

**SUPPORTING STATEMENT FOR THE
COLLECTION OF INFORMATION REQUIREMENTS IN THE
ASBESTOS IN CONSTRUCTION STANDARD (29 CFR 1926.1101)¹
OFFICE OF MANAGEMENT AND BUDGET (OMB)
CONTROL NO. 1218-0134 (September 2021)**

This ICR is requesting an extension for an already approved data collection.

A. JUSTIFICATION

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

The main objective of the Occupational Safety and Health Act (OSH Act) 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 regulations" (29 U.S.C. 651).

To protect employee health, the OSH Act authorizes the Occupational Safety and Health Administration (OSHA) to develop standards that provide for "monitoring or measuring employee exposure" to occupational hazards and to "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 in order to most effectively determine whether the health of such employees is adversely affected by such exposure" (29 U.S.C. 655). In addition, the OSH Act mandates that "[e]ach employer shall make, keep and preserve, and make available to the Secretary [of Labor] . . . such records regarding [his/her] activities relating to this Act as the Secretary . . . may prescribe by regulation as necessary or appropriate for the enforcement of this Act or for developing information regarding the causes and prevention of occupational accidents and illnesses" (29 U.S.C. 657). In addition, the OSH Act directs OSHA to "issue regulations requiring employers to maintain accurate records of employee exposure to potentially toxic materials or other harmful physical agents which are required to be monitored and measured," and further 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). The OSH 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

¹The purpose of this supporting statement is to analyze and describe the burden hours and costs associated with provisions of the Asbestos in Construction Standard that contain collection of information requirements; this supporting statement does not provide information or guidance on how to comply with, or how to enforce, the Standard.

inspection of an employer's establishment" (29 U.S.C. 651).

Under the authority granted by the OSH Act, OSHA published a health standard governing employee exposure to asbestos in construction (29 CFR 1926.1101). The basis for this standard is a determination by the Assistant Secretary for OSHA that occupational exposure to asbestos poses a hazard to workers. Years of exposure to asbestos can cause numerous disabling or fatal diseases. Among these diseases are asbestosis, a disease in which lung scarring (fibrosis) impairs breathing and causes death from respiratory or heart failure; lung cancer; mesothelioma, a cancerous tumor that spreads rapidly in the cells of membranes covering the lungs and body organs; and gastrointestinal cancer.

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. Multi-employer worksites (§1926.1101(d))

§1926.1101(d)(1) - On multi-employer worksites, an employer performing work requiring the establishment of a regulated area shall inform other employers on the site of the nature of the employer's work with asbestos and/or presumed asbestos containing material (PACM), of the existence of and requirements pertaining to regulated areas, and the measures taken to ensure that employees of such other employers are not exposed to asbestos.

Purpose: Informing other employers at the worksite of asbestos and/or PACM ensures that the hazards concerning asbestos are known to all employers and employees working near this toxin; so that proper measures can be taken to eliminate any unnecessary exposures.

B. Regulated areas (§1926.1101(e))

§1926.1101(e)(1) - All Class I, II and III² asbestos work shall be conducted within regulated areas. All other operations covered by this standard shall be conducted within a regulated area where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed a PEL. Regulated areas shall comply with the requirements of paragraphs (2), (3), (4) and (5) of this section.

Demarcation §1926.1101(e)(2) - The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Signs shall be provided and displayed pursuant to the requirements of paragraph (k)(7) of this section.

²Class I asbestos work means activities involving the removal of thermal system insulation (TSI) or surfacing asbestos containing material (ACM) or PACM. Class II work means activities involving removal of ACM which is neither TSI or surfacing ACM. Class III asbestos work means repair and maintenance operations where "ACM", including TSI and surfacing ACM and PACM, is likely to be disturbed.

Purpose: Designated areas where employee exposures are over the PELs warn employees who are not essential to the performance of tasks within the areas to keep out. Demarcation also warns employees required to be in the regulated area that respirators need to be worn to avoid excessive exposure via inhalation and that good personal hygiene must be practiced to avoid exposure to asbestos via ingestion.

C. Exposure assessments and monitoring (§1926.1101(f))

Initial Exposure Assessment §1926.1101(f)(2)(i) - Each employer who has a workplace or work operation covered by this standard shall ensure that a "competent person"³ conducts an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace. The assessment must be completed in time to comply with requirements which are triggered by exposure data or the lack of a "negative exposure assessment," and to provide information necessary to assure that all control systems planned are appropriate for that operation and will work properly.

