**SUPPORTING STATEMENT FOR
THE INFORMATION COLLECTION REQUIREMENTS
IN THE RESPIRABLE CRYSTALLINE SILICA STANDARDS FOR
GENERAL INDUSTRY AND MARITIME (29 CFR 1910.1053)
AND CONSTRUCTION (29 CFR 1926.1153)[1]
OMB CONTROL NO. 1218-0266 (January 2019)**

This ICR seeks to extend OMB authorization under the Paperwork Reduction Act for the information collection requirements associated with the Respirable Crystalline Silica standards promulgated on March 25, 2016 (81 FR 16285-16890).

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 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]

[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.

. . . 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 insure 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 of respirable crystalline silica per cubic meter of air (50 $\mu g/m^3$) as an 8-hour time-weighted average (referred to hereafter as "TWA") in all industries covered by the rule. 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. 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 standard, 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.

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)

§ 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, or where the employer does not fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1, 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 /Maritime 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 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)(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 in the rule. 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 healthful 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 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 maritime (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 or when an exposure assessment reveals that exposures are in excess of the PEL. The competent person[2], 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.

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

[2] Note: Section (b) of the construction standard, "Definitions" indicates: "Competent person" means an individual who is capable of identifying 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.

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 maritime 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.[3]

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.

[3] 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.

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 rule 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 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 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 is requiring 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 of 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 (i.e., spirometry for this rule) 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 maritime, 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 is appropriate for most employees exposed to respirable crystalline silica in light of 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 particular format is required to be obtained by the PLHCP. The agency expects that the written authorization could easily be accomplished by the PLHCP through the use of 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 as a result 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 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 cost 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 actually 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 actually 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 (as discussed in the preamble of the Notice of Proposed Rulemaking) is included because analysis of crystalline silica samples must conform with the requirements listed in the each standard (i.e., in Appendix A), and that can only be determined by knowing the identity of the laboratory that performed the analysis.

<u>Air-Monitoring Data Records - Maintenance and Availability</u>

§§ 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 rule 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 rule, 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 are capable of demonstrating 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. [4]

[4] 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 maritime (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 maritime (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

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 for adopting 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 provides a list of construction tasks that expose workers to

in the agreement between the employer and the PLHCP.

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 tasks if they use the controls on Table 1.

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 secret, 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 (PRA) (44 U.S.C. 3506(c)(2)(A)), OSHA published a notice in the Federal Register on October 1, 2019 (84 FR 52144), soliciting comments on its proposal to extend the Office of Management and Budget's approval of the information collection requirements specified in the Respirable Crystalline Silica standards (29 CFR 1910.1052). This notice was part of a preclearance consultation program that provides the public and government agencies with an opportunity to comment. The agency received no comments in response to this notice.

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.**

RESPONDENT BURDEN-HOUR AND COST BURDEN DETERMINATIONS

OSHA based these determinations on the 2016 Final Economic Analysis ("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.[5] The full explanation of these determinations is included in the FEA. Tables 1-28, referenced in this Supporting Statement, are included at the

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

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. The agency intends to update respondent data and revise initial costs during the next ICR extension cycle.

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, maritime employment is included in the general industry estimates.

PRA Respondents

In total, the ICR estimates that the standards affect 682,581 establishments[6] (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 mean hourly wage earnings to represent the cost of employee time. For the relevant standard occupational classification category, OSHA used the wage rates reported in the Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment Statistics (OES), May 2018 [date accessed: July 15, 2019]. (OES data is available at *https://www.bls.gov/oes/tables.htm*. 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 following BLS release: *Employer Costs for Employee Compensation* news release text, released 10:00 AM (EDT), June 18, 2019 (https://www.bls.gov/news.release/archives/ecec_06182019.htm). BLS reported that for civilian workers, fringe benefits accounted for 31.4 percent of total compensation and wages accounted for the remaining 68.6 percent. To calculate the loaded hourly wage for each occupation, the agency divided the mean hourly wage rate by 1 minus the fringe benefits.

[6]To calculate the number of PRA respondents, the agency used the number of establishments shown in the "Rule Familiarization" ICR spreadsheet associated with the 2016 final rule ICR (ICR No.201509-1218-004).

WAGE HOUR ESTIMATES (2019)				
Occupational Title	**Standard Occupation Code**	**Mean Hour Wage Rate (A)**	**Fringe Benefits (B)**	**Loaded Hourly Wage Rate (C) = (A)/((1-(B))**
Human Resources Manager	11-3121	$60.91	31.40%	$88.79
First-Line Supervisors of Production and Operating Workers (General Industry Supervisor)	51-1011	$30.93	31.40%	$45.09
First-Line Supervisors of Construction Trades and Extraction Workers (Construction Supervisor)*	47-1011	$33.91	31.40%	$49.43
Production Occupations (General Industry Worker)	51-0000	$18.84	31.40%	$27.46
Construction Trades Worker	47-2000	$23.97	31.40%	$34.94

* Like the FEA, this ICR assumes the same wage rate for a "competent person" as the construction supervisor rate.

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 or assess and limits 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).

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

The standards require employers to 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.

For purposes of calculating the exposure-assessment burden hours and costs under the performance option, the agency used the total number of covered workers exposed to silica at or

above the action level (25 ug/m^3) to estimate 277,949 workers in general industry will undergo exposure assessments. The FEA assumed that 1 percent of at-risk construction workers will undergo initial exposure assessment which equates to 22,125 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 that, on average, there are four workers per work area; thus, approximately 25% of these workers (69,487 in general industry; 5,531 in construction) represent the number of initial exposure assessments.[7] Accordingly, employers will collect a total of 75,018 initial exposure assessments from workers (69,487 + 5,531). Each worker will incur 30 minutes (.5 hours) of lost work time during air monitoring. The burden hours and cost associated with these provisions are:

Burden hours: 69,487 (workers sampled in general industry) x 30/60 (hours of worker time) = **34,744 hours**
Cost: 34,744 burden hours x $27.46 = **$954,070**

Burden hours: 5,531 (workers sampled in construction) x 30/60 (hours of worker time) = **2,766 hours**
Cost: 2,766 burden hours x $34.94 = **$96,644**

Total burden hours: 34,744 + 2,766 = **37,510 hours**
Total cost: $954,070+ $96,644 = **$1,050,714**

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)

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. The FEA assumes that 10 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 in order to meet this requirement. In representative sampling, the employer must sample the employee(s) who are expected to have the highest exposure to respirable crystalline silica.

Under the scheduled monitoring option, requirements for periodic monitoring depend on the

[7]This ICR may overestimate initial exposure assessment burden because it continues to estimate first-year assessments for all affected general industry workers at or above the AL in the first year of the implementation of the standards. The agency intends to revise the initial exposure assessment respondent estimate in the next ICR extension.

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/maritime 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.

The number of workers at or above the action level and at or below the PEL subject to periodic and additional exposure assessments under both standards is derived from the FEA. For the general industry standard, the agency uses the number of workers wearing respirators to represent those workers exposed above the PEL after the initial exposure assessment. OSHA estimates that 31,206 workers in general/maritime industries are exposed above the PEL and will wear respirators. The agency also estimates that 110,388 workers in general/maritime industries are exposed at or above the action level but below the PEL.

The agency assumes that the employer will complete one representative, periodic exposure assessment for every four workers per work area. OSHA anticipates that most construction workers will choose to comply with Table 1 and avoid the costs of conducting exposure assessments, however, OSHA assumes that some may choose to conduct initial monitoring to determine their exposure levels to silica. Those employers who undergo initial monitoring will be required to conduct periodic monitoring for those employees determined to be exposed above the action level. Abrasive blasters and tunnel workers in the construction industry are not covered by Table 1, and these workers will undergo 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).Therefore, based on the FEA, OSHA estimates that approximately 12,482 construction workers will undergo periodic monitoring.

Also, OSHA estimates that approximately 25 percent of workers whose initial exposure or subsequent monitoring was at or above the action level would undergo additional monitoring paragraph (d)(4) of the general industry standard and paragraph (d)(2)(iv) of the construction standard to reassess exposure levels.

The burden hours and cost associated with these provisions are:

Periodic and Additional Exposure Assessments (General Industry)

Burden hours: 110,388 workers in general industry at or above the action level but below the PEL) / 4 (workers per area) x 2 (assessments per year) x 1.25 (additional assessments) = 68,993 periodic and additional assessments

68,993 assessments x 30/60 (hours of worker time)) = **34,497 hours**

Cost: 34,497 burden hours x $27.46 = **$947,288**

Burden hours: 31,206 (respirator users in general industry exposed above the PEL) / 4 (workers per area) x 4 (assessments per year) = 31,208 periodic assessments

31,208 x 1.25 (additional assessments) = 39,010 periodic and additional assessments

39,010 assessments x 30/60 (hours of worker time) = **19,505 hours**

Cost: 19,505 burden hours x $27.46 = **$535,607**

Subtotal Burden Hours (General Industry): 34,497 + 19,505 = **54,002 hours**
Subtotal Cost (General Industry): $947,288 + $535,607 = **$1,482,895**

Periodic and Additional Exposure Assessments (Construction)

Burden hours: 383 (workers in construction undergoing semi-annual sampling) / 4 (workers per area) x 2 assessments/year x 1.25 (additional assessments) x 30/60 (hours of worker time) = **120 hours**
Cost: 120 burden hours x $34.94 = **$4,193**

Burden hours: 12,099 (workers in construction undergoing quarterly sampling) / 4 (workers per area) x 4 assessments/year x 1.25 (additional assessments) x 30/60 (hours of worker time) = **7,562 hours**
Cost: 7,562 burden hours x $34.94 = **$264,216**

Subtotal Burden Hours (Construction): 120 + 7,562 = **7,682 hours**
Subtotal Cost (Construction): $4,193 + $264,216 = **$268,409**

All Periodic and Additional Exposure Assessments Combined

Total Burden Hours: 34,497 + 19,505 + 120 + 7,562 = **61,684 hours**
Total Cost: $947,288 + $535,607 + $4,193 + $264,216 = **$1,751,304**

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

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 to prepare and notify each worker of the results, either by posting or written notification. The following table summarizes the estimated number of exposure assessments to be conducted:

Exposure Assessments [8]	Initial	Periodic	Additional	Periodic and Additional
General Industry				
At or above AL	69,487	-	-	-
At or above AL and at or below PEL	-	55,194	13,799	68,993
Above PEL	-	31,206	7,802	39,008
Subtotal	69,487	86,400	21,601	108,001
Construction				
Workers undergoing Initial Assessment	5,531	-	-	-
Workers undergoing Periodic Assessment	-	12,290	3,073	15,363
Subtotal	5,531	12,290	3,073	15,363
Total	**75,018**	**98,690**	**24,674**	**123,364**

Therefore, the annual burden hours and cost of this worker-notification requirement are:

Burden hours: 69,487 initial assessments + 108,003 periodic and additional assessments (in general industry) = 177,490 assessments (in general industry)

177,490 assessments (in general industry) x 15/60 hours = **44,373 hours**

Cost: 44,373 hours x $88.79 (HR manager wage rate, general industry) = **$3,939,879**

Burden hours: 5,531 initial assessments + 15,363 periodic and additional assessments (in construction) = 20,894 assessments (in construction)

[8]See Tables 1, 3 and 5 attached to this Supporting Statement for detailed exposure-assessment calculations.

