings and Labor Turnover Survey (JOLTS), 2025 [date accessed: May 5, 2025. (JOLTS data is available at: https://www.bls.gov/jlt/data.htm).

The format of this supporting statement generally follows the approach used in the FEA. In the FEA, hydraulic fracturing is considered part of general industry, and these costs are primarily combined. The only exceptions occur in provisions where the hydraulic fracturing industry was determined to have a different compliance rate than general industry for a provision (or activity within a provision). In these instances, hydraulic fracturing is noted separately from general industry in terms of costs. Also, shipyards employment is included in the general industry estimates.

PRA Respondents

[7] 2022 SUSB Annual Data Tables by Establishment Industry - April 2025 (Last Revised: April 10, 2025)

In total, the ICR estimates that the standards affect 818,438 establishments[8] (referred to as "employers" below); this is the number of PRA respondents affected by this ICR.

Wage Rate Determinations

The agency utilized a standardized wage rate methodology similar to those used in other agency ICRs to calculate PRA labor costs. The agency determined the wage rate from the mean hourly wage earnings to represent the cost of employee time. For the relevant Standard Occupational Classification (SOC) category, OSHA used the wage rates reported in the Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Employment and Wage Statistics* (OEWS), May 2024 [date accessed: July 31, 2025]. (OEWS data is available at https://data.bls.gov/oes/#/industry/000000. To access a wage rate, select the year, "Occupation profiles," and the Standard Occupational Classification (SOC) code).

To derive the loaded hourly wage rate presented in the table below, the agency used data from the Bureau of Labor Statistics' (BLS) *Occupational Employment Statistics (OES*), as described in the paragraph above. Then, the agency applied to the wage rates a fringe benefit markup based on data found in Table 1 of the construction standard of the following BLS release: *Employer Costs for Employee Compensation – March 2025* released June 13, 2025 (https://www.bls.gov/news.release/archives/ecec_06132025.pdf). BLS reported that for private industry workers, fringe benefits accounted for 29.75 percent of total compensation and wages accounted for the remaining 70.3 percent. To calculate the loaded hourly wage for each occupation, the agency divided the mean hourly wage rate by 1 minus the fringe benefits.

Table A -- WAGE HOUR ESTIMATES

Occupational Title	SOC Code	Mean Hourly Wage Rate (A)	Fringe Benefits (B)	Loaded Hourly Wage Rate (C) = [(A)/(1-B)]
Human Resources Manager	11-3121	$77.15	0.297	$109.74
First-Line Supervisors of Production and Operating Workers (General Industry Supervisor)	51-1011	$35.84	0.297	$50.98
First-Line Supervisors of Construction Trades and Extraction Workers (Construction Supervisor) *	47-1011	$40.62	0.297	$57.78

[8]To calculate the number of PRA respondents, the agency followed the methodology used to estimate the 682,581 establishments shown in the "Rule Familiarization" ICR spreadsheet associated with the 2016 final rule ICR (ICR No.201509-1218-004) but using the 2019 SUSB data.

Table A -- WAGE HOUR ESTIMATES				
Occupational Title	**SOC Code**	**Mean Hourly Wage Rate (A)**	**Fringe Benefits (B)**	**Loaded Hourly Wage Rate (C) = [(A)/(1-B)]**
Production Occupations Worker	51-0000	$24.08	0.297	$34.25
Construction Trades Worker	47-2000	$29.60	0.297	$42.11

*Like the FEA, this ICR assumes the same wage rate for a "competent person" as the construction supervisor rate. Also, the loaded hourly wage rates may be slightly different due to rounding.

A. Exposure Assessment (§ 1910.1053(d)) and § 1926.1153(d)(2))

The standards set forth requirements for assessing worker exposures to respirable crystalline silica. The general industry standard requires employers to assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level. For employees engaged in a task listed on Table 1 of the construction standard, construction employers may choose whether to follow Table 1 of the construction standard or assess and limit the exposure of the employee to respirable crystalline silica in accordance with paragraph (d) of the construction standard. Employers may either follow a performance option (as specified in paragraph (d)(2)) of the general industry standard and paragraph (d)(2)(ii) of the construction standard or a scheduled monitoring option (as specified in paragraph (d)(3) of the general industry standard and paragraph (d)(2)(iii) of the construction standard).

Table B – Estimated Exposure Assessments					
Exposure Assessments [9]	**No. of Affected Workers[10]**	**Initial Exposure Assessments**	**Periodic**	**Additional (Periodic x 0.25)**	**Periodic and Additional**
General Industry					
	54,597				
At or above AL		13,649	-	-	-
At or above AL and at or below PEL (semi-annual)		-	26,457	6,614	33,071

[9]See Tables 1, 3 and 5 attached to this Supporting Statement for detailed exposure-assessment calculations.
[10]See Table 2 in excel spreadsheets.

Table B – Estimated Exposure Assessments					
Exposure Assessments	**No. of Affected Workers**	**Initial Exposure Assessments**	**Periodic**	**Additional (Periodic x 0.25)**	**Periodic and Additional**
Above PEL (quarterly)		-	107,117	26,779	133,896
Subtotal		13,649	133,574	33,393	166,967
Construction					
	14,348				
Workers undergoing Initial Assessment (At or above AL)		3,587	-	-	-
At or above AL and at or below PEL (semiannual)			234	59	293
Above PEL			16,728	4,182	20,910
Subtotal		3,587	16,962	4,241	21,203
Total	**68,945**	**17,236**	**150,536**	**37,634**	**188,170**

1. Performance Option (paragraph (d)(2) of § 1910.1053 and (d)(2)(ii) of § 1926.1153) *(Table1)*

The standards require employers to assess the 8-hour TWA exposure for each employee based on any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica.

Initial Exposure Assessments

OSHA assumes that those workers who were employed by a covered establishment at the time of the rule's promulgation have undergone initial exposure assessment with that establishment. For purposes of calculating the ongoing exposure-assessment burden hours and costs under the performance option, the agency estimates the number of newly covered workers exposed to silica at or above the action level (25 ug/m^3) that will undergo initial exposure assessments in general industry is 54,597. The FEA assumed that 1 percent of at-risk construction workers undergo initial exposure assessment, using the same assumption OSHA estimates there are 14,348 new at-risk construction workers. The FEA assumed that initial monitoring is undertaken for abrasive blasters and tunnel workers, as is periodic monitoring for those workers exposed above the action level. OSHA interprets the exposure assessment under the performance option as requiring first-year testing of at least one worker in each distinct job classification and work area

who is, or may reasonably be expected to be, exposed to airborne concentrations of respirable crystalline silica at or above the action level. The agency estimates there are four workers per work area; when conducting initial exposure assessments. Combining these two assumptions, OSHA estimates that of the 54,597 affected workers in general industry/shipyards, one in four (13,469) will undergo initial exposure assessments. OSHA applies the same assumptions to the construction industry, 25 percent of the 14,348 at-risk construction workers, for an estimate of 3,587 initial exposure assessments. A worker spends 30 minutes (30/60 hours) conducting all air exposure assessments (e.g., initial, additional, semiannual, quarterly).

General Industry:

Burden hours: [54,597 (workers)/4 (workers per area)] = 13,649 (assessments) x [1 (assessments per year) x 30/60 hours] = 6,825 hours

Cost: 6,825 hours x $34.25 per hour = $233,756

Construction:

Burden hours: [14,348 (workers)/4 (workers per area)] = 3,587 (assessments) x [1 (assessments per year) x 30/60 hours] = 1,794 hours

Cost: 1,794 hours x $42.11 per hour = $75,545

Total hours and costs for initial exposure monitoring:

Burden hours: 6,825 hours (General industry) + 1,794 hours (Construction) = 8,619 hours

Cost: $233,756 (General industry) + $75,545 (Construction) = $309,301

2. Scheduled Monitoring Option and Reassessment of Exposures (§ 1910.1053 (d)(3), (4) and § 1926.1153) (d)(2)(iii), (d)(2)(iv) *(Table 3)*

Under the scheduled monitoring option for general industry and construction, the employer must perform initial monitoring to assess the 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone (PBZ) air samples that reflect the exposures of employees on each shift, for each job classification, in each work area.

Under the scheduled monitoring option, requirements for periodic monitoring depend on the results of initial monitoring. If the initial monitoring indicates that employee exposures are below the action level, no further monitoring is required. If the most recent exposure monitoring reveals

employee exposures to be at or above the action level but at or below the PEL, the employer must repeat monitoring within six months of the most recent monitoring. If the most recent exposure monitoring reveals employee exposures to be above the PEL, the employer must repeat monitoring within three months of the most recent monitoring.

Under paragraph (d)(4) for the general industry/shipyards standard (paragraph (d)(2)(iv) of the construction standard), employers must reassess exposures whenever a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the action level, or when the employer has any reason to believe that new or additional exposures at or above the action level have occurred.

General Industry – Semiannual and Additional Exposure Assessments

The number of workers with exposures at or above the action level and at or below the PEL that are subject to periodic and additional exposure assessments under both standards is derived from the FEA. The agency estimates that 52,914 workers in general/shipyards industries are exposed at or above the action level but below the PEL. The agency assumes employers complete one representative, periodic exposure assessment for every four workers per work area for a total of 13,229 semiannual exposure assessments twice per year, or 26,547 of these assessments annually. In addition, OSHA assumes that 25 percent of these assessments[11] find that exposure is at or above the action level, necessitating 6,614 additional assessments, for a total of 33,071 assessments annually.

Burden hours: 33,071 assessment x 30/60 hours per assessment = 16,536 hours

Cost: 16,536 hours x $34.25 per hour = $566,358

General Industry: Quarterly and Additional Exposure Assessments

OSHA estimates that 107,117 workers in general industry/shipyards have exposures above the PEL, and these employers conduct quarterly monitoring. These workers are wearing respirators. Employers conduct one quarterly assessment per work crew of 4 employees (107,117 workers divided by 4, equals 26,779 quarterly exposure assessments). To estimate the annual number of these assessments, the number of quarterly assessments is multiplied by four for a total of 107,117 total quarterly assessments each year. Of these assessments, OSHA assumes that 25 percent of the quarterly assessments indicate that exposure is at or above the PEL, requiring 26,779 additional assessments annually. OSHA estimates that each year, there will be 107,117

[11] In the previous ICR, OSHA used an alternative calculation to estimate the number of additional assessments, assuming that for every work crew (four workers), 25 percent of them would require one additional assessment annually (See OMB Control No. 1218-0266, May 2023). In this ICR, OSHA assumes that for each periodic assessment, one quarter of workers assessed will need an additional assessment. OSHA determined that this was a more appropriate estimate that reflects the likelihood of increased additional assessments with increased periodic assessments.

quarterly assessments and 26,779 subsequent additional exposure assessments, for a total of 133,896 assessments for workers in general/shipyards industry that are exposed above the PEL.

> **Burden hours**: 133,896 assessments x 30/60 hours per assessment = 66,948 hours
>
> **Cost**: 66,948 hours x $34.25 per hour = $2,292,969

General Industry: Semiannual, Quarterly, and Additional Exposure Monitoring Totals

> **Total Burden hours**: 16,536 hours (Semi-annual and additional) + 66,948 hours (Quarterly and additional) = 83,484 hours
> **Total Cost**: $566,358(Semi-annual and additional) + $2,292,969 (Quarterly and additional) = $2,859,327

Construction:

OSHA believes that most construction employers will choose to comply with Table 1 of the construction standard and avoid the costs of conducting exposure assessments, however, OSHA assumes that some construction employers may choose to conduct initial monitoring to determine their exposure levels to silica. Those employers who undergo initial monitoring are required to conduct periodic monitoring for those employees determined to be exposed above the action level. Abrasive blasters and tunnel work, while performed by employers in the construction industry, is not covered by Table 1 of the construction standard, and these employers will need to conduct initial exposure assessments as well as any periodic monitoring required based on the resulting exposure levels (two times per year for workers exposed below the PEL and above the AL and four times per year for workers exposed above the PEL). Based on the FEA, OSHA estimates that 17,196 construction employees will be above the action level, comprised of 468 above the PEL and 16,728 below the PEL and above the action level.

The FEA assumes that 1 percent of affected workers in the construction industry will undergo the same initial monitoring requirements. Where several employees perform the same job tasks on the same shift and in the same work area, the employer may sample a representative fraction of these employees to meet this requirement. In a representative sample, the employer must sample the employee(s) who are expected to have the highest exposure to respirable crystalline silica**.**

Construction: Semi-annual and Additional Exposure Assessments

OSHA estimates that semiannually, of the 468 construction workers, one per work crew will undergo an assessment, resulting in an estimate of 117 exposure assessments every six months

and 234 of these assessments each year. OSHA assumes that 25 percent of assessments find exposure to be above the PEL, resulting in 59 additional assessments (.25 * 234 semi-annual assessments) for a total of 293 assessments.

Burden hours: 293 assessments x 30/60 hours per assessment = 147 hours

Cost: 147 hours x $42.11 per hour = $6,190

Construction: Quarterly and Additional Assessments

OSHA estimates that there are 16,728 construction workers subject to quarterly monitoring and assumes that one person per crew will undergo a quarterly assessment, for a total of 4,182 quarterly assessments. This results in an estimate of 16,728 quarterly estimates per year. OSHA assumes that 25 percent of these will indicate exposure above the PEL, necessitating additional assessments. OSHA estimates that there will be 4,182 additional assessments for a total of 20,910 quarterly and additional assessments.