§1926.1101(f)(2)(iii) - Negative Exposure Assessment: For any one specific asbestos job which will be performed by employees who have been trained in compliance with the standard, the employer may demonstrate that employee exposures will be below the PELs by data which conform to the following criteria:

§1926.1101(f)(2)(iii)(A) - Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for releasing asbestos; or

§1926.1101(f)(2)(iii)(B) - Where the employer has monitored prior asbestos jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with the asbestos standard in effect; and the data were obtained during work operations conducted under workplace conditions "closely resembling" the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the operations were conducted by employees whose training and experience are no more extensive than that of employees performing the current job, and these data show that under the conditions prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or

§1926.1101(f)(2)(iii)(C) - The results of initial exposure monitoring of the current job

³ Competent person means, in addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f); in addition for Class I and Class II work who is specially trained in a training course which meets the criteria of the Environmental Protection Agency's (EPA) Model Accreditation Plan (40 CFR Part 763) for supervisor, or its equivalent, and for Class III and Class IV work, who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92(a) (2).

made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

Periodic monitoring §1926.1101(f)(3)

Class I and II operations §1926.1101(f)(3)(i) - The employer shall conduct daily monitoring that is representative of the exposure of each employee who is assigned to work within a regulated area who is performing Class I or II work, unless the employer pursuant to (f)(2)(iii) of this section, has made a negative exposure assessment for the entire operation.

§1926.1101(f)(3)(ii) - All operations under the standard other than Class I and II operations. The employer shall conduct periodic monitoring of all work where exposures are expected to exceed a PEL, at intervals sufficient to document the validity of the exposure prediction.

Purpose: Exposure monitoring assists employers in identifying areas or operations that may require efforts to reduce exposure and come into compliance with the standard. Monitoring results also assist employers in determining the necessity for using engineering controls, instituting or modifying work practices and in selecting appropriate respiratory protection to prevent employees from over exposure.

Employee notification of monitoring results §1926.1101(f)(5) - The employer must, as soon as possible but no later than 5 working days after the receipt of the results of any monitoring performed under this section, notify each affected employee of these results either individually in writing or by posting the results in an appropriate location that is accessible to employees.

Purpose: Consistent with Section 8(c)(3) of the OSH Act, every worker has the right to know what their exposure level is and whether it is above or below the action level. Moreover, since the permissible exposure level is one that also considers feasibility and, therefore, is not necessarily a “safe” level, it is necessary for the worker to know the level of asbestos to which they were exposed. This is necessary to assure workers that the employer is making every effort to furnish them with a safe and healthy work environment as required by Section 8(c)(3) of the OSH Act.

D. Methods of compliance (§1926.1101(g)(6)(ii) and (g)(8)(vi))

§1926.1101(g)(6)(ii) - A certified industrial hygienist or licensed professional engineer who is also qualified as a project designer as defined in paragraph (b) of this section, shall evaluate the work area, the projected work practices and the engineering controls and shall certify in writing that the planned control method is adequate to reduce direct and indirect employee exposure to below the PELs under worst-case conditions of use, and that the planned control method will prevent asbestos contamination outside the regulated area, as measured by clearance sampling which meets the requirements of Environmental Protection Agency's Asbestos in Schools rule issued under AHERA, or perimeter monitoring which meets the criteria in paragraph (g)(4)(ii) (B) of this section.

§1926.1101(g)(6)(ii)(A) - Where the TSI or surfacing material to be removed is 25 linear or 10 square feet or less, the evaluation required in paragraph (g)(6) of this section may be performed by a "competent person," and may omit consideration of perimeter or clearance monitoring otherwise required.

§1926.1101(g)(6)(ii)(B) - The evaluation of employee exposure required in paragraph (g)(6) of this section shall, include and be based on sampling and analytical data representing employee exposure during the use of such method under worst-case conditions and by employees whose training and experience are equivalent to employees who are to perform the current job.

§1926.1101(g)(8)(vi) - Alternative Work Practices and Controls - Instead of the work practices and controls listed in paragraph (g)(8)(i) through (v) of this section, the employer may use different or modified engineering and work practice controls if the following provisions are complied with.

§1926.1101(g)(8)(vi)(A) - The employer shall demonstrate by data representing employee exposure during the use of such method under conditions which closely resemble the conditions under which the method is to be used, that employee exposure will not exceed the PELs under any anticipated circumstances.