20,894 assessments (in construction) x 15/60 hours = **5,224 hours**

Cost: 5,224 hours x $88.79 (HR manager wage rate, construction) = **$463,839**

Total burden hours: 44,373 + 5,224 **= 49,597**
Total cost: $3,939,879 + $463,839 **= $4,403,718**

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.

For costing purposes, the agency estimates that 682,581 affected establishments will develop a written exposure control plan. Unit costs for a written exposure control plan were calculated based on establishment size, and the agency assumed, for costing purposes, that a supervisor will develop and update the written exposure control plan for each establishment, spending 1 hour for establishments with fewer than 20 employees, 4 hours for those establishments with between 20 and 499 employees, and 16 hours for those establishments with 500 or more employees. OSHA estimated that 1 hour would be sufficient for very small establishments because there is, on average, barely more than 1 worker covered by the standard per very small establishment in general industry and maritime.

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, 2 hours for those with between 20 and 499 employees, and 8 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 PEA.

For the employee notification or briefing option, OSHA estimated that, on average, it will take the competent person 15 minutes (15/60 hours) per job to revise the briefing plan, that each job will last 10 work-days, and that there are 150 construction working days in a year. OSHA further estimated that it will take 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 4 at-risk workers.

For the direct access control option, OSHA estimated that, on average, it will take 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 work-days 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 work-days and that there are 150 construction working days in a year, for a total of 15 jobs per year.[9]

Development of Written Exposure Control Plans

Burden hours: 51,949 written exposure control plans in small general industry establishments x 1 (hour of supervisor time to develop written plan) = **51,949 hours**
Cost: 51,949 x $45.09 = **$2,342,380**

Burden hours: 24,271 written exposure control plans in medium general industry establishments[10] x 4 (hours of supervisor time to develop written plan) = 97,084 **hours**
Cost: 97,084 x $45.09 = **$4,377,518**

[9] 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.

[10] The agency is adjusting the number of written exposure control plans in medium general industry establishments from 23,922 to 24,271 to account for a previous administrative error.

Burden hours: 641 written exposure control plans in large general industry establishments x 16 (hours of supervisor time to develop written plan) = **10,256 hours**
Cost: 10,256 x $45.09 = **$462,443**

Burden hours: 545,417 written exposure control plans in small construction establishments x 1 (hours of competent person time to develop written plan) = **545,417 hours**
Cost: 545,417 x $49.43 = **$26,959,962**

Burden hours: 59,743 written exposure control plans in medium construction establishments x 4 (hours of competent person time to develop written plan) = **238,972 hours**
Cost: 238,972 x $49.43 = **$11,812,386**

Burden hours: 560 written exposure control plans in large construction establishments x 16 (hours of competent person time to develop written plan) = **8,960 hours**
Cost: 8,960 x $49.43 = **$442,893**

Total Burden Hours: 51,949 + 97,084 + 10,256 + 545,417 + 238,972 +8,960 **= 952,638**
Total Cost: $2,342,380 + $4,377,518 + $462,443+ $26,959,962 + $11,812,386 + $442,893 **= $46,397,582**

Review and Update of Written Exposure Control Plans

Burden hours: 51,949 written exposure control plans in small general industry establishments x 30/60 (hours of supervisor time to revise and update written plan) = **25,975 hours**
Cost: 25,975 x $45.09 = **$1,171,213**

Burden hours: 24,271 written exposure control plans in medium general industry establishments x 2 (hours of supervisor time to revise and update written plan) = **48,542 hours**
Cost: 48,542 x $45.09 = **$2,188,759**

Burden hours: 641 written exposure control plans in large general industry establishments x 8 (hours of supervisor time to revise and update written plan) = **5,128 hours**
Cost: 5,128 x $45.09 = **$231,222**

Burden hours: 545,417 written exposure control plans in small construction establishments x 30/60 (hours of competent person time to revise and update written plan) = **272,709 hours**
Cost: 272,709 x $49.43 = **$13,480,006**

Burden hours: 59,743 written exposure control plans in medium construction establishments x 2 (hours of competent person time to revise and update written plan) = **119,486 hours**
Cost: 119,486 x $49.43 = **$5,906,193**

Burden hours: 560 written exposure control plans in large construction establishments x 8 (hours of competent person time to revise and update written plan) = **4,480 hours**
Cost: 4,480 x $49.43 = **$221,446**

Total Burden Hours: 25,975 + 48,542 + 5,128 + 272,709 + 119,486 + 4,480 **= 476,320**
Total Cost: $1,171,213 + $2,188,759 + $231,222 + $13,480,006 + $5,906,193 + $221,446 **= $23,198,839**

Implementation of Written Access Control Plan (construction only)

Burden hours: 545,417 written exposure control plans in small construction establishments x 18/60 (hours of competent person time to implement written plan) x 15 (jobs per year) = **2,454,377 hours**
Cost: 2,454,377 x $49.43 = **$121,319,855**

Burden hours: 59,743 written exposure control plans in medium construction establishments x 18/60 (hours of competent person time to implement written plan) x 15 (jobs per year) = **268,844 hours**
Cost: 268,844 x $49.43 = **$13,288,959**

Burden hours: 560 written exposure control plans in large construction establishments x 18/60 (hours of competent person time to implement written plan) x 15 (jobs per year) = **2,520 hours**
Cost: 2,520 x $49.43 = **$124,564**

Total Burden hours: 2,454,377 + 268,844 + 2,520 **= 2,725,741**
Total Cost: $121,319,855 + $13,288,959 + $124,564 **= $134,733,378**

For purposes of calculating PRA burden hours and costs, OSHA assumes supervisor time to make the written plan available to employees and designated representatives under §§ 1910.1053(f)(2)(iii) and 1926.1153(g)(3).

Making Written Exposure Control Plans Available (§§ 1910.1053(f)(2)(iii) and 1926.1153(g)(3))

Burden hours: 152,263 employees in general industry establishments x 10% x 5/60 (hours of supervisor time to make written plan available) = **1,269 hours**
Cost: 1,269 x $45.09 = **$57,219**

Burden hours: 1,096,986 employees in construction establishments x 10% x 5/60 (hours of supervisor time to make written plan available) = 9,142 **hours**
Cost: 8,776 x $49.43 = **$451,889**

Total Burden hours: 1,269 + 9,142 **= 10,441**
Total Cost: $57,219 + $451,889 **= $509,108**

C. Air Quality Permit Notification

The agency 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 loaded hourly wage rate was applied to estimate the cost to employers. The costs per establishment were estimated at approximately $1,500 per medium establishment and $3,000 per large establishment. Because both new permit applications and permit modifications are minor administrative chores, OSHA's cost estimates are sufficient to cover either case.

Burden hours: 15,960 affected establishments in small/medium general industry x 20 (hours of HR manager time to create and submit permit) = **319,200 hours**
Cost: 319,200 burden hours x $88.79 = **$28,341,768**

Burden hours: 575 affected establishments in general industry x 40 (hours of HR manager time to create and submit permit) = **23,000 hours**
Cost: 23,000 burden hours x $88.79 = **$2,042,170**

Total Burden hours: 319,200 + 23,000 **= 342,200**
Total cost: $28,341,768 + $2,042,170 **= $30,383,938**

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.[11] 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 maritime 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 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 maritime (shipyard employment and maritime 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 maritime (half of all the abrasive blaster workers), as a result of the final rule.

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

Establishing New Respiratory Protection Programs

[11] 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 6,038 small and medium-sized establishments with respirator users outside of the hydraulic fracturing industry, and 3,019 of those establishments with respirator users needing a new program (50% of 6,038). The agency also estimates there are 209 large establishments with respirator users in general industry (excluding hydraulic fracturing), of which there are 105 large establishments (500 or more workers) with respirator users needing a new program (50% of 209).[12] In construction, the agency estimates there are 82,993 small and medium-sized establishments with respirator users, and 36,517 of those establishments with respirator users needing a new program (44% of 82,993). The agency also estimates there are 3,994 large establishments with respirator users in construction, of which there are 1,757 large establishments with respirator users needing a new program (44% of 3,994).[13]

In hydraulic fracturing, the agency estimates there are 430 small-sized establishments with respirator users, and 129 of those establishments need a new program (30% of 430); 2,587 medium-sized establishments with respirator users, and 517 of those establishments need a new program (20% of 2,587); and zero large establishments with respirator users, therefore no large establishments need a new program (5% of 0).

Employers will incur a cost burden to establish a respirator programs. The agency projects that this expense will involve an initial 8 hours for large establishments, and 4 hours for all other firms. The agency assumes that a human resources manager will conduct the work associated with the establishment and revision of these programs. The burden hours and cost associated with these provisions are:

Establish New Programs in General Industry:

Burden hours: 105 large general industry establishments with respirator users not in compliance x 8 (hours of human resource manager time to establish new program) = **840 hours**

Cost: 840 burden hours x $88.79 = **$74,584**

Burden hours: 3,019 (all other general industry establishments with respirator users not in compliance) x 4 (hours of human resources manager time to establish new program) = **12,076 hours**

Cost: 12,076 burden hours x $88.79= **$1,072,228**

Total Burden hours: 840 + 12,076 = **12,916 hours**
Total Cost: $74,584 + $1,072,228= **$1,146,812**

Establish New Programs in Construction:

[12] The agency estimates a total of 6,247 establishments with respirator users in general industry.