Burden hours: 20,910 assessments x 30/60 hours per assessment = 10,455 hours

Cost: 10,455 hours x $42.11 per hour = $440,260

-

Construction: Semiannual, Quarterly, and Additional Exposure Monitoring Totals

Burden hours: 147 hours (Semi-annual and additional) + 10,455 hours (Quarterly and additional) = 10,602 hours

Cost: $6,190 (Semi-annual and additional) + $440,260 (Quarterly and additional) = $446,450

General Industry and Construction: All Periodic and Additional Exposure Assessments (Combined Totals)

Total Burden hours: 83,484 hours (General Industry) + 10,602 hours (Construction) = 94,086 hours
Cost: $2,859,327 (General Industry) + $446,450 (Construction) = $3,305,777

3. Employee Notification of Assessment Results (paragraph (d)(6) of § 1910.1053 and (d)(2)(vi) of § 1926.1153) *(Table 5)*

The standards require the employer to individually notify each affected employee in writing of the results of any exposure assessment conducted in accordance with paragraph (d) of the general

industry standard (paragraph (d)(2) of the construction standard) or post the results in an appropriate location accessible to all affected employees. In addition, whenever an exposure assessment indicates that employee exposure is above the PEL, the employer shall describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

The agency estimates that a human resources manager takes on average 15 minutes (15/60 hours) to prepare and notify each worker of the results, either by posting or notification in writing. The following table summarizes the estimated number of exposure assessments to be conducted: Therefore, the annual burden hours and cost of this worker-notification requirement are:

General Industry:

Burden hours: 13,649 (initial assessments) + 166,967 (periodic and additional assessments) = 180,616 assessments (general industry)

180,616 assessments (general industry) x 15/60 hours per assessment = 45,154 hours

Cost: 45,154 hours x $109.74 per hour (HR manager wage rate, general industry) = $4,955,200

Construction:

Burden hours: 3,587 (initial assessments) + 21,203 (periodic and additional assessments) (construction) = 24,790 assessments (construction)

24,790 assessments (construction) x 15/60 hours per assessment = 6,198 hours

Cost: 6,198 hours x $109.74 per hour (HR manager wage rate, construction) = $680,169

Total Burden hours: 45,154 hours + 6,198 hours = 51,352 hours
Total Cost: $4,955,200 + $680,169 = $5,635,369

Total Burden ours and Costs for A. Exposure Assessment:

Burden hours:

Worker Time and Cost Initial Assessment	*8,619 hours*
Worker Time and Cost Periodic & Additional	*94,086 hours*
Employee Notification	*51,352 hours*
Total	**154,057 hours**

Costs:

Worker Time and Cost Initial Assessment	*$309,301*
Worker Time and Cost Periodic & Additional	*$3,305,777*
Employee Notification	*$5,635,369*
Total	**$9,250,447**

B. Written Exposure Control Plan (paragraph (f)(2) of 1910.1053 and paragraph (g) of 1926.1153)

Paragraph (f)(2) in the standard for general industry and paragraph (g) in standard for construction specify the following requirements for a written exposure control plan. The employer must include the following elements in the plan: a description of the tasks in the workplace that involve exposure to respirable crystalline silica; a description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to respirable crystalline silica for each task; a description of the housekeeping measures used to limit employee exposure to respirable crystalline silica; and for construction, a description of the procedures used to restrict access to work areas, when necessary, to minimize the number of employees exposed to respirable crystalline silica and their level of exposure, including exposures generated by other employers or sole proprietors.

The agency assumes that all establishments existing at the time of the rule's implementation have developed a written exposure control plan. For this ICR, costs for the development of exposure plans are estimated only for new establishments. For this analysis, the agency estimates that there are 38,924 affected new establishments required to develop a written exposure control plan each year. All existing affected establishments with written exposure control plans will need to review and update those plans. OSHA estimated 818,438 affected establishments review and update their written exposure control plans.

Unit costs for the development of a written exposure control plan were calculated based on establishment size, and the agency assumed, for costing purposes, that a supervisor develops the written exposure control plan for each establishment, spending one hour for establishments with fewer than 20 employees, four hours for those establishments with between 20 and 499 employees, and 16 hours for those establishments with 500 or more employees. OSHA estimated that one hour would be sufficient for very small establishments because there is, on average, barely more than one worker covered by the standard per very small establishment in general industry and Shipyards.

OSHA further determined that the additional supervisory time (or competent person time in construction) needed to review and evaluate the effectiveness of the plan, and to update it as necessary, will also vary by establishment size. OSHA estimated 30 minutes (30/60 hours) for establishments with fewer than 20 employees, two hours for those with between 20 and 499

employees, and eight hours for those with 500 or more employees to perform the annual review and update. The agency expects that no other labor or materials will be required for general industry to implement the plan, so the sole cost for this provision is the time it will take to develop, review, and update the plan.

For construction work, the agency assumes burden hours and costs related to the implementation of a written exposure control plan by a designated competent person. The competent person has two broad options to restrict access to work areas when necessary: notifying or briefing employees, or direct access control. While the requirements for the written exposure control plan are more performance-oriented and thus should provide more flexibility for employers and reduce the cost of compliance, OSHA has estimated the costs of these options using, where appropriate, comparable components of the regulated area and written access control plan costs estimated in the FEA.

For the employee notification or briefing option, OSHA estimated it takes the competent person 15 minutes (15/60 hours) per job to revise the briefing plan, that each job lasts 10 workdays, and there are 150 construction working days in a year. OSHA further estimated that it takes the competent person 6 minutes (6/60 hours) to brief each at-risk crew member (where an at-risk crew member could be an employee, a contractor, a subcontractor, or other worker under the control of the competent person) and that each crew consists of four at-risk workers.

For the direct access control option, OSHA estimated that, on average, it takes the competent person 15 minutes (15/60 hours) per job to revise the plan concerning direct access control and, again, that each job will last 10 workdays and that there are 150 construction working days in a year. Thus, OSHA estimates that, on average, each employer would implement a direct access control 15 times per year over a total of 3.75 hours per year.

OSHA assumed that, in restricting access, half the time employers would use the briefing option and the other half of the time they would use direct access control. This results in 18 minutes (18/60) hours of the supervisor's time to implement the exposure control plan per job, including time to communicate the plan to workers. OSHA assumes each job will last 10 workdays and that there are 150 construction working days in a year, for a total of 15 jobs per year.[12]

1. *Development of Written Exposure Control Plans (Table 6)*

   General Industry

   Small

[12] The PEA included .1 hour of plan implementation time to communicate the plan to workers. In the FEA, this time is incorporated to the time to develop the plan for general industry, and it is considered part of the implementation time by a competent person in the construction industry. See Table 6 in the Silica ERG spreadsheet under the tables tab.

Burden hours: 2,152 new written exposure control plans x 1 hour per plan (supervisor time) = 2,152 hours
Cost: 2,152 hours x $50.98 per hour = $109,709

Medium

Burden hours: 335 new written exposure control plans x 4 hours per plan (supervisor time) = 1,340 hours
Cost: 1,340 hours x $50.98 per hour = $68,313

Large

Burden hours: 198 new written exposure control plans x 16 hours per plan (supervisor time) = 3,168 hours
Cost: 3,168 hours x $50.98 per hour = **$**161,505

Construction

Small

Burden hours: 32,479 new written exposure control plans x 1 hour per plan (competent person time) = 32,479 hours
Cost: 32,479 x $57.78 per hour = **$**1,876,637

Medium

Burden hours: 3,145 new written exposure control plans x 4 hours per plan (competent person time) = 12,580 hours
Cost: 12,580 x $57.78 per hour = $726,872

Large

Burden hours: 615 new written exposure control plans x 16 hours per plan (competent person time) = 9,840 hours
Cost: 9,840 x $57.78 per hour = $568,555

Total Burden Hours: 2,152 hours + 1,340 hours + 3,168 hours + 32,479 hours + 12,580 hours + 9,840 hours = 61,559 hours
Total Cost: $109,709+ $68,313 + $161,505+ $1,876,637 + $726,872 + $568,555 = $3,511,591

2. Review and Update of Written Exposure Control Plans (Table 7)

General Industry

Small

Burden hours: 57,902 existing written exposure control plans x 30/60 hours per plan (supervisor time) = 28,951 hours
Cost: 28,951 hours x $50.98 per hour = $1,475,922

Medium

Burden hours: 12,404 existing written exposure control plans x 2 hours per plan (supervisor time) = 24,808 hours
Cost: 24,808 hours x $50.98 per hour = $1,264,712

Large

Burden hours: 8,299 existing written exposure control plans x 8 hours per plan (supervisor time) = 66,392 hours
Cost: 66,392 hours x $50.98 per hour = $3,384,664

Construction

Small

Burden hours: 659,886 existing written exposure control plans x 30/60 hours per plan (competent person time) = 329,943 hours
Cost: 329,943 hours x $57.78 = $19,064,107

Medium

Burden hours: 64,572 existing written exposure control plans x 2 hours per plan (competent person time) = 129,144 hours
Cost: 129,144 hours x $57.78 per hour = $7,461,940

Large

Burden hours: 15,375 existing written exposure control plans x 8 hours per plan (competent person time) = 123,000 hours
Cost: 123,000 hours x $57.78 per hour = $7,106,940

Total Burden Hours: 28,951 hours + 24,808 hours + 66,392 hours + 329,943 hours + 129,144 hours + 123,000 hours = 702,238 hours

Total Cost: $1,475,922 + $1,264,712 +$3,384,664 + $19,064,107 + $7,461,940+ $7,106,940 = $39,758,285

2. *Implementation of Written Access Control Plan (construction only) (Table 8)*

Small

Burden hours: 659,886 written exposure control plans x 15 jobs x 18/60 hours per plan per job (competent person time) = 2,969,487 hours
Cost: 2,969,487 hours x $57.78 per hour = $171,576,959

Medium

Burden hours: 64,572written exposure control plans x 15 jobs x 18/60 hours per plan per job (competent person time) = 290,574 hours
Cost: 290,574 hours x $57.78 per hour = $16,789,366

Large

Burden hours: 15,375 written exposure control plans x 15 jobs x 18/60 hours per plan per job (competent person time) = 69,188 hours
Cost: 69,188 hours x $57.78 per hour = $3,997,683

Total Burden Hours: 2,969,487 hours + 290,574 hours + 69,188 hours = 3,329,249 hours
Total Cost: $171,576,959 + $16,789,366 + $3,997,683 = $192,364,008

4. Making Written Exposure Control Plans Available (§§ 1910.1053(f)(2)(iii) and 1926.1153(g)(3))[13]

For purposes of calculating PRA burden hours and costs, OSHA assumes a supervisor will make the written plan available to employees and designated representatives under §§ 1910.1053(f)(2)(iii) and 1926.1153(g)(3). For costing purposes, OSHA assumes 10% of employees request access to the written plan. OSHA assumes supervisors at establishments that existed at the time of the promulgation of the rule have already taken time to make the written plan available to employees and designated representatives. For costing purposes, only workers at new establishments were considered for this provision.

General Industry

Burden hours: 9,016 employees x 0.1 plan access per employee x 5/60 hours per plan access (supervisor time) = 75 hours

[13] See Table 8a under the tables tab in supporting spreadsheet.

Cost: 75 hours x$50.98 per hour = $3,824

Construction

Burden hours: 144,230 employees x 0.1 plan access per employee x 5/60 hours per plan access (supervisor time) = 1,202 hours
Cost*:* 1,202 hours x $57.78 per hour = $69,452

Total Burden Hours: 75 hours + 1,202 hours = 1,277 hours
Total Cost: $3,824 + $69,452 = $73,276

C. Air Quality Permit Notification

The agency previously received comments suggesting that foundries and other manufacturing plants would be required by the Environmental Protection Agency (EPA), or other federal or state environmental authorities, to incur an administrative cost to ensure their systems are compliant with relevant EPA regulations. In the FEA, the agency recognizes that there will be minor incremental costs for notifying environmental authorities.

To allow for adequate administrative time for creating and submitting the notification, at those facilities that could potentially incur costs, OSHA allocated 20 hours to establishments with 20 to 499 employees and 40 hours to establishments with 500 or more employees. A manager's hourly wage rate was applied to estimate the cost to employers. OSHA assumes that establishments that existed at the time of the promulgation of the rule have already taken the necessary time to create and submit the notification. For costing purposes, OSHA only considers new establishments for this provision.

Medium

Burden hours: 335 permits x 20 hours per permit (HR manager time) **=** 6,700 hours
Cost: 6,700 hours x $109.74 per hour = $735,258

Large

Burden hours: 198 permits x 40 hours per permit (HR manager time) = 7,920 hours
Cost: 7,920 hours x $109.74 per hour = $869,141

Total Burden Hours: 6,700 hours + 7,920 hours = 14,620 hours
Total Cost: $735,258 + $869,141 = $1,604,399

D. Respiratory Protection (§§ 1910.1053(g) and 1926.1153(e))

Paragraph (g) of the standard for general industry (paragraph (e) of the standard for construction) establishes requirements for the use of respiratory protection, to which OSHA's Respiratory Protection standard (29 CFR 1910.134) also applies.[14] Specifically, respirators are required under the rule: where exposures exceed the PEL during periods necessary to install or implement engineering and work practice controls; where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible; and during tasks for which all feasible engineering and work practice controls have been implemented but are not sufficient to reduce exposure to or below the PEL.

The standard for general industry and shipyards also requires respiratory protection during periods when an employee is in a regulated area. The standard for construction also requires respiratory protection where specified by Table 1 of the construction standard of paragraph (c) but does not include a requirement to establish a regulated area and thus does not contain a provision requiring the use of respirators in regulated areas.

Whenever employers use respirators to comply with the requirements of the standards, paragraph (g)(2) in the general industry (paragraph (e)(2) of the construction standards requires the employer to implement a comprehensive, written respiratory-protection program in accordance with the Respiratory Protection standard. OSHA designed the respiratory protection program to ensure that workers use respirators properly in the workplace, and that respirators are effective in protecting workers. The program must include procedures for selecting respirators for use in the workplace; medical evaluation of workers required to use respirator; fit-testing workers for respirator use; procedures for proper use of respirators in routine and reasonably foreseeable emergency situations; procedures and schedules for maintaining respirators; procedures to ensure adequate quality, quantity, and flow of breathing air for atmosphere-supplying respirators; training of workers in respiratory hazards they may be exposed to on the job; training of workers in the proper use of respirators; and procedures for evaluating the effectiveness of the program.

For workers in Shipyards (shipyard employment and Shipyards terminals), the only activity with silica exposures above the new PEL is abrasive blasting. Abrasive blasting operators**,** but not abrasive blasting helpers, are already required to use respirators under the existing OSHA Respiratory Protection standard. This ICR includes respirator costs for abrasive blaster helpers in Shipyards (half of all the abrasive blaster workers).