§1926.1101(g)(8)(vi)(B) - A competent person shall evaluate the work area, the projected work practices and the engineering controls, and shall certify in writing, that the different or modified controls are adequate to reduce direct and indirect employee exposure to below the PELs under all expected conditions of use and that the method meets the requirements of this standard. The evaluation shall include and be based on data representing employee exposure during the use of such method under conditions which closely resemble the conditions under which the method is to be used for the current job, and by employees whose training and experience are equivalent to employees who are to perform the current job.

E. Respirator program (§1926.1101(h)(2)(i))

§1926.1101(h)(2)(i) - The employer must implement a respiratory protection program in accordance with 29 CFR 1910.134 (b) through (d) (except (d)(1)(iii)), and (f) through (m), which covers each employee required by this section to use a respirator.

Purpose: To ensure that employers establish a standardized procedure for selecting, using, and maintaining respirators for each workplace where respirators will be used. Developing written procedures requires employers to think through just how all of their requirements of the respiratory standard will be met in their workplace.

F. Laundering protective clothing (§1926.1101(i)(2)(ii))

Any employer who gives contaminated clothing to another person for laundering shall inform such person of the requirement in paragraph (i)(2)(i) of this section to effectively prevent the

release of airborne asbestos in excess of the TWA and excursion limit prescribed in paragraph (c) of this section.

Purpose: By providing this information to the person doing the laundry, they can be protected from the potentially harmful effects of asbestos.

G. Communication of hazards (§1926.1101(k)(1)) - (1) Hazard communication.

§1926.1101(k)(1)(i) - This section applies to the communication of information concerning asbestos hazards in construction activities to facilitate compliance with this standard. Most asbestos-related construction activities involve previously installed building materials. Building owners often are the only and/or best sources of information concerning them. Therefore, they, along with employers of potentially exposed employees, are assigned specific information conveying and retention duties under this section. Installed Asbestos Containing Building Material. Employers and building owners shall identify TSI and sprayed or troweled on surfacing materials in buildings as asbestos-containing, unless they determine in compliance with paragraph (k)(5) of this section that the material is not asbestos-containing. Asphalt and vinyl flooring material installed no later than 1980 must also be considered as asbestos containing unless the employer, pursuant to paragraph (g)(8)(i)(I) of this section determines that it is not asbestos-containing. If the employer/building owner has actual knowledge, or should have known through the exercise of due diligence, that other materials are asbestos-containing, they too must be treated as such. When communicating information to employees pursuant to this standard, owners and employers shall identify “PACM” as ACM. Additional requirements relating to communication of asbestos work on multi-employer worksites are set out in paragraph (d) of this section.

§1926.1101(k)(1)(ii) - The employer shall include asbestos in the program established to comply with the Hazard Communication Standard (HCS) (§1910.1200). The employer shall ensure that each employee has access to labels on containers of asbestos and safety data sheets, and is trained in accordance with the provisions of HCS and paragraphs (k)(9) and (10) of this section. The employer shall provide information on at least the following hazards: Cancer and lung effects.⁴

H. Duties of building and facility owners (§1926.1101(k)(2))

Before work subject to this standard is begun, building and facility owners shall determine the presence, location, and quantity of ACM and/or PACM at the work site pursuant to paragraph (k)(1)(i) of this section.

§1926.1101(k)(2)(ii) - Building and/or facility owners shall notify the following persons of the presence, location and quantity of ACM or PACM, at the work sites in their buildings and facilities. Notification either shall be in writing, or shall consist of a personal communication

⁴The Agency accounts for the burden hours and costs associated with compliance with the HCS, such as the development of a hazard communication program, under the Information Collection Request (ICR) for the HCS, OMB Control No. 1218-0072. The labels required by the HCS as it pertains to the Asbestos in Construction Standard are addressed in this Supporting Statement.

between the owner and the person to whom notification must be given or their authorized representatives:

§1926.1101(k)(2)(ii)(A) - Prospective employers applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing such material;

§1926.1101(k)(2)(ii)(B) - Employees of the owner who will work in or adjacent to areas containing such material:

§1926.1101(k)(2)(ii)(C) - On multi-employer worksites, all employers of employees who will be performing work within or adjacent to areas containing such materials;

§1926.1101(k)(2)(ii)(D) - Tenants who will occupy areas containing such material.

Purpose: To ensure that the hazards concerning asbestos are properly conveyed to all employers and employees working in the presence of asbestos.