[13] The agency estimates a total of 86,987 establishments with respirator users in construction.

Burden hours: 1,757 (large construction establishments with respirator users not in compliance) x 8 (hours of human resource manager time to establish new program) = **14,056 hours**
Cost: 14,056 burden hours x $88.79 = **$1,248,032**

Burden hours: 36,517 (all other construction establishments with respirator users not in compliance) x 4 (hours of human resources manager time to establish new program) = **146,068 hours**
Cost: 146,068 burden hours x $88.79 = **$12,969,378**

Total burden hours: 14,056 + 146,068 = **160,124 hours**
Total cost: $1,248,032 + $12,969,378 = **$14,217,410**

Establish New Programs in Hydraulic Fracturing:

Burden hours: 0 (large hydraulic fracturing establishments with respirator users) x (1- .95) (compliance rate) x 8 (hours of human resource manager time to establish new program) = **0 hours**
Cost: 0 burden hours x $88.79 = **$0**

Burden hours: 517 (medium hydraulic fracturing establishments with respirator users not in compliance) x 4 (hours of human resources manager time to establish new program) = **2,068 hours**
Cost: 2,068 burden hours x $88.79 = **$183,618**

Burden hours: 430 (small hydraulic fracturing establishments with respirator users not in compliance) x 4 (hours of human resources manager time to establish new program) = **516 hours**
Cost: 516 burden hours x $88.79 = **$45,816**

Total Burden hours: 0 + 2,068 + 516 = **2,584 hours**
Total cost: $0 + $183,618 + $45,816 = **$229,434**

Establish New Programs in All Industries Combined:

Total burden hours: 12,916 + 160,124 + 2,584 = **175,624 hours**
Total cost: $1,146,812 + $14,217,410 + $229,434 = **$15,593,656**

2. Revise Existing Respiratory Protection Programs

After the first year, OSHA estimates that 20 percent of all establishments who established a program would revise their program every year. Large establishments will expend 4 hours for a program revision, and all other employers will expend two hours for a program revision.

Revise Existing Programs in General Industry

Burden hours: 21 (large general industry establishments with respirator users updating program) x 4 (hours of human resource manager time to revise the existing program) = **84 hours**
Cost: 84 burden hours x $88.79 = $**7,458**

Burden hours: 604 (all other general industry establishments with respirator users updating program) x 2 (hours of human resource manager time to revise the existing program) = 1,208 **hours**
Cost: 1,208 burden hours x $88.79= **$107,258**

Total Burden hours: 84 + 1,208 = **1,292 hours**
Total cost: $7,458 + $107,258 = **$114,716**

Revise Existing Programs in Construction:

Burden hours: 3,994 (large construction establishments with respirator users updating program) x 4 (hours of human resource manager time to revise the existing program) = **1,404 hours**
Cost: 1,404 burden hours x $88.79 = **$124,661**

Burden hours: 7,303 (all other construction establishments with respirator users updating program) x 2 (hours of human resources manager time to revise the existing program) = **14,606 hours**
Cost: 14,606 burden hours x $88.79 = **$1,296,867**

Total Burden hours: 1,404 + 14,606 = **16,010 hours**
Total cost: $124,661 + $1,295,867 = **$1,421,528**

Revise Existing Programs in Hydraulic Fracturing:

Burden hours: 0 (large hydraulic fracturing establishments with respirator users) x (1- .95) (compliance rate) x .2 (percent of establishments updating program) x 4 (hours of human resource manager time to revise the existing program) = **0 hours**
Cost: 0 burden hours x $88.79 = **$0**

Burden hours: 103 (medium hydraulic fracturing establishments with respirator users updating program) x 2 (hours of human resources manager time to revise the existing program) = **206 hours**
Cost: 206 burden hours x $88.79 = **$18,291**

Burden hours: 26 (small hydraulic fracturing establishments with respirator users updating program) x 2 (hours of human resources manager time to revise the existing program) = **52 hours**
Cost: 52 burden hours x $88.79 = **$4,617**

Total burden hours: 0 + 206 + 52 = **258 hours**
Total cost: $0 + $18,291+ $4,617 = **$22,908**

Revise Existing Programs in All Industries Combined:

Total burden hours: 1,292 + 16,010 + 285 = **17,560 hours**
Total cost: $114,716 + $1,421,528+ $22,908 = **$1,559,152**

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

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 that: 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 the model and size of the respirator used by the worker in the workplace.

For purposes of calculating respiratory protection costs, OSHA estimates that there are 31,206 respirator users in general industry and 264,761 in construction that will require fit tests. The agency estimates that each worker takes 1 hour to complete a fit test, including recordkeeping, in-house, 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:

Burden hours: 31,206 (fit tests) x 1 (hours of worker time, general industry) = **31,206 hours**
Cost: 31,206 hours x $27.46 = **$856,917**

Burden hours: 31,206 (fit tests) x 15/60 (hours of supervisor time, general industry) = **7,802 hours**
Cost: 7,802 hours x $45.09 = **$351,792**

Burden hours: 264,761 (fit tests) x 1 (hours of worker time, construction) = **264,761 hours**
Cost: 264,761 hours x $34.94 = **$9,250,749**

Burden hours: 264,761 (fit tests) x 15/60 (hours of supervisor time, construction) = **66,190 hours**
Cost: 66,190 hours x $49.43= **$3,271,772**

Total burden hours: 31,206 + 7,802 + 264,761 + 66,190 **= 369,959 hours**
Total cost: $856,917 + $351,792 + $9,250,749 + $3,271,772 **= $13,731,230**

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 meeting 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 will 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.[14] 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

[14] Implementation of the action level trigger is staggered so that it is not implemented until four years after the effective date. At two through four years after the effective date, the PEL will be the trigger for medical surveillance in general industry and maritime. (See: Final Rule, 29 CFR 1910.1053(l)(4), "Dates.")) The medical examination costs in the FEA may be overestimates because OSHA assumed immediate implementation of the rule (with no phase-in of the rule's provisions).

three years (by §§ 1910.1053(i)(2) and 1926.1153(h)(2)).[15] The content of the initial medical examinations is described by §§ 1910.1053(i)(2)(i)-(vi) and 1926.1153(h)(2)(i)-(vi), and consists of: (1) a medical and work history, (2) a physical examination with special emphasis on the respiratory system, (3) a chest x-ray, (4) a pulmonary-function test, (5) testing for latent tuberculosis (TB) infection, and (6) any other tests deemed appropriate by the PLHCP. This Supporting Statement assumes burden hours and costs for employers to provide these medical examinations during the first year that medical surveillance is required for each industry, with subsequent periodic medical examinations for these workers described in the paragraphs of this section, below.

For existing workers in all industries, OSHA estimates 20 percent of establishments with fewer than 20 workers, 75 percent of establishments with 20-499 workers, and 100 percent of establishments with 500 or more workers would have the initial health screening conducted on-site. For new workers in all industries, OSHA estimates that 10 percent of establishments with fewer than 20 workers, 50 percent of establishments with 20-499 workers, and 90 percent of establishments with 500 or more workers would have the initial health screening for new hires conducted on-site. In OSHA's experience, larger establishments are more likely than smaller establishments to have the PLHCP provide the health-screening services at the establishment's worksite. OSHA assumes for purposes of this ICR that contract PLHCPs will conduct all medical examinations.

The agency estimates that 75% of new workers in general industry and 40% of new workers in construction will require initial medical examinations. Therefore, for purposes of calculating medical surveillance costs, OSHA estimates that 412,175 existing workers (141,594 workers in general industry and 270,581 workers in construction) at or above the action level will require initial medical examinations. To estimate the number of new workers, OSHA assumes a separation rate (layoffs, quits, and retirements) of 25% in general industry and 70% in construction. Based on these assumptions, a total of 102,637 new workers (26,549 in general industry and 76,087 in construction) will also require initial medical examinations.

The agency estimates that a worker will take 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[16]. The estimated travel time for workers to travel off-site for the initial medical examination is 1 hour for general industry and 90 minutes

[15] The agency intends to revise the initial medical examination respondent estimate in the next ICR extension; therefore, this ICR likely overestimates initial medical examination burden.

[16] In the previous ICR, the examination time was 2 hours and included the time for the PLHCP to complete the medical report and opinion forms and to provide the respective forms to the worker and employer. To better align the ICR with ROCIS fields and for PRA purposes only, the agency adjusted the previous ICR time estimate, burden hours and cost for overall initial, periodic and specialist medical examinations to separate out the burden hours and costs associated with an employer's employee time and cost to wait for the PLHCP to complete medical surveillance forms, including the time to provide the forms to the employee and opinion to the employer.

(90/60) hours for construction.[17] The detailed burden hours and cost associated with the initial medical examination provision are available below in Item 12, Table A of this Supporting Statement (and also in Tables 13 and 14 in the supporting spreadsheet).

Burden hours (existing workers, spreadsheet Table 13): **944,793 hours**
Cost (existing workers, spreadsheet Table 13): **$30,757,074**

Burden hours (new workers, spreadsheet Table 14): **263,790 hours**
Cost (new workers, spreadsheet Table 14): **$8,754,581**

The agency further estimates that it will take 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 (and also in Tables 13(a) and 14(a) in the supporting spreadsheet).

Burden hours (existing workers, spreadsheet Table 13a): **103,044 hours**
Cost (existing workers, spreadsheet Table 13a): **$3,335,582**

Burden hours (new workers, spreadsheet Table 14a): **25,659 hours**
Cost (new workers, spreadsheet Table 14a): **$846,881**

Additionally, there are burden hours and costs associated with the worker returning to the PLHCP for a reading of the latent TB test administered during the initial medical examination. OSHA estimates that all workers undergoing initial medical surveillance will take 5 minutes (5/60 hours) for the return visit; 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 A of this Supporting Statement (and also in Tables 16 and 17 in the supporting spreadsheet).

Burden hours (existing workers, spreadsheet Table 16): **257,834 hours**
Cost (existing workers, spreadsheet Table 16): **$8,519,940**

Burden hours (new workers, spreadsheet Table 17): **92,731 hours**
Cost (new workers, spreadsheet Table 17): **$3,108,746**

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

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

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

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 will take 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[18]. 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 A of Item 12 in this Supporting Statement (and also 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 A of Item 12 of this Supporting Statement (and also in Tables 19(a) and 20 (a) of the supporting spreadsheet).