1. Respiratory Protection Program §§ 1910.1053(g)(2) and 1910.1153(e)(2))

Establishing New Respiratory Protection Programs

[14] The agency accounts for the information collection requirements of the Respiratory Protection Standard as it relates to respirable crystalline silica exposure in the Respiratory Protection Standard ICR, OMB Control Number 1218-0099, unless otherwise accounted for in this Supporting Statement.

In general industry, the agency estimates there are 3,210 small and medium-sized (less than 500 employees) establishments with respirator users outside of the hydraulic fracturing industry, and 75 of those establishments are new establishments needing a new program. The agency also estimates there are 1,743 large establishments (500 or more employees) with respirator users in general industry (excluding hydraulic fracturing), of which there are 40 new establishments with respirator users needing a new program.[15] In construction, the agency estimates there are 92,792 small and medium-sized establishments with respirator users, and 4,570 of those are new establishments with respirator users needing a new program. The agency also estimates there are 11,127 large establishments with respirator users in construction, of which there are 457 large new establishments with respirator users needing a new program.[16]

In hydraulic fracturing, the agency estimates there are 507small-sized establishments (less than 20 employees) with respirator users, and 12 of those are new establishments needing a new program; 868 medium-sized establishments (20-499 employees) with respirator users, and 21 of those are new establishments needing a new program; and 561 large establishments with respirator users, and 14 of those are new establishments needing a new program.

Employers will incur a cost burden to establish a respirator program. The agency projects that this expense will involve an initial eight hours for large establishments, and four hours for all other firms. The agency assumes that a human resources manager conducts the work associated with the establishment and revision of these programs. The burden hours and cost associated with these provisions are:

a. Establish New Programs in General Industry (Table 10):

Burden hours (large general industry establishments with respirator users): 40 new programs x 8 hours per new program (human resource manager time) = 320 hours

Cost: 320 hours x $109.74 per hour = $35,117

Burden hours (all other new general industry establishments with respirator users): 75 new programs x 4 hours per new program (human resources manager time) = 300 hours

Cost: 300 hours x $109.74 per hour = $32,922

Total Burden hours: 320 hours + 300 hours = 620 hours
Total Cost: $35,117 + $32,922 = $68,039

b. Establish New Programs in Hydraulic Fracturing (Table 10a):

[15] The agency estimates a total of 4,953 establishments with respirator users in general industry (excluding hydraulic fracturing) and 4,624 in the hydraulic fracturing industry.

[16] The agency estimates a total of 103,919 establishments with respirator users in construction.

Burden hours (large hydraulic fracturing establishments with respirator users):
14 new programs x 8 hours per new program (human resource manager time) = 112 hours
Cost: 112 hours x $109.74 per hour = $12,291

Burden hours (medium hydraulic fracturing establishments with respirator users):
21 new programs x 4 hours per new program (human resources manager time) = 84 hours
Cost: 84 hours x $109.74 per hour = $9,218

Burden hours (small hydraulic fracturing establishments with respirator users): 12 new programs x 4 hours per new program (human resources manager time) = 48 hours
Cost: 48 hours x $109.74 per hour = $5,268

Total Burden Hours: 112 hours + 84 hours + 48 hours = 244 hours
Total Cost: $12,291 + $9,218 + $5,268 = $26,777

c. Establish New Programs in Construction (Table 11):

Burden hours (large new construction establishments with respirator users): 547 new programs x 8 hours per new program (human resource manager time) = 4,376 hours
Cost: 4,376 hours x $109.74 per hour = $480,222

Burden hours (all other new construction establishments with respirator users):
4,570 new programs x 4 hours per new program (human resources manager time) = 18,280 hours
Cost: 18,280 hours x $109.74 per hour = $2,006,047

Total Burden Hours: 4,376 hours + 18,280 hours = 22,656 hours
Total Cost: $480,222 + $2,006,047 = $2,486,269

Total Establish New Programs in All Industries Combined:

Total Burden Hours: 620 hours + 244 hours + 22,656 hours = 23,520 hours
Total Cost: $68,039 + $26,777 + $2,486,269= $2,581,085

2. Revise Existing Respiratory Protection Programs

OSHA estimates that 20 percent of all establishments with established programs would revise their program every year. Large establishments will expend four hours for a program revision, and all other employers will expend two hours for a program revision.

a. Revise Existing Programs in General Industry (Table 10)

Burden hours (large general industry establishments with respirator users updating program): 341 existing program updates x 4 hours per existing program updates (human resource manager time) = 1,364 hours
Cost: 1,364 hours x $109.74 per hour = $149,685

Burden hours (all other general industry establishments with respirator users updating program): 627 existing program updates x 2 hours per existing program updates (human resource manager time) = 1,254 hours
Cost: 1,254 hours x $109.74 per hour = $137,614

Total Burden Hours: 1,364 hours + 1,254 hours = 2,618 hours
Total Cost: $149,685 + $137,614 = $287,299

b. Revise Existing Programs in Hydraulic Fracturing (Table 10 a):

Burden hours (large hydraulic fracturing establishments with respirator users updating program): 109 existing program updates x 4 hours per existing program updates (human resource manager time) = 436 hours
Cost: 436 hours x $109.74 per hour = $47,847

Burden hours (medium hydraulic fracturing establishments with respirator users updating program): 169 existing program updates x 2 hours per existing program update (human resources manager time) = 338 hours
Cost: 338 hours x $109.74 per hour = $37,092

Burden hours (small hydraulic fracturing establishments with respirator users updating program): 99 existing program updates x 2 hours per program updates (human resources manager time) = 198 hours
Cost: 198 hours x $109.74 per hour = $21,729

Total Burden hours: 436 hours + 338 hours + 198 hours = 972 hours
Total Cost: $47,847 + $37,092 + $21,729= $106,668

c. Revise Existing Programs in Construction (Table 11):

Burden hours (large construction establishments with respirator users updating program): 2,116 existing program updates x 4 hours per program updates (human resource manager time) = 8,464 hours
Cost: 8,464 hours x $109.74 per hour = $928,839

Burden hours (all other construction establishments with respirator users updating program): 17,644 existing program updates x 2 hours per program updates (human resources manager time) = 35,288 hours

Cost: 35,288 hours x $109.74 per hour = $3,872,505

Total Burden Hours: 8,464 hours + 35,288 hours = 43,752 hours
Total Cost: $928,839 + $3,872,505 = $4,801,344

Revise Existing Programs in All Industries Combined:

Total Burden Hours: 2,618 hours + 972 hours + 43,752 hours = 47,432 hours
Total Cost: $287,299 + $106,668 + $4,801,344 = $5,195,311

3. Respiratory Protection Program: Fit-Testing for Respirator Use (§§ 1910.1053(g)(2) and 1926.1153(e)(2)) (*Table 12)*

In addition to the development of a written respirator program, the Respiratory Protection standard's information collection requirements require employers to administer fit tests for workers who will use negative-pressure or positive-pressure, tight-fitting facepieces. The Respiratory Protection standard requires fit-testing to ensure that respirators adequately protect workers who must use them.

For costing purposes, the agency assumes that workers who use respirators for protection against airborne respirable crystalline silica will receive a qualitative fit test (QLFT) prior to initial respirator use, and at least annually thereafter. The QLFT involves the introduction of a gas, vapor, or aerosol test agent into an area around the head of the respirator user. If the respirator user can detect the presence of the test agent through subjective means, such as odor, taste, or irritation, the respirator fit is inadequate. The QLFT record must include the date and type of fit test performed (e.g., irritant smoke, saccharin), worker information, type of respirator, and results of the fit test. Employers must maintain the fit-testing records until they administer the next fit test. Both employers and OSHA need these records to determine whether: each worker received a fit test (both prior to starting respirator use and at least annually thereafter); each worker passed the fit test; and the model and size of the respirator used during fit-testing are the same as those used by the worker in the work area.

For purposes of calculating respiratory protection costs, OSHA estimates that there are 29,900 respirator users in general industry and 326,594 in construction that will require fit tests. The

agency estimates that each worker takes 1 hour to complete a fit test in-house, including recordkeeping, and supervisors will conduct the fit-testing for workers in groups of 4 (15/60 hours of supervisor time per worker). The annual burden hours and cost associated with fit testing are:

General Industry

Burden hours: 29,900 fit tests x 1 hour per fit test (production operations worker time) = 29,990 hours
Cost: 29,900 hours x $34.25 per hour = $1,024,075

Burden hours: 29,900 fit tests x 15/60 hours per fit test (general industry supervisor time) = 7,475 hours
Cost: 7,475 hours x $50.98 per hour = $381,076

Construction

Burden hours: 326,594 fit tests x 1 hour per fit test (construction worker time) = 326,594 hours
Cost: 326,594 hours x $42.11 per hour = $13,752,873

Burden hours: 326,594 fit tests x 15/60 hour per fit test (construction supervisor time) = 81,649 hours
Cost: 81,649 hours x $57.78 per hour = $4,717,679

Total Burden Hours: 29,900 hours + 7,475 hours + 326,594 hours + 81,649 hours = 445,618 hours
Total Cost: $1,024,075 + $381,076 + $13,752,873 + $4,717,679 = $19,875,703

In the FEA, costs for establishing and maintaining fit test records are included in the respirator fit test costs presented above in paragraph D.2. "Respiratory Protection Program."

E. Medical Surveillance (§§ 1910.1053(i) and 1926.1153(h))

Employers must make medical examinations available at no cost, and at a reasonable time and place, for exposed workers that meet the appropriate trigger point in each standard. In addition, employers ensure that a PLHCP performs all medical examinations and procedures required by the standards. Although OSHA believes that some affected establishments currently provide some medical testing to their silica-exposed employees, for costing purposes the agency has assumed no current compliance with the health screening requirements. The following paragraphs describe the specific medical examinations in detail.

1. Initial Examination (§§ 1910.1053(i)(2)(i)-(vi) and 1926.1153(h)(2)(i)-(vi))

In general industry, the FEA assumes that employers make available medical surveillance (i.e., medical examinations) to workers who receive occupational exposure to respirable crystalline silica at or above the action level for 30 or more days a year. In construction, the FEA assumes that employers must make available medical surveillance to workers wearing a respirator for 30 or more days per year.

An initial medical examination must be made within 30 days after initial assignment, unless the worker has received an examination meeting the requirements of this standard within the last three years (by §§ 1910.1053(i)(2) and 1926.1153(h)(2)). This Supporting Statement assumes employers have already provided initial medical examinations for all existing workers during the first year that medical surveillance was required for each industry. Therefore, no burden hours or costs for the provision of initial medical examinations for existing workers are presented in this Supporting Statement. Burden hours and costs for employers to provide those initial medical examinations can be found in prior ICRs, with subsequent periodic medical examinations for these workers described in the paragraphs of this section, below.

Medical Surveillance, Worker Time and Cost to Complete Initial Medical Examination, Existing Workers - Table 13

Burden hours: 0 hours
Cost: $0

Worker Time and Cost to Complete Medical Surveillance Form for the Initial Medical Examination - Existing Workers - Table 13(a)

Burden hours: 0 hours
Cost: $0

Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - Existing Workers (Table 16)

Burden hours: 0 hours
Cost: $0

Medical Surveillance, Worker Time and Cost for Complete Initial Medical Examination, New Workers – Table 14

The agency estimates that employers are required to provide initial medical examinations to 75% of new workers in general industry and 40% of new workers in construction. To estimate the total number of new workers, OSHA assumes an annual hire rate of 31.3% in general industry

and 49.9% in construction.[17] Based on these assumptions, a total of 102,754 new workers (37,566 in general industry and 65,188 in construction) will complete an initial medical examination.

The agency estimates that a worker takes 1 hour 45 minutes (105/60 hours) to complete the initial medical examination, consisting of: a medical and work history (including the medical questionnaire for respirator use); a physical examination (including a follow-up medical examination for respirator use, if needed); a chest x-ray; a pulmonary function test; a latent TB test; and other tests deemed appropriate by the PLHCP. The estimated travel time for workers to travel off-site for the initial medical examination is 1 hour for general industry and 90 minutes (90/60) hours for construction.[18] The percentage of employees going off-site is reflected as a percentage in the response column in Table C. The detailed burden hours and cost associated with the initial medical examination provision are available below in Item 12, Table C of this Supporting Statement. (and in Table 14 in the supporting spreadsheet).

Initial Medical Exam

General Industry:

Burden hours: 21,760 onsite examinations x (105/60) hours per onsite examination (worker time) = 38,080 hours
Cost: 38,080 hours x $34.25 per hour = $1,304,240

Burden hours: 15,806 offsite examinations and travel x [105/60 hours per examination (worker time) + 1 hour per travel (worker travel time)] = 43,467 hours
Cost: 43,467 hours x $34.25 per hour = $1,488,746

Construction:

Burden hours: 29,035 onsite examinations x 105/60 hours per examination (worker time) = 50,812 hours
Cost: 50,812 hours x $42.11 per hour = $2,139,694

Burden hours: 36,153 offsite examinations x [105/60 hours per examination (worker time) + 90/60 hours per travel (worker travel time)] = 117,497 hours
Cost: 117,497 hours x $42.11 per hour = $4,947,799

Combined Totals:

[17] These hire rates are from the Bureau of Labor Statistics, U.S. Department of Labor, 2024 Job Openings and Labor Turnover Survey (JOLTS) [date accessed: May 5, 2025]. (JOLTS data is available at: https://www.bls.gov/jlt/data.htm).

[18] The agency based the difference in travel times on the assumption that construction establishments are more geographically dispersed than general industry establishments.

Total Burden hours: 38,080 hours + 43,467 hours + 50,812 hours + 117,497 hours = 249,856 hours
Total Costs: $1,304,240 + $1,488,746 + $2,139,694 + $4,947,799 = $9,880,479

Worker Time and Cost to Complete the Medical Surveillance Form for the Initial Medical Examination - New Workers - Table 14(a)

The agency estimates that it takes 15 minutes for the worker to wait for completion by the PLHCP of the "Medical Report for Employee" and "Medical Opinion for Employer" forms (contained in Appendix B, "Medical Surveillance Guidelines") and to receive the medical report during each medical examination. The detailed burden hours and cost associated with the time to complete the form for initial medical examination provision are available below in Item 12, Table A of this Supporting Statement (also see Tables 13(a) and 14(a) in the supporting spreadsheets).