Duties of Employers (§1926.1101(k)(3)) – Duties of employers whose employees perform work subject to this standard in or adjacent to areas containing ACM and PACM. Building/facility owners whose employees perform such work shall comply with these provisions to the extent applicable.

§1926.1101(k)(3)(i) - Before work in areas containing ACM and PACM is begun; employers shall identify the presence, location, and quantity of ACM, and/or PACM therein pursuant to paragraph (k)(1)(i) of this section.

§1926.1101(k)(3)(ii) - Before work under this standard is performed employers of employees who will perform such work shall inform the following persons of the location and quantity of ACM and/or PACM present in the area and the precautions to be taken to insure that airborne asbestos is confined to the area.

§1926.1101(k)(3)(ii)(A) - Owners of the building/facility;

§1926.1101(k)(3)(ii)(B) - Employees who will perform such work and employers of employees who work and/or will be working in adjacent areas.

§1926.1101(k)(3)(iii) - Within 10 days of the completion of such work, the employer whose employees have performed work subject to this standard, shall inform the building/facility owner and employers of employees who will be working in the area of the current location and quantity of PACM and/or ACM remaining in the area and final monitoring results, if any.

Purpose: This is to ensure that the hazards concerning asbestos are properly conveyed to all employers and employees working in the presence of asbestos.

§1926.1101(k)(4) - In addition to the above requirements, all employers who discover ACM and/or PACM on a worksite shall convey information concerning the presence, location and

quantity of such newly discovered ACM and/or PACM to the owner and to other employers of employees working at the work site, within 24 hours of the discovery.

Purpose: This is to ensure that everyone is aware of the presence of asbestos.

Criteria to rebut the designation of installed material as PACM (§1926.1101(k)(5) -

§1926.1101(k)(5)(i)) - At any time, an employer and/or building owner may demonstrate, for purposes of this standard, that PACM does not contain asbestos. Building owners and/or employers are not required to communicate information about the presence of building material for which such a demonstration pursuant to the requirements of paragraph (k)(5)(ii) of this section has been made. However, in all such cases, the information, data and analysis supporting the determination that PACM does not contain asbestos, shall be retained pursuant to paragraph (n) of this section.

§1926.1101(k)(5)(ii) - An employer or owner may demonstrate that PACM does not contain more than 1 percent asbestos by the following:

§1926.1101(k)(5)(ii)(A) - Having a completed inspection conducted pursuant to the requirements of AHERA (40 CFR Part 763, Subpart E) which demonstrates that the material is not ACM; or

§1926.1101(k)(5)(ii)(B) - Performing tests of the material containing PACM which demonstrate that no ACM is present in the material. Such tests shall include analysis of bulk samples collected in the manner described in 40 CFR 763.86. The tests, evaluation and sample collection shall be conducted by an accredited inspector or by a CIH. Analysis of samples shall be performed by persons or laboratories with proficiency demonstrated by current successful participation in a nationally recognized testing program such as the National Voluntary Laboratory Accreditation Program (NVLAP) or the National Institute for Standards and Technology (NIST) or the Round Robin for bulk samples administered by the American Industrial Hygiene Association (AIHA) or an equivalent nationally-recognized round robin testing program.

Purpose: This is to ensure that asbestos hazards are properly recognized.

§1926.1101(k)(6) - At the entrance to mechanical rooms/areas in which employees reasonably can be expected to enter and which contain ACM and/or PACM, the building owner shall post signs which identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that ACM and/or PACM will not be disturbed. The employer shall ensure, to the extent feasible, that employees who come in contact with these signs can comprehend them. Means to ensure employee comprehension may include the use of foreign languages, pictographs, graphics, and awareness training.

Signs (§1926.1101(k)(7)(i)) - Warning signs that demarcate the regulated area shall be provided and displayed at each location where a regulated area is required to be established by paragraph (e) of this section. Signs shall be posted at such a distance from such a location that an employee

may read the signs and take necessary protective steps before entering the area marked by the signs.

§1926.1101(k)(7)(ii)(A) - The warning signs required by paragraph (k)(7) of this section shall bear the following information. DANGER – ASBESTOS – MAY CAUSE CANCER – CAUSES DAMAGE TO LUNGS - AUTHORIZED PERSONNEL ONLY.

§1926.1101(k)(7)(ii)(B) - In addition, where the use of respirators and protective clothing is required in the regulated area under this section, the warning signs shall include the following: WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA.