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 A of Item 12 in this Supporting Statement (and also in Table 21 of the supporting spreadsheet.)

Periodic Medical Examination[19]

Burden hours: 146,488 (periodic onsite examinations, general industry) x 105/60 (hours of worker time for onsite examination) = **256,355 hours**
Cost: 256,355 hours x $27.46 = **$7,039,509**

Burden hours: 97,603 (periodic offsite examinations, general industry) x (105/60 (hours of worker time for offsite examination) + 1 (hour of worker travel time for exam)) = **268,409 hours**

[18] In the previous ICR, the examination time was 2 hours and included the time for the PLHCP to complete the medical report and opinion forms and to provide the respective forms to the worker and employer. To better align the ICR with ROCIS fields and for PRA purposes only, the agency adjusted the previous ICR time estimate, burden hours and cost for overall initial, periodic and specialist medical examinations to separate out the burden hours and costs associated with an employer's employee time and cost to wait for the PLHCP to complete medical surveillance forms, including the time to provide the forms to the employee and opinion to the employer.

[19] The burden hours and costs presented for periodic medical exams represent all medical examinations in year 4 (3 years after implementation). This includes triennial exams for workers tested in year 1 as well as initial testing of workers conducted in year 4.

Cost: **268,409** hours x $27.46 = **$7,370,511**

Burden hours: 245,895 (periodic onsite examinations, construction industry) x 105/60 (hours of worker time for onsite examination) = **430,317 hours**
Cost: 430,317 hours x $34.94 = **$15,035,275**

Burden hours: 201,263 (periodic offsite examinations, construction industry) x (105/60 (hours of worker time for offsite examination) + 90/60 (hours of worker travel time for exam)) = 654,105 **hours**
Cost: 654,105 hours x $34.94 = **$22,854,428**

Total burden hours: **256,355** + 168,409 + 430,317 + 654,105 = 1,609,186 **hours**
Total cost: $7,039,509 + $7,370,511 + $15,035,275 + $22,854,428 **= $52,299,723**

TB testing During Periodic Medical Examination

Burden hours: 7,085 (onsite TB tests during periodic medical examination, general industry) x 5/60 (hours of worker time for return reading) = **590 hours**
Cost: 590 hours x $27.46 = **$16,201**

Burden hours: 4,308 (offsite TB tests during periodic medical examination, general industry) x (5/60 (hours of worker time for return reading) + 1 (hour of worker travel time for test)) = **4,667 hours**
Cost: 4,667 hours x $27.46 = **$128,156**

Burden hours: 11,683 (onsite TB tests during periodic medical examination, construction industry) x 5/60 (hours of worker time for return reading) = **974 hours**
Cost: 974 hours x $34.94 = **$34,032**

Burden hours: 8,416 (offsite TB tests during periodic medical examination, construction industry) x (5/60 (hours of worker time for return reading) + 90/60 (hours of worker travel time for test)) = **13,325 hours**
Cost: 13,325 hours x $34.94 = **$465,576**

Total burden hours: 590 + 4,667 + 974 + 13,325 = **19,556 hours**
Total cost: $16,201 + $128,156+ $34,032 + $465,576 **= $643,965**

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))

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. In the FEA, OSHA estimates that there will be 603 new cases of silicosis a year among general industry and maritime workers and 563 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:

Burden hours: 26,549[20] (initial examinations, general industry) x 15/60 (hours of HR manager time) = **6,637 hours**
Cost: 6,637 hours x $88.79 = **$589,299**

Burden hours: 76,088[21] (initial examinations, construction) x 15/60 (hours of HR manager time) = **19,022 hours**
Cost: 19,022 hours x $88.79 = **$1,688,963**

Burden hours: 244,091 (periodic examinations[22], general industry) x 15/60 (hour of HR manager time) = **61,023 hours**
Cost: 61,023 hours x $88.79 = **$5,418,232**

Burden hours: 447,159 (periodic examinations, construction) x 15/60 (hour of HR manager time) = **111,790 hours**
Cost: 111,790 hours x $88.79 = **$9,925,834**

[20]This figure includes the number of existing and new workers requiring initial medical examinations in general industry, as referenced in paragraph 1 of this section.

[21]This figure includes the number of existing and new workers requiring initial medical examinations in construction, as referenced in paragraph 1 of this section.

[22] The agency requests an adjustment to add burden hours and costs for information provided to the PLHCP in association with periodic examinations which were previously displayed in the ICR spreadsheets but not included in the total calculations for the previous ICR.

Burden hours: 544 (specialist examinations, general industry) x 1 (hour of HR manager time) = **544 hours**
Cost: 544 hours x $88.79 = **$48,302**

Burden hours: 563 (specialist examinations, construction) x 1 (hour of HR manager time) = **563 hours**
Cost: 563 hours x $88.79 = **$49,989**

Total burden hours: 6,637 + 19,022 + 61,023 + 111,790 + 544 + 563 = **199,579 hours**
Total cost: $589,299 + $1,688,963 + $5,418,232 + $9,925,834 + $48,302 + $49,989 **= $17,720,619**

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))

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

Burden hours: 271,184 (medical examinations, general industry) x 15/60 (hour of HR manager time) = **67,796 hours**
Cost: 67,796 hours x $88.79 = **$6,019,607**

Burden hours: 523,808 (medical examinations, construction) x 15/60 (hour of HR manager time) = **130,953 hours**
Cost: 130,953 hours x $88.79 = **$11,627,316**

Total Burden hours: **198,749 hours**
Total Cost: **$17,646,923**

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).)

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 that there will be 544 new cases of silicosis a year among general industry and maritime workers and 563 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 that a worker will take 45 minutes to complete the examination while it will take 15 minutes to complete the medical surveillance forms during the exam.[23] 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. The detailed burden hours and cost associated with the pulmonary-specialist examination provision and the burden hours and cost for the completion of the medical surveillance forms are available in Table A of Item 12 of this Supporting Statement (and also in supporting spreadsheet Tables 24 and Table 24(a)).

Table 24:

Total burden hours: **2,219 hours**
Total cost: **$70,411**

Table 24(a):

Total burden hours: **277 hours**
Total cost: **$8,661**

F. Rule Familiarization

OSHA expects that the employer will assign responsibility for investigating the details of the standards, and for determining how to implement it, to one or more supervisors. OSHA assumes that the time supervisors will require for rule familiarization will be based on a number of 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

[23] In the previous ICR, the examination time was 1 hour and included the time for the PLHCP to complete the medical report and opinion forms and to provide the respective forms to the worker and employer. To better align the ICR with ROCIS fields and for PRA purposes only, the agency adjusted the previous ICR time estimate, burden hours and cost for overall initial, periodic and specialist medical examinations to separate out the burden hours and costs associated with an employer's employee time and cost to wait for the PLHCP to complete medical surveillance forms, including the time to provide the forms to the employee and opinion to the employer.

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.

Burden hours: 51,949 affected establishments in small general industry establishments x 4 (hours of supervisor time) = **207,796 hours**
Cost: 207,797 x $45.09 = **$9,369,522**

Burden hours: 24,271 affected establishments in medium general industry establishments x 8 (hours of supervisor time) = **194,168 hours**
Cost: 194,168 x $45.09 = **$8,755,035**

Burden hours: 641 affected establishments in large general industry establishments x 40 (hours of supervisor time) = **25,640 hours**
Cost: 25,640 x $45.09 = **$1,156,108**

Burden hours: 545,417 affected establishments in small construction establishments x 4 (hours of supervisor time) = **2,181,668 hours**
Cost: 2,181,668 x $49.43 = **$107,839,849**

Burden hours: 59,743 affected establishments in medium construction establishments x 8 (hours of supervisor time) = **477,944 hours**
Cost: 477,944 x $49.43 = **$23,624,772**

Burden hours: 560 affected establishments in large construction establishments x 40 (hours of supervisor time) = **22,400 hours**
Cost: 22,400 x $49.43 = **$1,107,232**

Total Burden hours: 207,796 + 194,168 + 25,640 + 2,181,668 + 477,944 + 22,400 = **3,109,616**
Total Cost: $9,369,522 + $8,755,035 + $1,156,108 + $107,839,849 + $23,624,772+ $1,107,232 = **$151,852,518**

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 that it will take 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 that it will require 15 minutes (15/60 hours) to update periodic and additional assessment records. The burden hours and cost associated with these provisions are:

Burden hours: 177,488 (exposure assessments, general industry) x 15/60 (hours of HR manager time) = **44,373 hours**
Cost: 44,373 x $88.79 = **$3,939,879**

Burden hours: 20,894 (exposure assessments, construction) x 15/60 (hours of HR manager time) = **5,224 hours**
Cost: 5,224 x $88.79 = **$463,839**

Total burden hours: 44,373 + 5,224 = **49,597 hours**
Total cost: $3,939,879 + $463,839 = **$4,403,718**

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

No burden hours or costs are assessed. 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 includes 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 records for 794,993 workers who receive initial medical surveillance (26,549 in general industry and 76,088 in construction), periodic medical surveillance (244,091 in general industry and 447,159 in construction)[24], and additional medical examinations (544 in general industry and 563 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:

Burden hours: ((26,549 (initial examinations, general industry) x 15/60 (hours of HR manager time)) + (244,091 (periodic examinations, general industry) x .25 (hours of HR manager time))) + (544 (additional examinations, general industry) x 1 (hour of HR manager time))) = **68,204 hours**
Cost: 68,204 x $88.79 = **$6,055,833**

Burden hours: ((76,088 (initial examinations, construction) x 15/60 (hours of HR manager time)) + (447,159 (periodic examinations, construction) x .25 (hours of HR manager time)) + (563 (additional examinations, construction) x 1 (hour of HR manager time))) = **131,375 hours**
Cost: 131,375 x $88.79 = **$11,664,786**

Total burden hours: 68,204 + 131,375 = **199,579 hours**
Total cost: $6,055,833 + $11,664,786 = **$17,720,619**

[24] The hour burden and costs presented for periodic examinations represent all medical examination in year 4 (3rd year after implementation).