General Industry:

Burden hours: 57,566 medical surveillance forms x (15/60) hours per medical surveillance form (worker time) = 9,392 hours
Cost: 9,392 hours x $34.25 per hour = $321,677

Construction:

Burden hours: 65,188 medical surveillance forms x 15/60 hours per medical surveillance forms (worker time) = 9,038 hours
Cost: 9,038 hours x $42.11 per hour = $686,268

Combined Totals:

Total Burden hours: 9,392 hours + 9,038hours = 16,297 hours
Total Costs: $321,677 + $686,268 = $1,007,945

Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - New Workers (Table 17)

OSHA assumes that all new workers undergoing initial medical surveillance will have to return to the PLHCP to have the results of the latent TB test (administered during the initial examination) read. OSHA assumes that it will take 5 minutes (5/60 hours) to read the test during the return visit, and that estimated travel time is 1 hour for general industry and 90 minutes

(90/60 hours) for construction workers. The detailed burden hours and costs associated with the return reading of the latent TB test are available below in Item 12, Table C of this Supporting Statement (also in Table 17 in the supporting spreadsheet).

Burden hours: 78,598 hours
Cost: $3,160,925

2. Periodic Medical Examination (§§ 1910.1053(i)(3) and 1926.1153(h)(3)) - Table 19

Under §§ 1910.1053(i)(3) and 1926.1153(h)(3), employers must make available periodic medical examinations at least every three years (or more frequently if recommended by the PLHCP) to the workers who continue to meet the trigger for medical surveillance. The content of the periodic medical examinations is identical to the requirements of paragraph (i)(2) of the standard for general industry (paragraph (h)(2) of the standard for construction), with the exception that testing for latent tuberculosis (paragraph (i)(2)(v) of the standard for general industry and paragraph (h)(2)(v) of the standard for construction) is not required for periodic testing.

OSHA estimates that a worker takes 1 hour 45 minutes to complete the periodic medical examination, consisting of: a medical and work history; a physical examination; a chest x-ray; a pulmonary-function test; and other tests deemed appropriate by the PLHCP, including a latent TB test, if recommended. The estimated travel time for workers to travel off-site for the initial medical examination is 1 hour for general industry and 90 minutes (90/60 hours) for construction. The detailed burden hours and cost associated with the periodic medical examination provisions are available below in Table C of Item 12 in this Supporting Statement (and in Tables 19 and 20 in the supporting spreadsheet). The detailed burden hours and cost associated with the completion of medical surveillance forms for the periodic medical examination are also available below in Table C of Item 12 of this Supporting Statement and in Tables 19(a) and 20(a) of the supporting spreadsheet.

a. Periodic Medical Examination (Table 19)

General Industry:

Burden hours: 193,792 onsite examinations x 105/60 hours per onsite examination (worker time) = 339,136 hours
Cost: 339,136 hours x $34.25 per hour = $11,615,408

Burden hours: 75,520 offsite examinations and travel x [105/60 hours per examination (worker time) + 1 hour per travel (worker travel time)] = 207,680 hours
Cost: 207,680 hours x $34.25 per hour = $7,113,041

Construction:

Burden hours: 332,198 onsite examinations x 105/60 hours per examination (worker time) = 581,347 hours
Cost: 581,347 hours x $42.11 per hour = $24,480,522

Burden hours: 227,051 offsite examinations x [105/60 hours per examination (worker time) + 90/60 hours per travel (worker travel time)] = 737,916 hours
Cost: 737,916 hours x $42.11 per hour = $31,073,643

***Combined Totals**:*

Total Burden hours: 339,136 hours + 207,680 hours + 581,347 hours + 737,916 hours = 1,866,079 hours
Total Cost: $11,615,408 + $7,113,041 + $24,480,522+ $31,073,643 = $74,282,614

Additionally, there are burden hours and costs associated with workers recommended for latent TB testing during the periodic medical examination. The agency's assumptions are identical to the TB testing assumptions for initial medical surveillance described above, except that OSHA estimates that 15% of workers in general industry and 20% of workers in construction will be provided these tests. The detailed burden hours and costs associated with the latent TB testing during the periodic medical examination are available below in Table C of Item 12 in this Supporting Statement and in Table 21 of the supporting spreadsheet.

b. TB testing During Periodic Medical Examination

General Industry:

Burden hours: 7,985 tests (onsite TB tests during periodic medical examination) x 5/60 hour per test (worker time for return reading) = 666 hours
Cost: 666 hours x $34.25 per hour = $22,811

Burden hours: 2,772 tests (offsite TB tests during periodic medical examination) x (5/60 hour per test (worker time for return reading) + 1 hour per test (worker travel time for test)) = 3,003 hours
Cost: 3,003 hours x $34.25 per hour = $102,853

Construction:

Burden hours: 20,552 tests (onsite TB tests during periodic medical examination) x 5/60 hour per hour (worker time for return reading) = 1,713 hours
Cost: 1,713 hours x $42.11 per hour = **$**72,135

Burden hours: 12,941 tests (offsite TB tests during periodic medical examination) x (5/60 hour per test (worker time for return reading) + 90/60 hours per test (worker travel time for test)) = 20,490 hours
Cost: 20,490 hours x $42.11 per hour = $862,834

***Combined Totals*:**

Total burden hours: 666 hours + 3,003 hours + 1,712 hours + 20,490 hours = 25,872 hours
Total cost: $22,811 + $102,853+ $72,135 + $862,834 = $1,060,633

3. Information Provided to the PLHCP and Specialist (§§ 1910.1053(i)(4)(i)-(iv), (i)(6)(ii) and 1926.1153(h)(4)(i)-(iv), (h)(6)(ii)) (Table 22)

Paragraph (i)(4)(i)-(iv) of the general industry standard (paragraph (h)(4)(i)-(iv) of the construction standard) requires the employer to provide the PLHCP with the following information: a copy of the appropriate standard; a description of the affected worker's former, current, and anticipated duties as they relate to respirable crystalline silica exposure; the worker's former, current, and anticipated exposure level; a description of any personal protective equipment used or to be used by the worker, including when and for how long the worker used that equipment; and information from records of employment-related medical examinations previously provided to the affected worker that are within the control of the employer. The standards require employers to make the PLHCP aware of Appendix B by providing a copy of the appropriate standard to the PLHCP.

Paragraph (i)(6)(ii) of the general industry standard and paragraph (h)(6)(ii) of the construction standard require the employer to provide the specialist with the same information that the employer provides to the original PLHCP. OSHA estimates that there will be 615 new cases of silicosis a year among general industry and shipyards workers and 679 new cases among construction workers.

An employer must provide the PLHCP with specific information on each worker who is medically examined. OSHA assumes that a human resource manager requires 15 minutes (15/60 hours) to develop the specified information and provide it to the PLHCP for initial and periodic exams. OSHA assumes that a human resource manager requires 60 minutes (1 hour) to develop the specified information and provide it to the specialist for initial and periodic exams. The burden hours and cost associated with these provisions are:

a. Initial Examinations:

Burden hours: 37,566 initial examinations (general industry) x 15/60 hour per initial examination (HR manager time) = 9,392 hours
Cost: 9,392 hours x $109.74 per hour = $1,030,678

Burden hours: 65,188 initial examinations (construction) x 15/60 hour per initial examination (HR manager time) = 16,297 hours
Cost: 16,297 hours x $109.74 per hour **=** $1,788,422

b. *Periodic Examinations*:

Burden hours: 269,312 periodic examinations (general industry**)** x 15/60 hour per periodic examination (HR manager time) = 67,328 hours
Cost: 67,328 hours x $109.74 per periodic examination = $7,388,575

Burden hours: 559,249 periodic examinations (construction) x 15/60 hour per periodic examination (HR manager time) = 139,812 hours
Cost: 139,812 hours x $109.74 per periodic examination = $15,342,969

c. *Specialist Examinations*:

Burden hours: 615 specialist examinations (general industry) x 1 hour per specialist examination (HR manager time) = 615 hours
Cost: 615 hours x $109.74 per hour **=** $67,490

Burden hours: 679 specialist examinations (construction) x 1 hour per specialist examination (HR manager time) = 679 hours
Cost: 679 hours x $109.74 per hour **= $**74,513

***Combined Totals*:**

Total Burden hours: 9,392 hours + 16,297 hours + 67,328 hours + 139,812 hours + 615 hours + 679 hours = 234,123 hours
Total Cost: $1,030,678 + $1,788,433 + $7,388,575 + $15,342,969 + $67,490 + $74,513 = $25,692,658

4. PLHCP's Written Medical Report and Opinion (§§ 1910.1053(i)(5), (i)(6) and 1926.1153(h)(5) and (h)(6)) and Specialist's Written Medical Report and Opinion (§§ 3

In the FEA, the cost for the PLHCP and Specialist's written medical report to the worker and medical opinion to the employer are included in the costs for medical exams provided in paragraphs 1, 2, and 5 of this section (Item 12, E.) on Medical Surveillance. The employer must ensure that the PLHCP explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of each medical

examination performed. In addition, the employer must provide a copy of the written medical opinion to the worker within 30 days. The burden hours and costs for the employer to ensure that the PLHCP explains results to the worker and to ensure that the PLHCP provides the medical report to the worker, and for the employer to provide a copy of the opinion to the worker, are described below.

A. Human Resources Manager Time and Cost to Ensure Worker Receipt of the PLHCP's Medical Report and Provide a Copy of the PLHCP's Written Opinion to the Worker (Table 23)

Burden hours: 307,493 medical examinations (general industry) x 15/60 hours per medical examination (HR manager time) = 76,874 hours
Cost: 76,874 hours x $109.74 per hour = $8,436,153

Burden hours: 625,116 medical examinations (construction) x 15/60 hours per medical examination (HR manager time) = 156,279 hours
Cost: 156,279 hours x $109.74 per hour = $17,150,058

Total Burden hours: 76,874 hours + 156,279 hours = 233,153 hours
Total Cost: $8,436,153+ $17,150,058 = $25,586,211

5. Additional Examinations (§§ 1910.1053(i)(7), (i)(7)(i) and (i)(7)(ii) and 1926.1153(h)(7), (h)(7)(i) and (h)(7)(ii).) (Table 24)

The requirements specified by §§ 1910.1053(i)(7), (i)(7)(i) and (i)(7)(ii) and 1926.1153(h)(7), (h)(7)(i) and (h)(7)(ii) address the additional medical examination employers must make available to workers if the PLHCP's written medical opinion indicates that a specialist should examine the worker. The employer must make the examination available within 30 days after receiving the PLHCP's written medical opinion. The specialist must be provided with the same information that the employer is required to give the PLHCP, under paragraph (i)(4) of the general industry standard (paragraph (h)(4) of the construction standard), described in paragraph 4 of this section.

As noted in this Section, paragraph 3, above, OSHA estimates there will be 615 new cases of silicosis a year among general industry and shipyards workers and 680 new cases among construction workers. The agency assumes that the number of silicosis cases is the same as the number of cases referred to a specialist for examination. OSHA estimates a worker takes 45 minutes to complete the examination. The estimated travel time for workers to travel off-site for the examination is 1 hour for general industry and 90 minutes (90/60 hours) for construction.

Worker Time and Cost to Complete the Specialist Examination (Table 24)

Burden hours: 456 onsite specialist examinations (general industry) x 45/60 hours per onsite specialist examination

(general industry worker time) = 342 hours
Cost: 342 hours x $34.25 per hour = $11,714

Burden hours: 159 offside specialist examinations (general industry) x 105/60 hours per offsite specialist examination (general industry worker time) = 279 hours
Cost: 279 hours x $34.25 per hour = $9,556

Burden hours: 680 offsite specialist examinations (construction industry) x 135/60 hours per offsite specialist examinations (construction worker time) = 1,530 hours
Cost: 1,530 hours x $42.11 per hour = $64,427

Total burden hours: 342 hours + 279 hours + 1,530 hours = 2,151 hours
Total cost: $11,714 + $9,556 + $64,427= $85,697

Worker Time and Cost to Complete the Medical Surveillance Form for the Specialist Examination (Table 24(a))

OSHA estimates that an employee will take 15 minutes to complete the medical surveillance forms associated with the pulmonary-specialist exam.