Table A - Estimated Annualized Respondent Hour and Cost Burden Table

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
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 (Spreadsheet Table 1)								
General Industry	New Employees	-	0.25	-	30/60	-	$27.46	$ 0
Construction	New Employees	-	0.25	-	30/60	-	$34.94	$ 0
General Industry	Existing Employees	277,949	0.25	69,487	30/60	34,744	$27.46	$ 954,070
Construction	Existing Employees	22,125	0.25	5,531	30/60	2,766	$34.94	$ 96,644
Subtotal A.1.a.		**300,074**		**75,018**		**37,510**		**$ 1,050,714**
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 (Spreadsheet Table 3)								
General Industry	Employee	141,594	0.762765	108,003	30/60	54,002	$27.46	$ 1,482,895
Construction	Employee	12,482	1.230812	15,363	30/60	7,682	$34.94	$ 268,409
Subtotal A.2.a.		**154,076**		**123,366**		**61,684**		**$ 1,751,304**
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 (Spreadsheet Table 5)								
General Industry	Employees Undergoing Exposure Assessment	177,490	1	177,490	15/60	44,373	$88.79	$ 3,939,879

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
Construction	Employees Undergoing Exposure Assessment	20,894	1	20,894	15/60	5,224	$88.79	$ 463,839
Subtotal A.3.a.		**198,384**		**198,384**		**49,597**		**$ 4,403,718**
Subtotal A.		**652,534**		**396,768**		**148,791**		**$ 7,205,736**
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 (Spreadsheet Table 6)								
General Industry	**Establishments**							
	Small	51,949	1	51,949	1	51,949	$45.09	$ 2,342,380
	Medium	24,271	1	24,271	4	97,084	$45.09	$ 4,377,518
	Large	641	1	641	16	10,256	$45.09	$ 462,443
		76,861		***76,861***		***159,289***		***$ 7,182,341***
Construction	**Establishments**							
	Small	545,417	1	545,417	1	545,417	$49.43	$ 26,959,962
	Medium	59,743	1	59,743	4	238,972	$49.43	$ 11,812,386
	Large	560	1	560	16	8,960	$49.43	$ 442,893
		605,720		***605,720***		***793,349***		***$ 39,215,241***
Subtotal B.1.		**682,581**		**682,581**		**952,638**		**$ 46,397,582**
2. Supervisor Time and Cost - Review and Update Plan (Spreadsheet Table 7)								
General Industry	**Establishments**							
	Small	51,949	1	51,949	30/60	25,975	$45.09	$ 1,171,213
	Medium	24,271	1	24,271	2	48,542	$45.09	$ 2,188,759
	Large	641	1	641	8	5,128	$45.09	$ 231,222
		76,861		***76,861***		***79,645***		***$ 3,591,194***

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
Construction	**Establishments**							
	Small	545,417	1	545,417	30/60	272,709	$49.43	$ 13,480,006
	Medium	59,743	1	59,743	2	119,486	$49.43	$ 5,906,193
	Large	560	1	560	8	4,480	$49.43	$ 221,446
		605,720		***605,720***		***396,675***		***$ 19,607,645***
Subtotal B.2.		**682,581**		**682,581**		**476,320**		**$ 23,198,839**
3. Supervisor Time and Cost- Implementation of Plan (Construction) (Spreadsheet Table 8)								
Construction	**Establishments**							
	Small	545,417	15	8,181,255	18/60	2,454,377	$49.43	$ 121,319,855
	Medium	59,743	15	896,145	18/60	268,844	$49.43	$ 13,288,959
	Large	560	15	8,400	18/60	2,520	$49.43	$ 124,564
Subtotal B.3.		**605,720**		**9,085,800**		**2,725,741**		**$ 134,733,378**
4. Supervisor Time and Cost - Make Plan Available to Employees and Designated Representatives (Spreadsheet Table 8a)								
General Industry	Affected Employees	15,226	1	15,226	5/60	1,269	$45.09	$ 57,219
Construction	Affected Employees	109,699	1	109,699	5/60	9,142	$49.43	$ 451,889
Subtotal B.4.		**124,925**		**124,925**		**10,411**		$ 509,108
Subtotal B.		**2,095,807**		**10,575,887**		**4,165,110**		**$ 204,838,907**
C. Air Quality Permit Notification								
1. HR Manager Time and Cost for Creating and Submitting the Air Quality Permit Notification (Spreadsheet Table 9)								
General Industry	Establishments							
	Small/Medium	15,960	1	15,960	20	319,200	$88.79	$ 28,341,768
	Large	575	1	575	40	23,000	$88.79	$ 2,042,170
Subtotal C.		**16,535**		**16,535**		**342,200**		**$ 30,383,938**
D. Respiratory Protection (§§ 1910.1053(g) and 1926.1153(e))								

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
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 (Spreadsheet Tables 10, 10a & 11)								
(Table 10)	Establishments							
	> 500 workers	105	1	105	8	840	$88.79	$ 74,584
	< 500 workers	3,019	1	3,019	4	12,076	$88.79	$ 1,072,228
		3,124		**3,124**		**12,916**		**$ 1,146,812**
(Table 10a)	Establishments							
	Large (500+)	0	1	-	0	-	$88.79	$ 0
	Medium (20-499)	517	1	517	4	2,070	$88.79	$ 183,795
	Small (<20)	129	1	129	4	516	$88.79	$ 45,816
		646		**646**		**2,586**		**$ 229,611**
Table 11	Establishments							
	> 500 workers	1,757	1	1,757	8	14,056	$88.79	$ 1,248,032
	< 500 workers	36,517	1	36,517	4	146,068	$88.79	$ 12,969,378
		38,274		**38,274**		**160,124**		**$ 14,217,410**
Subtotal D.1.		**42,044**		**42,044**		**175,626**		**$ 15,593,833**
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 (Spreadsheet Tables 10, 10a & 11)								
(Table 10	Establishments							
	> 500 workers	21	1	21	4	84	$88.79	$ 7,458
	< 500 workers	604	1	604	2	1,208	$88.79	$ 107,258
		625		**625**		**1,292**		**$ 114,716**

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
(Table 10a)	Establishments							
	Large (500+)	0	1	-	4	0	$88.79	$ 0
	Medium (20-499)	103	1	103	2	206	$88.79	$ 18,291
	Small (<20)	26	1	26	2	52	$88.79	$ 4,617
		129		**129**		**258**		**$ 22,908**
Table 11	Establishments							
	> 500 workers	351	1	351	4	1,404	$88.79	$ 124,661
	< 500 workers	7,303	1	7,303	2	14,606	$88.79	$ 1,296,867
		7,654		**7,654**		**16,010**		**$ 1,421,528**
Subtotal D.2.a.		**8,408**		**8,408**		**17,560**		**$ 1,559,152**
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 (Spreadsheet Table 12)								
General Industry	Worker - General Industry	31,206	1	31,206	1	31,206	$27.46	$ 856,917
	Worker - General Industry	31,206	1	31,206	15/60	7,802	$45.09	$ 351,792
Construction	Worker - General Industry	264,761	1	264,761	1	264,761	$34.94	$ 9,250,749
	Worker - General Industry	264,761	1	264,761	15/60	66,190	$49.43	$ 3,271,772
Subtotal D.3.a.		**591,934**		**591,934**		**369,959**		**$ 13,731,230**
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))								

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
a(i). Worker Time and Cost to Complete the Initial Medical Examination - Existing Workers (Spreadsheet Table 13)								
General Industry	**Onsite Employees**							
	Small	7,517	1	7,517	105/60	13,155	$27.46	$ 361,236
	Medium	70,431	1	70,431	105/60	123,254	$27.46	$ 3,384,555
	Large	10,100	1	10,100	105/60	17,675	$27.46	$ 485,356
		88,048		**88,048**		**154,084**		**$ 4,231,147**
	Offsite Employee							
	Small	30,069	1	30,069	165/60	82,690	$27.46	$ 2,270,667
	Medium	23,477	1	23,477	165/60	64,562	$27.46	$ 1,772,873
	Large	0	1	0	-	0	$27.46	$ 0
		53,546		**53,546**		**147,252**		**$ 4,043,540**
Construction	**Onsite Employees**							
	Small	18,800	1	18,800	105/60	32,900	$34.94	$1,149,526
	Medium	114,283	1	114,283	105/60	199,995	$34.94	$6,987,825
	Large	24,205	1	24,205	105/60	42,359	$34.94	$1,480,023
		157,288		**157,288**		**275,254**		**$ 9,617,374**
	Offsite Employee							
	Small	75,199	1	75,199	210/60	244,397	$34.94	$8,539,231
	Medium	38,094	1	38,094	210/60	123,806	$34.94	$4,325,782
	Large	0	1	0	210/60	-	$34.94	$ 0
		113,293		**113,293**		**368,203**		**$12,865,013**
Subtotal E.1.a(i).		**412,175**		**412,175**		**944,793**		**$ 30,757,074**

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
a(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Initial Medical Examination - Existing Workers (Spreadsheet Table 13(a))								
General Industry	**Onsite Employees**							
	Small	7,517	1	7,517	15/60	1,879	$27.46	$ 51,597
	Medium	70,431	1	70,431	15/60	17,608	$27.46	$ 483,516
	Large	10,100	1	10,100	15/60	2,525	$27.46	$ 69,337
		88,048		**88,048**		**22,012**		**$ 604,450**
	Offsite Employee							
	Small	30,069	1	30,069	15/60	7,517	$27.46	$ 206,417
	Medium	23,477	1	23,477	15/60	5,869	$27.46	$ 161,163
	Large	0	1	0	15/60	0	$27.46	$ 0
		53,546		**53,546**		**13,386**		**$ 367,580**
Construction	**Onsite Employees**							
	Small	18,800	1	18,800	15/60	4,700	$34.94	$164,218
	Medium	114,283	1	114,283	15/60	28,571	$34.94	$998,271
	Large	24,205	1	24,205	15/60	6,051	$34.94	$211,422
		157,288		**157,288**		**39,322**		**$ 1,373,911**
	Offsite Employee							
	Small	75,199	1	75,199	15/60	18,800	$34.94	$656,872
	Medium	38,094	1	38,094	15/60	9,524	$34.94	$332,769
	Large	0	1	0	15/60	-	$34.94	$ 0
		113,293		**113,293**		**28,324**		**$989,641**
Subtotal E.1.a(ii).		**412,175**		**412,175**		**103,044**		**$ 3,335,582**

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
b(i). Worker Time and Cost to Complete the Initial Medical Examination - New Workers (Spreadsheet Table 14)								
	Onsite Employees							
	Small	705	1	705	2	1,234	$27.46	$ 33,886
	Medium	8,804	1	8,804	2	15,407	$27.46	$ 423,076
	Large	1,704	1	1,704	2	2,982	$27.46	$ 81,886
General Industry		**11,213**		**11,213**		**19,623**		**$ 538,848**
	Offsite Employee							
	Small	6,343	1	6,343	3	17,443	$27.46	$ 478,985
	Medium	8,804	1	8,804	3	24,211	$27.46	$ 664,834
	Large	189	1	189	3	520	$27.46	$ 14,279
		15,336		**15,336**		**42,174**		**$ 1,158,098**
	Onsite Employees							
	Small	2,643	1	2,643	2	4,625	$34.94	$ 161,598
	Medium	21,424	1	21,424	2	37,492	$34.94	$ 1,309,970
	Large	6,126	1	6,126	2	10,721	$34.94	$ 374,592
Construction		**30,193**		**30,193**		**52,838**		**$ 1,846,160**
	Offsite Employee							
	Small	23,789	1	23,789	210/60	77,314	$34.94	$ 2,701,351
	Medium	21,424	1	21,424	210/60	69,628	$34.94	$ 2,432,802
	Large	681	1	681	210/60	2,213	$34.94	$ 77,322
		45,894		**45,894**		**149,155**		**$ 5,211,475**
Subtotal E.1.b(i).		**102,636**		**102,636**		**263,790**		**$ 8,754,581**
b(ii) Worker Time and Cost to Complete the the Medical Surveillance Form for the Initial Medical Examination - New Workers (Spreadsheet Table 14(a))								
General Industry	**Onsite Employees**							

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
	Small	705	1	705	15/60	176	$27.46	$ 4,833
	Medium	8,804	1	8,804	15/60	2,201	$27.46	$ 60,439
	Large	1,704	1	1,704	15/60	426	$27.46	$ 11,698
		11,213		**11,213**		**2,803**		**$ 76,970**
	Offsite Employee							
	Small	6,343	1	6,343	15/60	1,586	$27.46	$ 43,552
	Medium	8,804	1	8,804	15/60	2,201	$27.46	$ 60,439
	Large	189	1	189	15/60	47	$27.46	$ 1,291
		15,336		**15,336**		**3,834**		**$ 105,282**
Construction	**Onsite Employees**							
	Small	2,643	1	2,643	15/60	661	$34.94	$ 23,095
	Medium	21,424	1	21,424	15/60	5,356	$34.94	$ 187,139
	Large	6,126	1	6,126	15/60	1,532	$34.94	$ 53,528
		30,193		**30,193**		**7,549**		**$ 263,762**
	Offsite Employee							
	Small	23,789	1	23,789	15/60	5,947	$34.94	$ 207,788
	Medium	21,424	1	21,424	15/60	5,356	$34.94	$ 187,139
	Large	681	1	681	15/60	170	$34.94	$ 5,940
		45,894		**45,894**		**11,473**		**$ 400,867**
Subtotal E.1.b(ii).		**102,636**		**102,636**		**25,659**		**$ 846,881**
d. Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - Existing Workers (Spreadsheet Table 16)								
General Industry	**Onsite Employees**							
	Small	7,517	1	7,517	5/60	626	$27.46	$ 17,190
	Medium	70,431	1	70,431	5/60	5,869	$27.46	$ 161,163

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
	Large	10,100	1	10,100	5/60	842	$27.46	$ 23,121
		88,048		**88,048**		**7,337**		**$ 201,474**
	Offsite Employee							
	Small	30,069	1	30,069	65/60	32,575	$27.46	$ 894,510
	Medium	23,477	1	23,477	65/60	25,433	$27.46	$ 698,390
	Large	0	1	-	65/60	-	$27.46	$ 0
		53,546		**53,546**		**58,008**		**$ 1,592,900**
Construction	**Onsite Employees**							
	Small	18,800	1	18,800	5/60	1,567	$34.94	$ 54,751
	Medium	114,283	1	114,283	5/60	9,524	$34.94	$ 332,769
	Large	24,205	1	24,205	5/60	2,017	$34.94	$ 70,474
		157,288		**157,288**		**13,108**		**$ 457,994**
	Offsite Employee							
	Small	75,199	1	75,199	95/60	119,065	$34.94	$ 4,160,131
	Medium	38,094	1	38,094	95/60	60,316	$34.94	$ 2,107,441
	Large	0	1	0	95/60	-	$34.94	$ 0
		113,293		**113,293**		**179,381**		**$ 6,267,572**
Subtotal E.1.d.		**412,175**		**412,175**		**257,834**		**$ 8,519,940**
e. Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - New Workers (Spreadsheet Table 17)								
General Industry	**Onsite Employees**							
	Small	705	1	705	5/60	59	$27.46	$ 1,620
	Medium	8,804	1	8,804	5/60	734	$27.46	$ 20,156

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
	Large	1,704	1	1,704	5/60	142	$27.46	$ 3,899
		11,213		**11,213**		**935**		**$ 25,675**
	Offsite Employee							
	Small	6,343	1	6,343	65/60	6,872	$27.46	$ 188,705
	Medium	8,804	1	8,804	65/60	9,538	$27.46	$ 261,913
	Large	189	1	189	65/60	205	$27.46	$ 5,629
		15,336		**15,336**		**16,615**		**$ 456,247**
Construction	**Onsite Employees**							
	Small	2,643	1	2,643	5/60	220	$34.94	$ 7,687
	Medium	21,424	1	21,424	5/60	1,785	$34.94	$ 62,368
	Large	6,126	1	6,126	5/60	511	$34.94	$ 17,854
		30,193		**30,193**		**2,516**		**$ 87,909**
	Offsite Employee							
	Small	23,789	1	23,789	95/60	37,666	$34.94	$ 1,316,050
	Medium	21,424	1	21,424	95/60	33,921	$34.94	$ 1,185,200
	Large	681	1	681	95/60	1,078	$34.94	$ 37,665
		45,894		**45,894**		**72,665**		**$ 2,538,915**
Subtotal E.1.e.		**102,636**		**102,636**		**92,731**		**$ 3,108,746**
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 (Spreadsheet Table 19)								
General Industry	**Onsite Employees**							
	Small	12,254	1	12,254	105/60	21,445	$27.46	$ 588,880
	Medium	117,013	1	117,013	105/60	204,773	$27.46	$ 5,623,067

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
	Large	17,221	1	17,221	105/60	30,137	$27.46	$ 827,562
		146,488		**146,488**		**256,355**		**$ 7,039,509**
	Offsite Employee							
	Small	52,540	1	52,540	165/60	144,485	$27.46	$ 3,967,558
	Medium	44,874	1	44,874	165/60	123,404	$27.46	$ 3,388,674
	Large	189	1	189	165/60	520	$27.46	$ 14,279
		97,603		**97,603**		**268,409**		**$ 7,370,511**
Construction	**Onsite Employees**							
	Small	28,425	1	28,425	105/60	49,744	$34.94	$ 1,738,055
	Medium	178,150	1	178,150	105/60	311,763	$34.94	$ 10,892,999
	Large	39,320	1	39,320	105/60	68,810	$34.94	$ 2,404,221
		245,895		**245,895**		**430,317**		**$ 15,035,275**
	Offsite Employee							
	Small	126,916	1	126,916	210/60	412,477	$34.94	$ 14,411,946
	Medium	73,666	1	73,666	210/60	239,415	$34.94	$ 8,365,160
	Large	681	1	681	210/60	2,213	$34.94	$ 77,322
		201,263		**201,263**		**654,105**		**$ 22,854,428**
Subtotal E.2.a(i).		**691,249**		**691,249**		**1,609,186**		**$ 52,299,723**
a(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Periodic Medical Examination (Spreadsheet Table 19(a))								
General Industry	**Onsite Employees**							
	Small	12,254	1	12,254	15/60	3,064	$27.46	$ 84,137
	Medium	117,013	1	117,013	15/60	29,253	$27.46	$ 803,287
	Large	17,221	1	17,221	15/60	4,305	$27.46	$ 118,215

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
		146,488		**146,488**		**36,622**		**$ 1,005,639**
	Offsite Employee							
	Small	52,540	1	52,540	15/60	13,135	$27.46	$ 360,687
	Medium	44,874	1	44,874	15/60	11,219	$27.46	$ 308,074
	Large	189	1	189	15/60	47	$27.46	$ 1,291
		97,603		**97,603**		**24,401**		**$ 670,052**
Construction	**Onsite Employees**							
	Small	28,425	1	28,425	15/60	7,106	$34.94	$ 248,284
	Medium	178,150	1	178,150	15/60	44,538	$34.94	$ 1,556,158
	Large	39,320	1	39,320	15/60	9,830	$34.94	$ 343,460
		245,895		**245,895**		**61,474**		**$ 2,147,902**
	Offsite Employee							
	Small	126,916	1	126,916	15/60	31,729	$34.94	$ 1,108,611
	Medium	73,666	1	73,666	15/60	18,417	$34.94	$ 643,490
	Large	681	1	681	15/60	170	$34.94	$ 5,940
		201,263		**201,263**		**50,316**		**$ 1,758,041**
Subtotal E.2.a(ii).		**691,249**		**691,249**		**172,813**		**$ 5,581,634**
c. Worker Time and Cost to Complete Latent TB Test Return Reading During Periodic Medical Examination (Spreadsheet Table 21)								
General Industry	**Onsite Employee**							
		7,085	1	7,085	5/60	590	$27.46	$ 16,201
	Offsite Employee							
		4,308	1	4,308	65/60	4,667	$27.46	$ 128,156
Construction	**Onsite Employees**							