Burden hours: 123 onsite specialist examination forms (general industry) x 15/60 hour per onsite specialist examination form (worker time) = 31 hours
Cost: 31 hours x $34.25 per hour = $1,062

Burden hours: 492 offsite specialist examination forms (general industry) x 15/60 hour per offsite specialist examination form (worker time) = 123 hours
Cost: 123 hours x $34.25 per hour = $4,213

Burden hours: 680 offsite specialist examination forms (construction industry) x 15/60 hour per offsite specialist examination form (worker time) = 170 hours
Cost: 170 hours x $42.11 per hour = $7,158

***Combined Totals*:**

Total burden hours: 31 hours + 123 hours + 170 hours = 324 hours
Total cost: $1,062 + $4,213 +$7,158 = $12,433

F. Rule Familiarization

OSHA expects that the employer will assign responsibility for investigating the details of the standards, and for determining how to implement the requirements, to one or more supervisors. OSHA assumes that the time supervisors spend on rule familiarization will be based on several factors, including establishment size. The agency estimates that supervisors in small establishments will require 4 hours to become familiar with the standards, while supervisors in medium establishment will require 8 hours and those in large establishment will require 40 hours. OSHA's estimate of familiarization costs therefore reflects the total supervisor familiarization time (costed at a supervisory wage) for each covered employer, with the number of employees at each establishment also serving as a proxy to represent the diversity of silica activities. OSHA assumes that establishments that existed at the time of the promulgation of the rule would have already incurred costs associated with rule familiarization. Therefore, the following estimates reflect burden hours and costs of rule familiarization for new establishments only. (See Table 26)

General Industry:

Burden hours: 2,152 affected establishments in small general industry establishments x 4 hours per affected establishment (supervisor time) = 8,608 hours
Cost: 8,608 hours x $50.98 = $438,836

Burden hours: 335 affected establishments in medium general industry establishments x 8 hours per affected establishment (supervisor time) = 2,680 hours
Cost: 2,680 hours x $50.98 = $136,626

Burden hours: 198 affected establishments in large general industry establishments x 40 hours per affected establishment (supervisor time) = 7,920 hours
Cost: 7,920 hours x $50.98 per hour = **$**403,762

Construction:

Burden hours: 32,479 affected establishments in small construction establishments x 4 hours per affected establishment (supervisor time) = 129,916 hours
Cost: 129,916 hours x $57.78 per hour = **$**7,506,546

Burden hours: 3,145 affected establishments in medium construction establishments x 8 hours per affected establishment (supervisor time) = 25,160 hours
Cost: 25,160 hours x $57.78 per hour = $1,453,745

Burden hours: 615 affected establishments in large construction establishments x 40 hours per effected establishment (supervisor time) = 24,600 hours
Cost: 24,600 hours x $57.78 per hour = $1,421,388

***Combined Totals*:**

Total Burden hours: 8,608 hours + 2,680 hours + 7,920 hours + 129,916 hours + 25,160 hours + 24,600 hours = 198,884 hours
Total Cost: **$**438,836 + $136,626 + $403,762 + $7,506,546 + $1,453,745 + $1,421,388 = $11,360,903

G. Recordkeeping (§§ 1910.1053(k) and 1926.1153(j))

1. Air-Monitoring Data (§§ 1910.1053(k)(1) and 1926.1153(j)(1)).

Employers performing air monitoring to determine worker respirable crystalline silica exposures must keep accurate records of all air-monitoring results used or relied on to assess worker exposure to respirable crystalline silica. These records must include the following information: the date of measurement for each sample taken; the task monitored; sampling and analytical methods used; the number, duration, and results of samples taken; the identity of the laboratory that performed the analysis; the type of personal protective equipment, such as respirators, worn by the workers monitored; and the name and job classification of all workers represented by the monitoring, indicating the workers monitored. Also, employers must maintain exposure records, and make them available, in accordance with 29 CFR 1910.1020. The air-monitoring data are worker-exposure records that employers must maintain for at least 30 years in accordance with 29 CFR 1910.1020(d)(1)(ii).

Employers must establish and maintain an exposure-monitoring record for each worker on whom they conduct an exposure assessment. Using information contained in an earlier section of this ICR (see section A of Item 12, Exposure Assessment), OSHA assumes it takes a human resources manager 15 minutes (15/60 hours) to establish and maintain the air-monitoring records associated with exposure monitoring. In subsequent years, the agency estimates it takes 15 minutes (15/60 hours) to update periodic and additional assessment records. The burden hours and cost associated with these provisions are:

Burden hours: 180,616 exposure assessments (general industry) x 15/60 hour per exposure assessment (HR manager time) = 45,154 hours
Cost: 45,154 hours x $109.74 per hour = $4,955,201

Burden hours: 24,790 exposure assessments (construction) x 15/60 hour per exposure assessment (HR manger time) = 6,198 hours
Cost: 6,198 hours x $109.74 per hour = **$**680,168

Total Burden hours: 45,154 hours + 6,198 hours = 51,352 hours
Total Cost: $4,955,201 +$680,168 = $5,635,369

2. Objective Data (§§ 1910.1053(k)(2) and 1926.1153(j)(2))

No burden hours or costs are assessed under this collection requirement. See Item 2.

3. Medical Surveillance (§§ 1910.1053(k)(3) and 1926.1153(j)(3))

This provision requires employers to make and maintain an accurate record for each worker subject to medical surveillance under the standards. These records must include the following information: the name of the worker; a copy of the PLHCP's and specialist's written medical opinions about the worker; and a copy of the information provided to the PLHCPs and specialists as required by paragraph (i)(4) of the general industry standard (paragraph (h)(4) of the construction standard). The information provided to the PLHCPs and specialists include the worker's duties as they relate to crystalline silica exposure, crystalline silica exposure levels, descriptions of personal protective equipment used by the worker, and information from employment-related medical examinations previously provided to the worker. Also, the employer must maintain worker medical records in accordance with 29 CFR 1910.1020. Employers must maintain medical records for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020(d)(1)(i).

Employers must establish and maintain accurate records containing specific information for each worker subject to medical surveillance. Using information contained in an earlier section of this ICR (see section E of Item 12, Medical Surveillance) OSHA finds that employers must establish and maintain 932,609 records of initial medical surveillance (37,566 in general industry and 65,188 in construction), periodic medical surveillance (269,312 in general industry and 559,249 in construction), and additional medical examinations (615 in general industry and 679 in construction). OSHA assumes that it will take a human resources manager 15 minutes (15/60 hours), on average per screening, to establish and prepare the file for workers' initial and periodic medical-examination records. OSHA estimates that it will take 1 hour to prepare and maintain workers' medical records for additional medical examinations. The burden hours and cost associated with these provisions are:

a. Maintaining Examinations Records for General Industry:

Burden hours: 37,566 initial examinations x 15/60 hour per initial examination (HR manager time)= 9,392 hours
Cost: 9,392 hours x $109.74 per hour = $1,030,678

Burden hours: 269,312 periodic examinations x 15/60 hour per periodic examination (HR manager time) = 67,328 hours
Cost: 67,328 hours x $109.74 per hour = $7,388,575

Burden hours: 615 additional examinations x 1 hour per additional examination (HR manager time) = 615 hours
Cost: 615 hours x $109.74 per hour = $67,490

b. Maintaining Examinations Records for Construction:

Burden hours: 65,188 initial examinations x 15/60 hour per initial examination (HR manager time) = 16,297 hours
Cost: 16,297 hours x $109.74 per hour = $1,788,433

Burden hours: 559,245 periodic examinations x 15/60 hour per periodic examination (HR manager time) = 139,812 hours
Cost: 139,812 hours x $109.74 per hour = $15,342,969

Burden hours: 679 additional examinations x 1 hour per additional examination (HR manager time) = 679 hours
Cost: 679 hours x $109.74 per hour = $74,513

***Combined Totals*:**

Total Burden hours: 9,392 hours + 67,328 hours + 615 hours +16,297 hours + 139,812 hours + 679 hours = 234,123 hours
Total cost: $1,030,678 + $7,388,575+ $67,490 + $1,788,433 + $15,342,969+ $74,513 = $25,692,658

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
A. Exposure Assessment (§§ 1910.1053(d)) and 1926.1153(d)(2))								
1. Performance option (paragraph (d)(2) of §§ 1910.1053 and (d)(2)(ii) of §§ 1926.1153)								
a. Worker Time and Cost - Initial Exposure Assessment (Table 1)								
General Industry	New Employees	54,597	0.25	13,649	30/60	6,825	$34.25	$233,756
Construction	New Employees	14,348	0.25	3,587	30/60	1,794	$42.11	$75,545
General Industry	Existing Employees	0	0.25	-	30/60	-	$34.25	$0
Construction	Existing Employees	0	0.25	-	30/60	-	$42.11	$0
	Subtotal A.1.a.			**17,236**		**8,619**		**$309,301**
2. Scheduled Monitoring Option and Reassessment of Exposures (paragraphs (d)(3) and (d)(4) of §§ 1910.1053 and (d)(2)(iii) and (d)(2)(iv) of § 1926.1153)								
a. Worker Time and Cost (General Industry) - Periodic and Additional Exposure Assessment (Table 3)								
General Industry (at or above Action Level below PEL),(Additional Exposures)	Employee (Semi-Annual Sampling)	33,073	1	33,071	30/60	16,536	$34.25	$566,538
General Industry (Above PEL) (Additional Exposures)	Employee (Periodic Assessments: AL)	133,896	1	133,896	30/60	66,948	$34.25	$2,292,969
	Subtotal A.2.a.			**166,967**		**83,484**		**$2,859,327**
b. Worker Time and Cost (Construction) - Periodic and Additional Exposure Assessment (Table 3)								

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
Construction (at or above Action Level below PEL),(Additional Exposures)	Employee (Semi-Annual Sampling)	293	1	293	30/60	147	$42.11	$6,190
Construction (Above PEL) (Additional Exposures)	Employee (Quarterly Sampling)	20,910	1	20,910	30/60	10,455	$42.11	$440,260
	Subtotal A.2.b.			**21,203**		**10,602**		**$446,450**
	Subtotal A.2.			**188,170**		**94,086**		**$3,305,777**
3. Employee Notification of Assessment Results (paragraph (d)(6) of § 1910.1053 and (d)(2)(vi) of § (1926.1153) (Table 5)								
a. Human Resources Manager Time to Notify Workers of Exposure Assessment Results (Table 5)								
General Industry	Employees Undergoing Exposure Assessment	180,616	1	180,616	15/60	45,154	$109.74	$4,955,200
Construction	Employees Undergoing Exposure Assessment	24,790	1	24,790	15/60	6,198	$109.74	$680,169
	Subtotal A.3.			**205,406**		**51,352**		**$5,635,369**
TOTAL A.				**410,812**		**154,057**		**$9,250,447**
B. Written Exposure Control Plan (paragraph (f)(2) of § 1910.1053 and paragraph (g) of § 1926.1153)								
1. Supervisor Time and Cost - Development of Plan (Table 6)								
General Industry	**Establishments**							
	Small	2,152	1	2,152	1	2,152	$50.98	$109,709
	Medium	335	1	335	4	1,340	$50.98	$68,313

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Large	198	1	198	16	3,168	$50.98	$161,505
	subtotal			**2,685**		**6,660**		**$339,527**
Construction	**Establishments**							
	Small	32,479	1	32,479	1	32,479	$57.78	$1,876,637
	Medium	3,145	1	3,145	4	12,580	$57.78	$726,872
	Large	615	1	615	16	9,840	$57.78	$568,555
	subtotal			**36,239**		**54,899**		**$3,172,064**
	Subtotal B.1.			**38,924**		**61,559**		**$3,511,591**
2. Supervisor Time & Cost - Review and Update Plan (Table 7)								
General Industry	**Establishments**							
	Small	57,902	1	57,902	30/60	28,951	$50.98	$1,475,922
	Medium	12,404	1	12,404	2	24,808	$50.98	$1,264,712
	Large	8,299	1	8,299	8	66,392	$50.98	$3,384,664
	subtotal			**78,605**		**120,151**		**$6,125,298**
Construction	**Establishments**							
	Small	659,886	1	659,886	30/60	329,943	$57.78	$19,064,107
	Medium	64,572	1	64,572	2	129,144	$57.78	$7,164,909
	Large	15,375	1	15,375	8	123,000	$57.78	$7,106,940
	subtotal			**739,833**		**582,087**		**$33,632,987**
	Subtotal B.2.			**818,438**		**702,238**		**39,758,285**
3. Supervisor Time and Cost- Implementation of Plan (Construction) (Table 8)								
Construction	**Establishments**							
	Small	659,886	15	9,898,290	18/60	2,969,487	$57.78	$171,576,959
	Medium	64,572	15	968,580	18/60	290,574	$57.78	$16,789,366
	Large	15,375	15	230,625	18/60	69,188	$57.78	$3,997,683
	Subpart B.3.			**11,097,495**		**3,329,249**		**$192,364,008**

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
4. Supervisor Time and Cost - Make Plan Available to Employees and Designated Representatives (Table 8 (a))								
General Industry	Affected Employees	9,016	0.1	902	5/60	75	$50.98	$3,824
Construction	Affected Employees	144,230	0.1	14,423	5/60	1,202	$57.78	$69,452
Subtotal B.4.				**15,325**		**1,277**		**$73,276**
TOTAL B.				**11,970,182**		**4,094,323**		**$235,707,160**
C. Air Quality Permit Notification								
1. HR Manager Time and Cost for Creating and Submitting the Air Quality Permit Notification (Table 9)								
General Industry	Establishments							
	Medium (20 to 499)	335	1	335	20	6,700	$109.74	$735,258
	Large (500+)	198	1	198	40	7,920	$109.74	$869,141
TOTAL C.		**533**		**533**		**14,620**		**$1,604,399**
D. Respiratory Protection (§§ 1910.1053(g) and 1926.1153(e))								
1. Respiratory Protection Program: Costs to Establish Program (paragraph (g)(2) of § 1910.1053 and (e)(2) of § 1926.1153)								
Human Resources Manager Time and Cost to Establish Respiratory Protection Program (Tables 10, 10a & 11)								
	Establishments							
General Industry New	*> 500 workers*	40	1	40	8	320	$109.74	$35,117
	< 500 workers	75	1	75	4	300	$109.74	$32,922
	subtotal			**115**		**620**		**$68,039**
(Table 10a)	Establishments							
Hydraulic Fracturing	*Large (500+)*	14	1	14	8	112	$109.74	$12,291
	Medium (20-499)	21	1	21	4	84	$109.74	$9,218

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Small (<20)	12	1	12	4	48	$109.74	$5,268
	subtotal			**47**		**244**		**$26,777**
Table 11	Establishments							
Construction	*> 500 workers*	547	1	547	8	4,376	$109.74	$480,222
	< 500 workers	4,570	1	4,570	4	18,280	$109.74	$2,006,047
	subtotal			**5,117**		**22,656**		**$2,486,269**
	Subtotal D.1.			**5,279**		**23,520**		**$2,581,085**
2. Respiratory Protection Program: Costs to Revise Program (paragraph (g)(2) of § 1910.1053 and (e)(2) of § 1926.1153) (Table 10)								
	Establishments							
General Industry	*> 500 workers*	1,703	0.2	341	4	1,364	$109.74	$149,685
	< 500 workers	3,135	0.2	627	2	1,254	$109.74	$137,614
	subtotal			**968**		**2,618**		**$287,299**
(Table 10a)	Establishments							
Hydraulic Fracturing	*Large (500+)*	547	0.2	109	4	436	$109.74	$47,847
	Medium (20-499)	846	0.2	169	2	338	$109.74	$37,092
	Small (<20)	495	0.2	99	2	198	$109.74	$21,729
	subtotal			**377**		**972**		**$106,668**
Table 11	Construction Establishments							
	> 500 workers	10,580	0.2	2,116	4	8,464	$109.74	$928,839
	< 500 workers	88,222	0.2	17,644	2	35,288	$109.74	$3,872,505
	subtotal			**19,760**		**43,752**		**$4,801,344**
	Subtotal D.2.			**21,105**		**47,342**		**$5,195,311**
3. Respirator Protection: Qualitative Fit Test Costs (paragraph (g)(2) of § 1910.1053 and (e)(2) of § 1926.1153)								