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
		11,683	1	11,683	5/60	974	$34.94	$34,032
	Offsite Employee							
		8,416	1	8,416	95/60	13,325	$34.94	$ 465,576
Subtotal E.2.c.		**31,492**		**31,492**		**19,556**		**$ 643,965**
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 (Spreadsheet Table 22)								
	Employees							
	Initial	26,549	1	26,549	15/60	6,637	$88.79	$ 589,299
General Industry	*Periodic*	244,091	1	244,091	15/60	61,023	$88.79	$ 5,418,232
	Additional/ Pulmonary Function Examination	544	1	544	1	544	$88.79	$ 48,302
		271,184		***271,184***		***68,204***		**$ 6,055,833**
Construction	**Employees**							
	Initial	76,087	1	76,087	15/60	19,022	89	$ 1,688,963
	Periodic	447,158	1	447,158	15/60	111,790	89	$ 9,925,834
	Additional/ Pulmonary Function Examination	563	1	563	1	563	89	$ 49,989
		523,808		***523,808***		***131,375***		***$ 11,664,786***
Subtotal E.3.a.		**794,992**		**794,992**		**199,579**		**$ 17,720,619**
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))								

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
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 (Spreadsheet Table 23)								
General Industry	**Employees**							
	Initial	26,549	1	26,549	15/60	6,637	$88.79	$ 589,299
	Periodic	244,091	1	244,091	15/60	61,023	$88.79	$ 5,418,232
	Specialist/Additional	544	1	544	15/60	136	$88.79	$ 12,075
		271,184		***271,184***		***67,796***	$88.79	***$ 6,019,607***
Construction	**Employees**							
	Initial	76,087	1	76,087	15/60	19,022	$88.79	$ 1,688,963
	Periodic	447,158	1	447,158	15/60	111,790	$88.79	$ 9,925,834
	Specialist/Additional	563	1	563	15/60	141	$88.79	$ 12,519
		523,808		***523,808***		***130,953***		***$ 11,627,316***
Subtotal E.4.a.		**794,992**		**794,992**		**198,749**		**$ 17,646,923**
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 (Spreadsheet Table 24)								
General Industry	**Onsite Employees**							
	Small	0	-	-	45/60	-	$27.46	$ 0
	Medium	0	-	-	45/60	-	$27.46	$ 0
	Large	0	-	-	45/60	-	$27.46	$ 0
		0		-		-		***$ 0***
	Offsite Employees							
	Small	144	1	144	105/60	252	$27.46	$ 6,920

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
	Medium	361	1	361	105/60	632	$27.46	$ 17,355
	Large	39	1	39	105/60	68	$27.46	$ 1,867
	544		***544***		***952***		***$***	***26,142***
Construction	**Onsite Employees**							
	Small	0	-	-	45/60	-	$34.94	$ 0
	Medium	0	-	-	45/60	-	$34.94	$ 0
	Large	0	-	-	45/60	-	$34.94	$ 0
	0		-			-		***$ 0***
	Offsite Employees							
	Small	196	1	196	150/60	441	$34.94	$ 15,409
	Medium	317	1	317	150/60	713	$34.94	$ 24,912
	Large	50	1	50	150/60	113	$34.94	$ 3,948
	563		***563***		***1,267***		***$***	***44,269***
Subtotal E.5.a(i).		**1,107**		**1,107**		**2,219**		**$ 70,411**
a(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Specialist Examination (Spreadsheet Table 24(a))								
General Industry	**Onsite Employees**							
	Small	0	-	-	15/60	-	$27.46	$ 0
	Medium	0	-	-	15/60	-	$27.46	$ 0
	Large	0	-	-	15/60	-	$27.46	$ 0

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
		0		-		***0***		***$ 0***
	Offsite Employees							
	Small	144	1	144	15/60	36	$27.46	$ 989
	Medium	361	1	361	15/60	90	$27.46	$ 2,471
	Large	39	1	39	15/60	10	$27.46	$ 275
		544		***544***		***136***		***$ 3,735***
Construction	**Onsite Employees**							
	Small	0	-	-	15/60	-	$34.94	$ 0
	Medium	0	-	-	15/60	-	$34.94	$ 0
	Large	0	-	-	15/60	-	$34.94	$ 0
		0		-		0		***$ 0***
	Offsite Employees							
	Small	196	1	196	15/60	49	$34.94	$ 1,712
	Medium	317	1	317	15/60	79	$34.94	$ 2,760
	Large	50	1	50	15/60	13	$34.94	$ 454
		563		***563***		***141***		***$ 4,926***
Subtotal E.5.a(i).				**1,107**		**277**		**$ 8,661**
F. Rule Familiarization								

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
1.Supervisor Rule Familiarization Time and Cost (Spreadsheet Table 26)								
General Industry	**Establishments**							
	Small	51,949	1	51,949	4	207,796	$45.09	$ 9,369,522
	Medium	24,271	1	24,271	8	194,168	$45.09	$ 8,755,035
	Large	641	1	641	40	25,640	$45.09	$ 1,156,108
		76,861		***76,861***		***427,604***		***$ 19,280,665***
Construction	**Establishments**							
	Small	545,417	1	545,417	4	2,181,668	$49.43	$ 107,839,849
	Medium	59,743	1	59,743	8	477,944	$49.43	$ 23,624,772
	Large	560	1	560	40	22,400	$49.43	$ 1,107,232
		605,720		***605,720***		***2,682,012***		***$ 132,571,853***
Subtotal F.1.		**682,581**		**682,581**		**3,109,616**		**$ 151,852,518**
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 (Spreadsheet Table 27)								
General Industry	Employees Undergoing Exposure Assessment	177,490	1	177,490	15/60	44,373	89	$ 3,939,879
Construction	Employees Undergoing Exposure Assessment	20,894	1	20,894	15/60	5,224	89	$ 463,839
Subtotal G.1.a.		**198,384**		**198,384**		**49,597**		**$ 4,403,718**
3. Medical Surveillance (§§ 1910.1053(k)(3) and 1926.1153(j)(3))								
a. Human Resources Manager Time and Cost to Establish and Maintain Record for Medical Surveillance (Spreadsheet Table 28)								

Collection of Information Requirements (Item 12 Costs Only)	Type of Respondent	No. of Respondents	No. of Responses per Respondent	Total No. of Responses	Avg. Burden per Response (in Hrs.)	Total Burden Hours (rounded)	Hourly Wage	Total Burden Costs (rounded)
General Industry	Employees Undergoing Medical Examination							
	Initial	26,549	1	26,549	15/60	6,637	$88.79	$ 589,299
	Periodic	244,091	1	244,091	15/60	61,023	$88.79	$ 5,418,232
	Referral/additional	544	1	544	1	544	$88.79	$ 48,302
		271,184		**271,184**		**68,204**		**$ 6,055,833**
Construction	Employees Undergoing Medical Examination							
	Initial	76,087	1	76,087	15/60	19,022	$88.79	$ 1,688,963
	Periodic	447,158	1	447,158	15/60	111,790	$88.79	$ 9,925,834
	Referral/additional	563	1	563	1	563	$88.79	$ 49,989
		523,808		**523,808**		**131,375**		**$ 11,664,786**
Subtotal G.3.a.				**794,992**		**199,579**		**$ 17,720,619**
TOTAL		**682,581** [25]		**17,858,154**		**12,468,266**		**$ 596,584,214**

[25] There are an estimated 682,581 unduplicated employer respondents, as noted earlier in Item 12 of this Supporting Statement.

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 will incur costs for analyzing the samples taken for exposure assessment. In the FEA, the agency estimates that the cost for contract industrial hygienist services for each exposure assessment sample will range from $312.50 to $1,250 for initial exposure monitoring and from $156.25 to $1,250 for periodic monitoring, depending on the size of the establishment. Laboratory fees and shipping will cost an additional $140.27. The detailed costs are shown in Tables 2 and 4.

Medical Examinations

The agency assumes that employers will incur costs for contract medical exams. The agency estimates the cost for an initial or periodic medical examination to be $362.48 and $367.24 for existing and new workers respectively, a specialist exam to be $210.89, and a TB test to be $16.63. 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.

To better align the ICR with ROCIS fields and for PRA purposes only, the agency adjusted the previous ICR estimate ($406.57 for the initial or periodic medical examinations and $210.89 for a specialist examination) to separate out the cost for a PLHCP to complete medical surveillance forms, and to provide the forms to the worker and employer respectively, during the medical examination. This action is consistent with adjustments made to medical surveillance burden hours and costs in Item 12, E., of this Supporting Statement, above.

The total operation and maintenance cost for the exposure assessments and medical examinations provided under the standards are estimated to be $393,789,550.

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)			
b. Contract Cost for an Industrial Hygienist to Conduct Analysis of Initial Exposure Assessment (Table 2)			
Subtotal A.1.b.	**$49,496,199**	**$49,496,199**	**$0**
c. Contract Cost for a Laboratory to Conduct Analysis of Initial Exposure Assessment (Table 2)			
Subtotal A.1.c.	**$10,522,775**	**$10,522,775**	**$0**
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)			
b. Contract Cost for an Industrial Hygienist to Conduct Analysis of Periodic Exposure Assessment (Table 4)			
Subtotal A.2.b.	**$49,621,271**	**$49,621,271**	**$0**
c. Contract Cost for a Laboratory to Conduct Analysis of Periodic Exposure Assessment (Table 4)			
Subtotal A.2.c.	**$4,349,632**	**$4,349,632**	**$0**
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))			
c(i). Contract Cost for a PLHCP to Conduct the Initial Medical Examination (Table 15)			
Subtotal E.1.c(i).	(See *Subtotal E.1.c.*)	$187,096,428	-
c(ii). 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).	**(**See *Subtotal E.1.c.*)	$22,210,379	-
Subtotal E.1.c.	**$209,307,214**	**$209,306,807**	**-$407**
f. Contract Cost for a PLHCP to Conduct the Latent TB Test During Initial Medical Examination (Table 18)			
Subtotal E.1.f.	**$8,561,324**	**$8,561,307**	**-$17**
2. Periodic Medical Examination (§§ 1910.1053(i)(3) and 1926.1153(h)(3))			
b(i). Contract Cost for a PLHCP to Conduct the Periodic Medical Examination (Table 20)			
Subtotal E.2.b(i).	(See *Subtotal E.2.b.*)	$54,520,523	-
b(ii). 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).	(See *Subtotal E.2.b.*)	$6,653,869	-
Total E.2.b.	**$61,174,392**	**$61,174,392**	**$0**
d. Contract Cost for a PLHCP to Conduct Latent TB Test During Periodic Medical Examination (Table 18)			
Subtotal E.2.d.	**$523,712**	**$523,712**	**$0**
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).)			
b(i). Contract Cost for a PLHCP to Conduct Specialist Examination (Table 25)			
Subtotal E.5.b(i).	(See *Subtotal E.5.b.*)	$204,739	-
b(ii). Contract Cost for a PLHCP to Conduct Specialist Examination (Adjusted for Medical Surveillance Form Completion Time)(Table 25(a))			
Subtotal E.5.b(ii).	(See *Subtotal E.5.b.*)	$28,716	-
Subtotal E.5.b.	**$233,382**	**$233,455**	**$73**
TOTAL	**$393,789,901**	**$393,789,550**	**-$351**

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 requests approval for an adjustment increase of 349,902 burden hours (from 12,118,364 to 12,468,266).