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
Supervisor and Worker Time and Cost to Complete Fit-Testing and Maintain Record (Table 12)								
General Industry	Worker - General Industry	29,900	1	29,900	1	29,900	$34.25	$1,024,075
	Worker - General Industry	29,900	1	29,900	15/60	7,475	$50.98	$381,076
Construction	Worker - General Industry	326,594	1	326,594	1	326,594	$42.11	$13,752,873
	Worker - General Industry	326,594	1	326,594	15/60	81,649	$57.78	$4,717,679
Subtotal D.3.				**712,988**		**445,618**		**$19,875,703**
Total D.				**739,372**		**516,480**		**$27,652,099**
E. Medical Surveillance (§§ 1910.1053(i) and 1926.1153(h))								
1. Initial Medical Examination (§§ 1910.1053(i)(2)(i)-(vi) and 1926.1153(h)(2)(i)-(vi))								
E. 1.a.(i). Worker Time and Cost to Complete the Initial Medical Examination - Existing Workers (Table 13)								
General Industry	**Onsite Employees**							
	Small	0	0.2	0	1.75	0	$34.25	$0
	Medium	0	0.75	0	1.75	0	$34.25	$0
	Large	0	1	0	1.75	0	$34.25	$0
	subtotal	**0**		**0**		**0**		**$0**
	Offsite Employee							
	Small	0	0.8	0	1.75	0	$34.25	$0
	Medium	0	0.25	0	1.75	0	$34.25	$0
	Large	0	0	0	1.75	0	$34.25	$0
	subtotal			**0**		**0**		**$0**
Construction	**Onsite Employees**							
	Small	0	0.2	0	1.75	0	$42.11	$0

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Medium	0	0.75	0	1.75	0	$42.11	$0
	Large	0	1	0	1.75	0	$42.11	$0
	subtotal			**0**		**0**		**$0**
	Offsite Employee							
	Small	0	0.8	0	3.25	0	$42.11	$0
	Medium	0	0.25	0	3.25	0	$42.11	$0
	Large	0	0	0	3.25	0	$42.11	$0
	subtotal			**0**		**0**		**$0**
	Subtotal E. 1.a.(i).			**0**		**0**		**$0**
a.(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Initial Medical Examination - Existing Workers (Table 13(a))								
General Industry	**Onsite Employees**							
	Small	0.2	0	0	15/60	0	$34.25	$0
	Medium	0.75	0	0	15/60	0	$34.25	$0
	Large	1	0	0	15/60	0	$34.25	$0
	subtotal			**0**		**0**		**$0**
	Offsite Employee							
	Small	0.8	0	0	15/60	0	$34.25	$0
	Medium	0.25	0	0	15/60	0	$34.25	$0
	Large	0	0	0	15/60	0	$34.25	$0
	subtotal			**0**		**0**		**$0**
Construction	**Onsite Employees**							
	Small	0.2	0	0	15/60	0	$42.11	$0
	Medium	0.75	0	0	15/60	0	$42.11	$0
	Large	1	0	0	15/60	0	$42.11	$0
	subtotal			**0**		**0**	$0.00	**$0**
	Offsite Employee							

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Small	0.8	0	0	15/60	0	$42.11	$0
	Medium	0.25	0	0	15/60	0	$42.11	$0
	Large	0	0	0	15/60	0	$42.11	$0
	subtotal			**0**		**0**		**$0**
	Subtotal E.1.a. (ii).			**0**		**0**		**$0**
	Subtotal E. 1.a.			**0**		**0**		**$0**
E. 1 .b.(i). Worker Time and Cost to Complete the Initial Medical Examination - New Workers (Table 14)								
General Industry	**Onsite Employees**							
	Small	30,512	(*75%*31.3%*10%)	716	105/60	1,253	$34.25	$42,915
	Medium	67,301	(*75%*31.3%*50%)	7,899	105/60	13,823	$34.25	$473,438
	Large	62,217	(*75%*31.3%*90%)	13,145	105/60	23,004	$34.25	$787,887
	subtotal			**21,760**		**38,080**		**$1,304,240**
	Offsite Employee							
	Small	30,512	(*75%*31.3%*90%)	6,446	165/60	17,727	$34.25	$607,150
	Medium	67,301	(*75%*31.3%*50%)	7,899	165/60	21,722	$34.25	$743,979
	Large	62,217	(*75%*31.3%*10%)	1,461	165/60	4,018	$34.25	$137,617
	subtotal			**15,806**		**43,467**		**$1,488,746**
Construction	**Onsite Employees**							
	Small	111,333	(40%*49.9%*10%)	2,222	105/60	3,889	$42.11	$163,766
	Medium	148,501	(40%*49.9%*50%)	14,820	105/60	25,935	$42.11	$1,092,123
	Large	66,760	(40%*49.9%*90%)	11,993	105/60	20,988	$42.11	$883,805
	subtotal			**29,035**		**50,812**		**$2,139,694**

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Offsite Employee							
	Small	111,333	(40%*49.9%*90%)	20,000	165/60	65,000	$42.11	$2,737,150
	Medium	148,501	(40%*49.9%*50%)	14,820	165/60	48,165	$42.11	$2,028,228
	Large	66,760	(40%*49.9%*10%)	1,333	165/60	4,332	$42.11	$182,421
	subtotal			**36,153**		**117,497**		**$4,947,799**
	Subtotal E.1.b.(i).			**102,754**		**249,856**		**$9,880,479**
E.1.b.(ii).Worker Time and Cost to Complete the Medical Surveillance Form for the Initial Medical Examination - New Workers (Table 14(a))								
General Industry	**Onsite Employees**							
	Small	30,512	(*75%*31.3%*10%)	716	15/60	179	$34.25	$6,131
	Medium	67,301	(*75%*31.3%*50%)	7,900	15/60	1,975	$34.25	$67,644
	Large	62,217	(*75%*31.3%*90%)	13,145	15/60	3,286	$34.25	$112,546
subtotal				**21,760**		**5,440**		**$186,321**
	Offsite Employee							
	Small	30,512	(*75%*31.3%*90%)	6,446	15/60	1,612	$34.25	$55,211
	Medium	67,301	(*75%*31.3%*50%)	7,899	15/60	1,975	$34.25	$67,644
	Large	62,217	(*75%*31.3%*10%)	1,461	15/60	365	$34.25	$12,501
	subtotal			**15,806**		**3,952**		**$135,356**
Construction	**Onsite Employees**							
	Small	111,333	(40%*49.9%*10%)	2,222	15/60	556	$42.11	$23,413
	Medium	148,501	(40%*49.9%*50%)	14,820	15/60	3,705	$42.11	$156,018
	Large	66,760	(40%*49.9%*90%)	11,993	15/60	2,998	$42.11	$126,246

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	subtotal			**29,035**		**7,259**		**$305,677**
	Offsite Employee							
	Small	111,333	(40%*49.9%*90%)	20,000	15/60	5,000	$42.11	$210,550
	Medium	148,501	(40%*49.9%*50%)	14,820	15/60	3,705	$42.11	$156,018
	Large	66,760	(40%*49.9%*10%)	1,333	15/60	333	$42.11	$14,023
	subtotal			**36,153**		**9,038**		**$380,591**
	Subtotal E.1.b.(ii).			**102,754**		**25,689**		**$1,007,945**
	Subtotal E. 1.b.			**205,508**		**275,545**		**$10,888,424**
E.1.c. Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - Existing Workers (Table 16)								
	Onsite Employees							
	Small	0	0	0	5/60	0	$34.25	0
General Industry	*Medium*	0	0	0	5/60	0	$34.25	0
	Large	0	0	0	5/60	0	$34.25	0
	subtotal			*0*		*0*		*0*
	Offsite Employee							
	Small	0	0	0	1.08	0	$34.25	0
	Medium	0	0	0	1.08	0	$34.25	0
	Large	0	0	0	1.08	0	$34.25	0
	subtotal			*0*		*0*		*0*
Construction	**Onsite Employees**							
	Small	0	0	0	5/60	0	$42.11	0
	Medium	0	0	0	5/60	0	$42.11	0
	Large	0	0	0	5/60	0	$42.11	0
	subtotal			0		0		0
	Offsite Employee							0
	Small	0	0	0	1.5+5/60	0	$42.11	0
	Medium	0	0	0	1.5+5/60	0	$42.11	0

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Large	0	0	0	1.5+5/60	0	$42.11	0
	subtotal			0		0		0
	Subtotal E.1.c.	0		0		0		0
E.1.d. Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - New Workers (Table 17)								
General Industry	**Onsite Employees**							
	Small	716	1	716	5/60	60	$34.25	$2,055
	Medium	7,899	1	7,899	5/60	658	$34.25	$22,537
	Large	13,145	1	13,145	5/60	1,095	$34.25	$37,504
	subtotal			**21,760**		**1,813**		**$62,096**
	Offsite Employee							
	Small	6,446	1	6,446	65/60	6,983	$34.25	$239,168
	Medium	7,899	1	7,899	65/60	8,557	$34.25	$293,077
	Large	1,461	1	1,461	65/60	1,583	$34.25	$54,218
	subtotal			**15,806**		**17,123**		**$586,463**
Construction	**Onsite Employees**							
	Small	2,222	1	2,222	5/60	185	$42.11	$7,790
	Medium	14,820	1	14,820	5/60	1,235	$42.11	$52,006
	Large	11,993	1	11,993	5/60	999	$42.11	$42,068
	subtotal			**29,035**		**2,419**		**$101,864**
	Offsite Employee							
	Small	20,000	1	20,000	95/60	31,667	$42.11	$1,333,497
	Medium	14,820	1	14,820	95/60	23,465	$42.11	$988,111
	Large	1,333	1	1,333	95/60	2,111	$42.11	$88,894
	subtotal			**36,153**		**57,243**		**$2,410,502**
	Subtotal E. (1). (d).			**102,754**		**78,598**		**$3,160,925**
	Subtotal E. 1.			**308,262**		**354,143**		**$14,049,349**

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
2. Periodic Medical Examination (§§ 1910.1053(i)(3) and 1926.1153(h)(3))								
a.(i). Worker Time and Cost to Complete the Periodic Medical Examination (Table 19)								
General Industry	**Onsite Employees**							
	Small	9,553	1	9,553	105/60	16,718	$34.25	$572,592
	Medium	80,996	1	80,995	105/60	141,741	$34.25	$4,854,629
	Large	103,244	1	103,244	105/60	180,677	$34.25	$6,188,187
	subtotal			**193,792**		**339,136**		**$11,615,408**
	Offsite Employee							
	Small	41,795	1	41,795	165/60	114,936	$34.25	$3,936,558
	Medium	32,264	1	32,264	165/60	88,726	$34.25	$3,038,866
	Large	1,461	1	1,461	165/60	4,018	$34.25	$137,617
	subtotal			**75,520**		**207,680**		**$7,113,041**
Construction	**Onsite Employees**							
	Small	24,489	1	35,907	105/50	62,837	$42.11	$2,646,066
	Medium	126,196	1	183,306	105/50	320,786	$42.11	$13,508,298
	Large	78,753	1	112,985	105/50	197,724	$42.11	$8,326,158
	subtotal			**332,198**		**581,347**		**$24,480,522**
	Offsite Employee							
	Small	109,066	1	154,736	195/60	502,892	$42.11	$21,176,782
	Medium	51,945	1	70,982	195/60	230,692	$42.11	$9,714,440
	Large	1,333	1	1,333	195/60	4,332	$42.11	$182,421
	subtotal			**227,051**		**737,916**		$31,073,643
	Subtotal E.2.a(i).			**828,561**		**1,866,079**		**$74,282,614**
a.(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Periodic Medical Examination (Table 19(a))								
General Industry	**Onsite Employees**							
	Small	9,553	1	9,553	15/60	2,388	$34.25	$81,789

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Medium	80,995	1	80,995	15/60	20,249	$34.25	$693,528
	Large	103,244	1	103,244	15/60	25,811	$34.25	$884,027
	subtotal			**193,792**		**48,448**		**$1,659,344**
	Offsite Employee							
	Small	41,795	1	41,795	15/60	10,449	$34.25	$357,878
	Medium	32,264	1	32,264	15/60	8,066	$34.25	$276,261
	Large	1,461	1	1,461	15/60	365	$34.25	$12,501
	subtotal			**75,520**		**18,880**		**$646,640**
Construction	**Onsite Employees**							
	Small	35,907	1	35,907	15/60	8,977	$42.11	$378,021
	Medium	183,306	1	183,306	15/60	45,827	$42.11	$1,929,775
	Large	112,985	1	112,985	15/60	28,246	$42.11	$1,189,439
	subtotal			**332,198**		**83,050**		**$3,497,235**
	Offsite Employee							
	Small	154,736	1	154,736	15/60	38,684	$42.11	$1,628,983
	Medium	70,982	1	70,982	15/60	17,746	$42.11	$747,284
	Large	1,333	1	1,333	15/60	333	$42.11	$14,023
				227,051		**56,763**		**$2,390,290**
	Subtotal E.2.a.(ii).			**828,561**		**207,141**		**$8,193,509**
	Subtotal E.2.a			**1,657,122**		**2,073,220**		**$82,476,123**
b. Worker Time and Cost to Complete Latent TB Test Return Reading During Periodic Medical Examination (Table 21)								
General Industry	**Onsite Employees**							
	Small	2,735	0.15	410	5/60	34	$34.25	$1,165
	Medium	22,620	0.15	3,393	5/60	283	$34.25	$9,693
	Large	27,882	0.15	4,182	5/60	349	$34.25	$11,953
	subtotal			**7,985**		**666**		**$22,811**