The requested adjustment increase is associated with the agency's correction of several administrative errors in the previous ICR. Specifically, the adjustment would include additional burden hours for the development and updating of the written exposure control plan associated with medium-sized general industry establishments. In addition, the adjustment would add additional burden hours for employers to provide information to a physician or other licensed health care professional in association with employee periodic medical examinations. These burden hours were displayed in the previous ICR spreadsheets as costs incurred after the initial year of standard implementation but were not included in the burden hour totals in the previous ICR. The adjustment also would add additional burden hours for managers to ensure worker receipt of the PLHCP and specialist's written medical report and distribute the PLHCP and specialist's written medical opinion to workers and the employer in association with employee initial, periodic, and additional medical examinations. There were also minor burden hour adjustments associated with the agency's use of a different burden hour time rounding method in the calculations.

In addition, to better align the ICR with ROCIS fields and for PRA purposes only, the agency adjusted the previous ICR time estimate, burden hours and costs for overall initial, periodic and specialist medical examinations to separate out the burden hours and costs associated with an employer's employee time and cost to wait for the PLHCP to complete medical surveillance forms, including the time to provide the forms to the employee and opinion to the employer, during the medical examination. This resulted in a substantial increase in responses associated with the forms.

The agency also requests an adjustment decrease of $351 for operation and maintenance costs (from $393,789,901 to $393,789,550) to adjust for administrative errors and to maintain all other previously approved operation and maintenance costs.

In addition, to better align the ICR with ROCIS fields and for PRA purposes only, the agency adjusted the operation and maintenance cost estimates for overall initial, periodic and specialist medical examinations to separate out the cost for a PLHCP to complete medical surveillance forms, and costs to provide the forms to the worker and employer respectively, during medical examination. This resulted in a substantial increase in responses associated with the forms.

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.

Table B

Summary of Burden Hours, Burden-Hour Cost, and Operating and Maintenance Cost and Change

Under Items 12 and 13 of this Supporting Statement

Information Collection Requirements (Item 2)	Number of Responses	Approved Hours (Item 12)	Requested Burden Hours (Item 12)	Change	Approved Item 13 Cost	Requested Item 13 Cost	Change
a. Worker Time and Cost - Initial Exposure Assessment (Table 1)	75,018	37,510	37,510	0	_	_	_
b. Contract Cost for an Industrial Hygienist to Conduct Analysis of Initial Exposure Assessment (Table 2)	–	–	–	–	$49,496,199	$49,496,199	$0
c. Contract Cost for a Laboratory to Conduct Analysis of Initial Exposure Assessment (Table 2)	_	_	_	_	$10,522,775	$10,522,775	$0
a. Worker Time and Cost - Periodic and Additional Exposure Assessment (Table 3)	123,366	61,682	61,684	2	_	_	_
b. Contract Cost for an Industrial Hygienist to Conduct Analysis of Periodic Exposure Assessment (Table 4)	–	–	–	–	$49,621,271	$49,621,271	$0
c. Contract Cost for a Laboratory to Conduct Analysis of Periodic Exposure Assessment (Table 4)	_	_	_	_	$4,349,632	$4,349,632	$0
a. Human Resources Manager Time to Notify Workers of Exposure Assessment Results	198,384	49,595	49,597	2	_	_	_

Information Collection Requirements (Item 2)	Number of Responses	Approved Hours (Item 12)	Requested Burden Hours (Item 12)	Change	Approved Item 13 Cost	Requested Item 13 Cost	Change
(Table 5)							
a. Supervisor Time and Cost - Development of Plan (Table 6)	682,581	951,286	952,638	1,352	_	_	_
b. Supervisor Time and Cost - Review and Update Plan (Table 7)	682,581	475,644	476,320	676	_	_	_
c. Supervisor Time and Cost-Implementation of Plan (Construction) (Table 8)	9,085,800	2,725,741	2,725,741	0	_	_	_
d. Supervisor Time and Cost - Make Plan Available to Employees and Designated Representatives (Table 8a)	124,925	9,994	10,411	417	_	_	_
C. Air Quality Permit Notification							
1. HR Manager Time and Cost for Creating and Submitting the Air Quality Permit Notification (Table 9)	16,535	342,200	342,200	0	_	_	_
D. Respiratory Protection (§§ 1910.1053(g) and 1926.1153(e))							
a. Human Resources Manager Time and Cost to Establish Respiratory Protection Program (Tables 10, 10a & 11)	42,044	175,626	175,624	-2	_	_	_
a. Human Resources Manager Time and Cost to Revise Respiratory Protection Program (Tables 10, 10a & 11)	8,408	17,560	17,560	0	_	_	_

Information Collection Requirements (Item 2)	Number of Responses	Approved Hours (Item 12)	Requested Burden Hours (Item 12)	Change	Approved Item 13 Cost	Requested Item 13 Cost	Change
a. Supervisor and Worker Time and Cost to Complete Fit-Testing and Maintain Record (Table 12)	591,934	369,959	369,959	0	_	_	_
E. Medical Surveillance (§§ 1910.1053(i) and 1926.1153(h))							
a(i). Worker Time and Cost to Complete the Initial Medical Examination - Existing Workers (Table 13)	412,175	1,047,836	944,793	1	_	_	_
a(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Initial Medical Examination - Existing Workers (Table 13(a))	412,175		103,044				
b(i). Worker Time and Cost to Complete the Initial Medical Examination - New Workers (Table 14)	102,636	289,452	263,790	-3	_	_	_
b(ii) Worker Time and Cost to Complete the the Medical Surveillance Form for the Initial Medical Examination - New Workers (Table 14(a))	102,636		25,659				
c(i). Contract Cost for a PLHCP to Conduct the Initial Medical Examination (Table 15)	_	_	_	_	$209,307,214	$187,096,428	-$407
c(ii). Contract Cost for a PLHCP to Conduct the Initial Medical Examination (*Adjusted for Medical Surveillance Form Completion Time*) (Table 15(a))	_	_	_	_		$ 22,210,379	

Information Collection Requirements (Item 2)	Number of Responses	Approved Hours (Item 12)	Requested Burden Hours (Item 12)	Change	Approved Item 13 Cost	Requested Item 13 Cost	Change
d. Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - Existing Workers (Table 16)	412,175	256,459	257,834	1,375	_	_	_
e. Worker Time and Cost for Latent TB Test Return Reading During Initial Medical Examination - New Workers (Table 17)	102,636	92,386	92,731	345	_	_	_
f. Contract Cost for a PLHCP to Conduct the Latent TB Test During Initial Medical Examination (Table 18)	_	_	_	_	$8,561,324	$8,561,307	-$17
a(i). Worker Time and Cost to Complete the Periodic Medical Examination (Table 19)	691,249	1,781,995	1,609,186	4	_	_	_
a(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Periodic Medical Examination (Table 19(a))	691,249		172,813		_	_	_
b(i). Contract Cost for a PLHCP to Conduct the Periodic Medical Examination (Table 20)	_	_	_	_	$61,174,392	$54,520,523	$0
b(ii). Contract Cost for a PLHCP to Conduct the Periodic Medical Examination (*Adjusted for Medical Surveillance Form Completion Time*)(Table 20(a))	_	_	_	_		$6,653,869	
c. Worker Time and Cost to	31,492	19,452	19,556	104	_	_	_

Information Collection Requirements (Item 2)	Number of Responses	Approved Hours (Item 12)	Requested Burden Hours (Item 12)	Change	Approved Item 13 Cost	Requested Item 13 Cost	Change
Complete Latent TB Test Return Reading During Periodic Medical Examination (Table 21)							
d. Contract Cost for a PLHCP to Conduct Latent TB Test During Periodic Medical Examination (Table 18)	–	–	–	–	$523,712	$523,712	$0
a. Human Resources Manager Time and Cost to Provide Information to the PLHCP (Table 22)	794,992	26,766	199,579	172,813	–	–	–
a. Worker and Human Resources Manager Time and Cost to Provide the PLHCP's Written Medical Report to the Worker and Opinion to the Employer (Table 23)	794,992	25,936	198,749	172,813	–	–	–
a(i). Worker Time and Cost to Complete the Specialist Examination (Table 24)	1,107	2,494	2,219	2	–	–	–
a(ii). Worker Time and Cost to Complete the Medical Surveillance Form for the Specialist Examination (Table 24(a))	1,107		277		–	–	–
b(i). Contract Cost for a PLHCP to Conduct Specialist Examination (Table 25)	–	–	–	–	$233,382	$204,739	$73
b(ii). Contract Cost for a PLHCP to Conduct Specialist Examination (*Adjusted for Medical Surveillance Form Completion Time*) (Table	–	–	–	–		$28,716	

Information Collection Requirements (Item 2)	Number of Responses	Approved Hours (Item 12)	Requested Burden Hours (Item 12)	Change	Approved Item 13 Cost	Requested Item 13 Cost	Change
25(a))							
F. Rule Familiarization							
1.Supervisor Rule Familiarization Time and Cost (Table 26)	682,581	3,109,616	3,109,616	0	–	–	–
G. Recordkeeping (§§ 1910.1053(k) and 1926.1153(j))			–				
a. Human Resources Manager Time and Cost to Establish and Maintain Record for Exposure Monitoring Data (Table 27)	198,384	49,596	49,597	1	–	–	–
a. Human Resources Manager Time and Cost to Establish and Maintain Record for Medical Surveillance (Table 28)	794,992	199,578	199,579	1	–	–	–
TOTAL	**17,858,154**	**12,118,364**	**12,468,266**	**349,902**	**$393,789,901**	**$393,789,550**	**-$351**