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Offsite Employee							
	Small	10,939	0.15	1,641	65/60	1,778	$34.25	$60,897
	Medium	7,540	0.15	1,131	65/60	1,225	$34.25	$41,956
	Large	0	0.15	0	65/60	0	$34.25	$0
	subtotal			**2,772**		**3,003**		**$102,853**
Construction	**Onsite Employees**							
	Small	11,418	0.2	2,284	5/60	190	$42.11	$8,001
	Medium	57,110	0.2	11,422	5/60	952	$42.11	$40,089
	Large	34,233	0.2	6,847	5/60	571	$42.11	$24,045
	subtotal			**20,553**		**1,713**		**$72,135**
	Offsite Employee							
	Small	45,671	0.2	9,134	95/60	14,462	$42.11	$608,995
	Medium	19,037	0.2	3,807	95/60	6,028	$42.11	$253,839
	Large	0	0.2	0	95/60	0	$42.11	$0
	subtotal			**12,941**		**20,490**		**$862,834**
	Subtotal E.2.b.			**44,251**		**25,872**		**$1,060,633**
	Subtotal E.2.			**1,701,372**		**2,099,092**		**83,536,756**
3. Information Provided to the PLHCP and Specialist (§§ 1910.1053(i)(4)(i)-(iv), (i)(7)(ii) and 1926.1153(h)(4)(i)-(iv), (h)(7)(ii))								
Human Resources Manager Time and Cost to Provide Information to the PLHCP (Table 22)								
General Industry	Employees							
	Initial	37,566	1	37,566	15/60	9,392	$109.74	$1,030,678
	Periodic	269,312	1	269,312	15/60	67,328	$109.74	$7,388,575
	Additional/Pulmonary Function Exam	615	1	615	1	615	$109.74	$67,490
	subtotal			**307,493**		**77,335**		**$8,486,743**
Construction	Employees							

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Initial	65,188	1	65,188	15/60	16,297	$109.74	$1,788,433
	Periodic	559,249	1	559,249	15/60	139,812	$109.74	$15,342,969
	Additional/Pulmonary Function Exam	679	1	679	1	679	$109.74	$74,513
	subtotal			**625,116**		**156,788**		**17,205,915**
	Subtotal E.3.			**932,609**		**234,123**		**25,692,658**
4. PLHCP's Written Medical Report and Opinion (§§ 1910.1053(i)(5) and (i)(6) and 1926.1153(h)(5) and (h)(6) and Specialist's Written Medical Report and Opinion (1910.1053(i)(7)(iii) and (i)(7)(iv) and 1926.1153(h)(7)(iii) and (h)(7)(iv))								
Human Resources Manager Time and Cost to Ensure Worker Receipt of the PLHCP's Medical Report and Provide a Copy of the PLHCP's Written Opinion to the Worker (Table 23)								
General Industry	Employees							
	Initial	37,566	1	37,566	15/60	9,392	$109.74	$1,030,678
	Periodic	269,312	1	269,312	15/60	67,328	$109.74	$7,388,575
	Specialist/Additional	615	1	615	15/60	154	$109.74	$16,250
	subtotal	**307,493**		**307,493**		**76,874**		**$8,436,153**
Construction	Employees							
	Initial	65,188	1	65,188	15/60	16,297	$109.74	$1,788,433
	Periodic	559,249	1	559,249	15/60	139,812	$109.74	$15,342,969
	Specialist/Additional	679	1	679	15/60	170	$109.74	$18,656
	subtotal	**625,116**		**625,116**		**156,279**		**$17,150,058**
	Subtotal E.4.	**932,609**		**932,609**		**233,153**		**$25,586,211**
5. Additional Medical Examinations (§§ 1910.1053(i)(7), (i)(7)(i) and (i)(7)(ii) and 1926.1153(h)(7), (h)(7)(i) and (h)(7)(ii).)								

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
E.5.a.(i). Worker Time and Cost to Complete the Specialist Examination (Table 24)								
General Industry	**Onsite Employees**							
	Small	117	0.2	23	0.75	17	$34.25	$582
	Medium	259	0.75	194	0.75	146	$34.25	$5,001
	Large	259	1	239	0.75	179	$34.25	$6,131
	subtotal			***456***		***342***		***$11,714***
	Offsite Employee							
	Small	117	0.8	94	1.75	165	$34.25	$5,651
	Medium	259	0.25	65	1.75	114	$34.25	$3,905
	Large	239	0	0	1.75	0	$34.25	$0
	subtotal			***159***		***279***		***$9,556***
Construction	**Onsite Employees**							
	Small	232	0	0	0	0	$42.11	0
	Medium	309	0	0	0	0	$42.11	0
	Large	139	0	0	0	0	$42.11	0
	subtotal			***0***		***0***		***0***
	Offsite Employee							
	Small	232	1	232	2.25	522	$42.11	$21,981
	Medium	309	1	309	2.25	695	$42.11	$29,266
	Large	139	1	139	2.25	313	$42.11	$13,180
	subtotal			***680***		***1,530***		**$64,427**
	Subtotal E.5.a.(i).			**1,295**		**2,151**		**$85,697**
a.(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Specialist Examination (Table 24(a))								
General Industry	**Onsite Employees**							
	Small	117	0.2	23	15/60	6	$34.25	$206
	Medium	259	0.2	52	15/60	13	$34.25	$445

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
	Large	239	0.2	48	15/60	12	$34.25	$411
	subtotal			***123***		***31***		***$1,062***
	Offsite Employee							
	Small	117	0.8	94	15/60	24	$34.25	$822
	Medium	259	0.8	207	15/60	52	$34.25	$1,781
	Large	239	0.8	191	15/60	48	$34.25	$1,644
	subtotal			***492***		***124***		***$4,247***
Construction	**Onsite Employees**							
	Small	232	0	0	15/60	0	$42.11	$0
	Medium	309	0	0	15/60	0	$42.11	$0
	Large	139	0	0	15/60	0	$42.11	$0
	subtotal			***0***		***0***		$0
	Offsite Employee							
	Small	232	1	232	15/60	58	$42.11	$2,442
	Medium	309	1	309	15/60	77	$42.11	$3,242
	Large	139	1	139	15/60	35	$42.11	$1,474
	subtotal			***680***		***170***		***7,158***
	Subtotal E.5.a(ii).			**1,295**		**325**		**12,467**
	Subtotal E.5.			**2,590**		**2,476**		**98,164**
Total E.				**3,877,422**		**2,922,987**		**148,963,138**
F. Rule Familiarization								
1. Supervisor Rule Familiarization Time and Cost (Table 26)								
General Industry	Establishments							
	Small	2,152	1	2,152	4	8,608	$50.98	$438,836
	Medium	335	1	335	8	2,680	$50.98	$136,626
	Large	198	1	198	40	7,920	$50.98	$403,762
	subtotal			***2,685***		***19,208***		***$979,224***

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
Construction	Establishments							
	Small	32,479	1	32,479	4	129,916	$57.78	$7,506,546
	Medium	3,145	1	3,145	8	25,160	$57.78	$1,453,745
	Large	615	1	615	40	24,600	$57.78	$1,421,388
	subtotal			***36,239***		***179,676***		***$10,381,679***
Total F.				**38,924**		**198,884**		**$11,360,903**
G. Recordkeeping (§§ 1910.1053(k) and 1926.1153(j))								
1. Air Monitoring Data and Objective Data (§§ 1910.1053(k)(1) and 1926.1153(j)(1))								
Human Resources Manager Time and Cost to Establish and Maintain Record for Exposure Monitoring Data (Table 27)								
General Industry	Employees Undergoing Exposure Assessment							
	Initial	13,649	1	13,649	15/60	3,412	$109.74	$374,433
	Periodic	133,574	1	133,574	15/60	33,394	$109.74	$3,664,658
	Referral/additional	33,393	1	33,393	15/60	8,348	$109.74	$916,110
	subtotal			**180,616**		**45,154**		**$4,955,201**
Construction	Employees Undergoing Exposure Assessment							
	Initial	3,587	1	3,587	0.25	897	$109.74	$98,437
	Periodic	16,962	1	16,962	0.25	4,241	$109.74	$465,407
	Referral/additional	4,241	1	4,241	1	1,060	$109.74	$116,324
	subtotal			**24,790**		**6,198**		**$680,168**

Table C – Summary of Burden Hours, Burden-Hour Cost Under Items 12 of this Supporting Statement								
	Type of Respondent[1]	**Base Response**	**Frequency**	**Total Responses**	**Time per Response (Hours)**	**Burden Hours**	**Hourly Loaded Wage**	**Cost**
Subtotal G.1.				**205,406**		**51,352**		**$5,635,369**
2. Medical Surveillance (§§ 1910.1053(k)(3) and 1926.1153(j)(3))								
Human Resources Manager Time and Cost to Establish and Maintain Record for Medical Surveillance (Table 28)								
General Industry	Employees Undergoing Medical Examination							
	Initial	37,566	1	37,566	15/60	9,392	$109.74	$1,030,678
	Periodic	269,312	1	269,312	15/60	67,328	$109.74	$7,388,575
	Referral/additional	615	1	615	1	615	$109.74	$67,490
	subtotal			**307,493**		**77,335**		**$8,486,743**
Construction	Employees Undergoing Medical Examination							
	Initial	65,188	1	65,188	15/60	16,297	$109.74	$1,788,433
	Periodic	559,249	1	559,249	15/60	139,812	$109.74	$15,342,969
	Referral/additional	679	1	679	1	679	$109.74	$74,513
	subtotal			625,116		156,788		$17,205,915
Subtotal G.2.				**932,609**		**234,123**		**25,692,658**
Subtotal G.				**1,138,015**		**285,475**		**$31,328,027**
Grand Total				18,175,280		8,186,825		$465,866,173

The number of respondents is 818,438.

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 on 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 collections services should be 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.**

Exposure Assessment

The agency assumes that employers incur costs for analyzing the samples taken for initial, periodic, and additional exposure assessment. The agency estimates that the cost for contract industrial hygienist services for each exposure assessment sample ranges from $335.44 to $1,341.77 for initial exposure monitoring and from $167.72 to $1,341.77 for periodic monitoring, depending on the size of the establishment. laboratory fees and shipping will cost an additional $198.00. The detailed costs are shown in Tables 2 and 4.

Medical Examinations

The agency assumes that employers incur costs for contract medical exams. The agency estimates the cost for an initial or periodic medical examination to be $263.38, a specialist exam to be $150.16 and a TB test to be $9.70. The detailed maintenance and operation costs are

shown in Tables 15, 15(a), 25, 25(a) and 18. The contract medical examinations include the same assumptions about onsite and offsite medical examinations costs as Item 12.

The total operation and maintenance cost for the exposure assessments and medical examinations provided under the standards are estimated to be $220,825,320.

Table D – Estimated Capital Cost for Exposure Assessment and Medical Surveillance			
Collection of Information Requirements	**Existing Capital Cost**	**Requested Capital Cost**	**Change**
A. Exposure Assessment (§§ 1910.1053(d)) and 1926.1153(d)(2))			
1. Performance option (paragraph (d)(2) of §§ 1910.1053 and (d)(2)(ii) of §§ 1926.1153)			
a. Contract Cost for an Industrial Hygienist to Conduct Analysis of Initial Exposure Assessment (Table 2)			
Subtotal A.1.b.	**$12,350,536**	**$10,527,453**	**-$1,823,083**
b. Contract Cost for a Laboratory to Conduct Analysis of Initial Exposure Assessment (Table 2)			
Subtotal A.1.c.	**$4,706,160**	**$3,412,778**	**-$1,293,382**
Subtotal A.1.	**$17,056,696**	**$13,940,231**	**-$3,116,465**
2. Scheduled Monitoring Option and Reassessment of Exposures (paragraphs (d)(3) and (d)(4) of §§ 1910.1053 and (d)(2)(iii) and (d)(2)(iv) of § 1926.1153)			
a. Contract Cost for an Industrial Hygienist to Conduct Analysis of Periodic Exposure Assessment (Table 4)			
Subtotal A.2.b.	**$62,538,654**	**$67,522,939**	**$4,984,285**
b. Contract Cost for a Laboratory to Conduct Analysis of Periodic Exposure Assessment (Table 4)			
Subtotal A.2.c.	**$40,003,760**	**$37,418,634**	**-$2,585,126**
Subtotal A.2.	**$102,542,414**	**$104,941,573**	**$2,399,159**
E. Medical Surveillance (§§ 1910.1053(i) and 1926.1153(h))			
1. Initial Medical Examination (§§ 1910.1053(i)(2)(i)-(vi) and 1926.1153(h)(2)(i)-(vi))			
a. Contract Cost for a PLHCP to Conduct the Initial Medical Examination (Table 15)			
Subtotal E.1.c(i).	$49,143,837	$27,063,349	-$22,080,488
b. Contract Cost for a PLHCP to Conduct the Initial Medical Examination (Adjusted for Medical Surveillance Form Completion Time) (Table 15(a))			
Subtotal E.1.c(i).	$5,666,353	$3,074,400	-$2,591,953
c. Contract Cost for a PLHCP to Conduct the Latent TB Test During Initial Medical Examination (Table 18)			
Subtotal E.1.f.	**$2,628,114**	**$996,714**	**-$1,631,400**
Subtotal E.1.	**$57,438,302**	**$31,134,463**	**-$26,303,841**
2. Periodic Medical Examination (§§ 1910.1053(i)(3) and 1926.1153(h)(3))			
a. Contract Cost for a PLHCP to Conduct the Periodic Medical Examination (Table 20)			
Subtotal E.2.b(i).	$74,331,064	$62,357,835	**-$11,973,229**
b. Contract Cost for a PLHCP to Conduct the Periodic Medical Examination (Adjusted for Medical Surveillance Form Completion Time)(Table 20(a))			
Subtotal E.2.b(ii).	$9,252,411	$7,794,539	**-$1,457,872**
c. Contract Cost for a PLHCP to Conduct Latent TB Test During Periodic Medical Examination (Table 18)			
Subtotal E.2.d.	**$748,811**	**$429,225**	**-$319,586**

Table D – Estimated Capital Cost for Exposure Assessment and Medical Surveillance			
Collection of Information Requirements	**Existing Capital Cost**	**Requested Capital Cost**	**Change**
Subtotal E.2	**$84,332,286**	**$70,581,599**	**-$13,750,687**
3. Additional Medical Examinations (§§ 1910.1053(i)(7), (i)(7)(i) and (i)(7)(ii) and 1926.1153(h)(7), (h)(7)(i) and (h)(7)(ii).)			
a. Contract Cost for a PLHCP to Conduct Specialist Examination (Table 25)			
Subtotal E.5.b(i).	$289,701	$194,457	-$95,224
b. Contract Cost for a PLHCP to Conduct Specialist Examination (Adjusted for Medical Surveillance Form Completion Time) (Table 25(a))			
Subtotal E.5.b(ii).	$50,226	$32,997	-$17,139
Subtotal E.3.	**$340,045**	**$227,454**	**-$112,591**
TOTAL	**$261,709,625**	**$220,825,320**	**-$40,884,305**

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

There is no cost to the Federal government associated with this information collection request. The agency has no annualized cost associated with enforcing the Standard. OSHA would only review records in the context of an investigation of a particular employer to determine compliance with the Standard. These activities are outside the scope of the PRA. See 5 CFR 1320.4(a)(2).

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

The agency is requesting an adjustment increase of 390,697 in burden hours, increasing from 7,796,128 to 8,186,825 hours. The increase is largely due to an increase in the number of estimated new affected construction establishments, as a result of an increase in the business formation rate (U.S. Census Bureau, 2022), that are required to develop and implement written access control plans; and an increase in the number of employees undergoing periodic medical examinations as a result of an updated estimation method (see footnote 11).

Also, the agency is requesting an adjustment decrease of $40,884,305 for operation and maintenance costs going from $261,709,625 to $220,825,320. This reduction is mainly due to a change to the source of the unit cost estimates for direct medical costs (e.g., physical exam, chest x-ray, pulmonary function test). In this ICR, OSHA relied upon current data for these medical exams or tests from the 2025 CMS Physician Fee schedule, while previous ICRs relied upon inflation-adjusted estimates from earlier ICRs.

RESPIRABLE CRYSTALLINE SILICA STANDARDS FOR GENERAL INDUSTRY (29 CFR 1910.1053), SHIPYARDS (29 CFR 1915.1053) AND CONSTRUCTION (29 CFR 1926.1153)
OMB Control Number – 1218-0266
Expiration Date: July 31, 2026

Table E

Adjusted Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost Change Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements	Number of Responses	Current Burden Hours	Requested Burden Hours	Change	Current Item 13 Cost	Proposed Item 13 Cost	Change
A. Exposure Assessment (§§ 1910.1053(d)) and 1926.1153(d)(2))							
1. Performance option (paragraph (d)(2) of §§ 1910.1053 and (d)(2)(ii) of §§ 1926.1153)							
a. Worker Time and Cost - Initial Exposure Assessment (Table 1)	17,236	11,075	8,619	-2,456	_	_	_
b. Contract Cost for an Industrial Hygienist to Conduct Analysis of Initial Exposure Assessment (Table 2)	–	–	–	–	$12,350,536	$10,527,453	-$1,823,083
c. Contract Cost for a Laboratory to Conduct Analysis of Initial Exposure Assessment (Table 2)	–	–	–	–	$4,706,160	$3,412,778	-$1,293,382
2. Scheduled Monitoring Option and Reassessment of Exposures (paragraphs (d)(3) and (d)(4) of §§ 1910.1053 and (d)(2)(iii) and (d)(2)(iv) of § 1926.1153)							
a. Worker Time and Cost - Periodic and Additional Exposure Assessment (Table 3)	188,170	80,456	94,086	13,630	_	_	_

Table E

Adjusted Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost Change Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements	Number of Responses	Current Burden Hours	Requested Burden Hours	Change	Current Item 13 Cost	Proposed Item 13 Cost	Change
b. Contract Cost for an Industrial Hygienist to Conduct Analysis of Periodic Exposure Assessment (Table 4)	–	–	–	–	$62,538,654	$67,522,939	$4,984,285
c. Contract Cost for a Laboratory to Conduct Analysis of Periodic Exposure Assessment (Table 4)	–	–	–	–	$40,003,760	$37,418,634	-$2,585,126
3. Employee Notification of Assessment Results (paragraph (d)(6) of § 1910.1053 and (d)(2)(vi) of § 1926.1153)							
a. Human Resources Manager Time to Notify Workers of Exposure Assessment Results (Table 5)	205,406	45,765	51,352	5,587	–	–	–
B. Written Exposure Control Plan (paragraph (f)(2) of § 1910.1053 and paragraph (g) of § 1926.1153)							
1. Supervisor Time and Cost - Development of Plan (Table 6)	38,924	54,365	61,559	7,194	–	–	–
2. Supervisor Time and Cost - Review and Update Plan (Table 7)	818,438	652,923	702,238	49,315	–	–	–
3. Supervisor Time and Cost- Implementation of Plan (Construction) (Table 8)	11,097,495	3,091,946	3,329,249	237,303	–	–	–

Table E

Adjusted Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost Change Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements	Number of Responses	Current Burden Hours	Requested Burden Hours	Change	Current Item 13 Cost	Proposed Item 13 Cost	Change
4. Supervisor Time and Cost - Make Plan Available to Employees and Designated Representatives (Table 8a)	15,325	1,175	1,277	102	–	–	–
C. Air Quality Permit Notification							
1. HR Manager Time and Cost for Creating and Submitting the Air Quality Permit Notification (Table 9)	533	13,800	14,620	820	–	–	
D. Respiratory Protection (§§ 1910.1053(g) and 1926.1153(e))							
1. Respiratory Protection Program: Costs to Establish Program (paragraph (g)(2) of § 1910.1053 and (e)(2) of § 1926.1153)							
a. Human Resources Manager Time and Cost to Establish Respiratory Protection Program (Tables 10, 10a & 11)	5,279	21,876	23,520	1,644	–	–	–
2. Respiratory Protection Program: Costs to Revise Program (paragraph (g)(2) of § 1910.1053 and (e)(2) of § 1926.1153)							
a. Human Resources Manager Time and Cost to Revise Respiratory Protection Program (Tables 10, 10a & 11)	21,105	46,086	47,342	1,256	–	–	–

RESPIRABLE CRYSTALLINE SILICA STANDARDS FOR GENERAL INDUSTRY (29 CFR 1910.1053), SHIPYARDS (29 CFR 1915.1053) AND CONSTRUCTION (29 CFR 1926.1153)
OMB Control Number – 1218-0266
Expiration Date: July 31, 2026

Table E

Adjusted Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost Change Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements	Number of Responses	Current Burden Hours	Requested Burden Hours	Change	Current Item 13 Cost	Proposed Item 13 Cost	Change
3. Respirator Protection: Qualitative Fit Test Costs (paragraph (g)(2) of § 1910.1053 and (e)(2) of § 1926.1153)							
a. Supervisor and Worker Time and Cost to Complete Fit-Testing and Maintain Record(Table 12)	712,988	435,654	445,618	9,964	_	_	_
E. Medical Surveillance (§§ 1910.1053(i) and 1926.1153(h))							
1. Initial Medical Examination (§§ 1910.1053(i)(2)(i)-(vi) and 1926.1153(h)(2)(i)-(vi))							
a. Worker Time and Cost to Complete the Initial Medical Examination - Existing Workers (Table 13)	0	0	0	0	_	_	_
b(i). Worker Time and Cost to Complete the Initial Medical Examination - New Workers (Table 14)	102,754	301,169	249,856	-51,313	_	_	_
b(ii) Worker Time and Cost to Complete the Medical Surveillance Form for the Initial Medical Examination - New Workers (Table 14(a))	102,755	31,322	25,689	-5,633	_	_	_
c(i). Contract Cost for a PLHCP to Conduct the Initial Medical Examination (Table 15)	_	-	_	_	$49,143,837	$27,063,349	-$22,080,488

Table E

Adjusted Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost Change Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements	Number of Responses	Current Burden Hours	Requested Burden Hours	Change	Current Item 13 Cost	Proposed Item 13 Cost	Change
c(ii). Contract Cost for a PLHCP to Conduct the Initial Medical Examination (Adjusted for Medical Surveillance Form Completion Time) (Table 15(a))	–	–	–	–	$5,666,353	$3,074,400	-$2,591,953
d. Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - Existing Workers (Table 16)	0	0	0	0	–	–	–
e. Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - New Workers (Table 17)	102,754	92,359	78,598	-13,761	–	–	–
f. Contract Cost for a PLHCP to Conduct the Latent TB Test During Initial Medical Examination (Table 18)	–	–	–	–	$2,628,112	$996,714	-$1,631,398
2. Periodic Medical Examination (§§ 1910.1053(i)(3) and 1926.1153(h)(3))							
a(i). Worker Time and Cost to Complete the Periodic Medical Examination (Table 19)	828,561	1,777,054	1,866,079	89,026	–	–	–
a(ii). Worker Time and Cost to Complete the Medical	828,561	197,783	207,141	9,358	–	–	–

Table E

Adjusted Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost Change Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements	Number of Responses	Current Burden Hours	Requested Burden Hours	Change	Current Item 13 Cost	Proposed Item 13 Cost	Change
Surveillance Form for the Periodic Medical Examination (Table 19(a))							
b(i). Contract Cost for a PLHCP to Conduct the Periodic Medical Examination (Table 20)	–	–	–	–	$74,331,064	$62,357,835	-$11,973,229
b(ii). Contract Cost for a PLHCP to Conduct the Periodic Medical Examination (Adjusted for Medical Surveillance Form Completion Time)(Table 20(a))	–	–	–	–	$9,252,411	$7,794,539	-$1,457,872
c. Worker Time and Cost to Complete Latent TB Test Return Reading During Periodic Medical Examination (Table 21)	44,251	20,798	25,872	5,074	–	–	–
d. Contract Cost for a PLHCP to Conduct Latent TB Test During Periodic Medical Examination (Table 18)	–	–	–	–	$748,811	$429,225	-$319,586
3. Information Provided to the PLHCP and Specialist (§§ 1910.1053(i)(4)(i)-(iv), (i)(7)(ii) and 1926.1153(h)(4)(i)-(iv), (h)(7)(ii))							
a. Human Resources Manager Time and Cost to Provide Information to the PLHCP	932,609	230,374	234,123	3,749	–	–	–

Table E

Adjusted Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost Change Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements	Number of Responses	Current Burden Hours	Requested Burden Hours	Change	Current Item 13 Cost	Proposed Item 13 Cost	Change
(Table 22)							
4. PLHCP's Written Medical Opinion and Specialist's Written Medical Opinion							
a. Human Resources Manager Time and Cost to Provide the PLHCP's Written Medical Opinion to the Worker (Table 23)	932,609	229,423	233,153	3,730	_	_	_
5. Additional Medical Examinations (§§ 1910.1053(i)(7), (i)(7)(i) and (i)(7)(ii) and 1926.1153(h)(7), (h)(7)(i) and (h)(7)(ii).)							
a(i). Worker Time and Cost to Complete the Specialist Examination (Table 24)[19]	1,751	2,409	2,151	84	_	_	_
a(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Specialist Examination (Table 24(a))	1,295	320	325	5	_	_	_
b(i). Contract Cost for a PLHCP to Conduct Specialist Examination (Table 25)	_	_	_	_	$289,701	$194,457	-$95,234

[19] In the 2023 ICR for this paperwork collection, the cost for completing the medical form was erroneously included in the cost estimate for E.5.a.i. in addition to E.5.a. ii.

Table E

Adjusted Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost Change Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements	Number of Responses	Current Burden Hours	Requested Burden Hours	Change	Current Item 13 Cost	Proposed Item 13 Cost	Change
b(ii). Contract Cost for a PLHCP to Conduct Specialist Examination (Adjusted for Medical Surveillance Form Completion Time)(Table 25(a))	_	_	_	_	$50,226	$32,997	-$17,229
F. Rule Familiarization							
1.Supervisor Rule Familiarization Time and Cost (Table 26)	38,924	175,924	198,884	22,960	_	_	_
G. Recordkeeping (§§ 1910.1053(k) and 1926.1153(j))							
1. Air Monitoring Data and Objective Data (§§ 1910.1053(k)(1) and 1926.1153(j)(1))							
a. Human Resources Manager Time and Cost to Establish and Maintain Record for Exposure Monitoring Data (Table 27)	205,406	52,604	51,352	-1,252	_	_	_
2. Objective Data (§§ 1910.1053(k)(2) and 1926.1153(j)(2))	_	_	_	_	_	_	_
3. Medical Surveillance (§§ 1910.1053(k)(3) and 1926.1153(j)(3))							

Table E

Adjusted Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost Change Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements	Number of Responses	Current Burden Hours	Requested Burden Hours	Change	Current Item 13 Cost	Proposed Item 13 Cost	Change
a. Human Resources Manager Time and Cost to Establish and Maintain Record for Medical Surveillance (Table 28)[20]	932,609	229,468	234,123	4,655	–	–	–
TOTAL	**18,175,280**	**7,796,128**	**8,186,825**	**390,697**	**$261,709,627**	**$220,825,320**	**-$40,884,307**

[20]The current burden hours are from the 2023 ICR, where the calculation for G.3. inadvertently captured a transposed estimate of the number of periodic exams in construction, specifically the calculation used 529,642 exams instead of 529,462.

16. For collection 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.

OSHA will not publish the information collected under the standards.

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 lists current valid control numbers in §§ 1910.8, 1915.8, 1917.4, 1918.4, and 1926.5 and publishes the expiration date in the Federal Register notice announcing OMB approval of the collection of information (See 5 CFR 1320.3(f)(3)). OSHA believes that this is the most appropriate and accurate mechanism to inform interested parties of these expiration dates.

18. Explain each exception to the certification statement.

OSHA is not requesting an exception to the certification statement.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

This Supporting Statement does not contain any collection of information requirements that employ statistical methods.