1926.1101(k)(7)(ii)(C) - Prior to June 1, 2016, employers could use the following legend in lieu of that specified in paragraph (k)(7)(ii)(A) of this section: DANGER – ASBESTOS - CANCER AND LUNG DISEASE HAZARD - AUTHORIZED PERSONNEL ONLY

1926.1101(k)(7)(ii)(D) - Prior to June 1, 2016, employers could use the following legend in lieu of that specified in paragraph (k)(7)(ii)(B) of this section: RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

§1926.1101(k)(7)(iii) - The employer shall ensure that employees working in and contiguous to regulated areas comprehend the warning signs required to be posted by paragraph (k)(7)(i) of this section. Means to ensure employee comprehension may include the use of foreign languages, pictographs and graphics.

Purpose: Posting warning signs serve to warn employees, who may otherwise not know, that they are entering a regulated area. Such signs would warn employees that entry is permitted only if the employee is authorized and there is a specific need to enter the area. Warning signs supplement the training which employees receive under this standard.

Labels (§1926.1101(k)(8)(i)) - Labels shall be affixed to all products containing asbestos and to all containers containing such products, including waste containers. Where feasible, installed asbestos products shall contain a visible label.

§1926.1101(k)(8)(ii) - The employer shall ensure that such labels comply with paragraphs (k) of this section.

§1926.1101(k)(8)(iii) - The employer shall ensure that labels of bags or containers of protective clothing and equipment, scrap, waste, and debris containing asbestos fibers bear the following information: DANGER - CONTAINS ASBESTOS FIBERS – MAY CAUSE CANCER - CAUSES DAMAGE TO LUNGS - DO NOT BREATHE DUST - AVOID CREATING DUST.

1926.1101(k)(8)(iv)(A) - Prior to June 1, 2015, employers could include the following information on raw materials, mixtures or labels of bags or containers of protective

clothing and equipment, scrap, waste, and debris containing asbestos fibers in lieu of the labeling requirements in paragraphs (k)(8)(ii) and (k)(8)(iii) of this section:

DANGER - CONTAINS ASBESTOS FIBERS - AVOID CREATING DUST -
CANCER AND LUNG DISEASE HAZARD

1926.1101(k)(8)(iv)(B) - Labels shall also contain a warning statement against breathing asbestos fibers.

1926.1101(k)(8)(vii) - When a building owner or employer identifies previously installed PACM and/or ACM, labels or signs shall be affixed or posted so that employees will be notified of what materials contain PACM and/or ACM. The employer shall attach such labels in areas where they will clearly be noticed by employees who are likely to be exposed, such as at the entrance to mechanical room/areas. Signs required by paragraph (k)(6) of this section may be posted in lieu of labels so long as they contain information required for labelling. The employer shall ensure, to the extent feasible, that employees who come in contact with these signs or labels can comprehend them. Means to ensure employee comprehension may include the use of foreign languages, pictographs, graphics, and awareness training.

Purpose: Warning labels assure that downstream employers and employees are informed of the associated hazards with asbestos and that special practices may need to be implemented to insure against exposure. Furthermore, hazard labels alert other employers who, in the absence of such labels, might not know that asbestos is present in their workplace and that they have incurred obligation of complying with the standard. To ensure employees comprehend the labels, the employer may include the use of foreign languages, pictographs, and graphics.

Employee Information and Training (§1926.1101(k)(9)(viii)(I))

§1926.1101(k)(9)(viii)(I) - The names, addresses and phone numbers of public health organizations which provide information, materials and/or conduct programs concerning smoking cessation. The employer may distribute the list of such organizations contained in Appendix J to this section, to comply with this requirement.

Paragraph (k)(9)(viii)(I) requires the employer to provide to workers a list of public health organizations providing smoking cessation programs, such as the list provided in Appendix J of the Standard. OSHA considers the requirement in §1926.1101(k)(9)(viii)(I) that employers provide Appendix J to workers to be a public disclosure of information originally supplied by the Federal government to the employer for the purpose of disclosure to the public. Therefore, OSHA is taking no burden hours for this requirement.

Purpose: Training is essential to inform employees of the hazards to which they are exposed and to provide employees with the necessary understanding of the degree to which they themselves can minimize the health hazard potential. Training serves to explain and reinforce the information presented to employees on signs, labels and Safety Data Sheets. These written forms of information and warning will be successful and relevant only when employees understand the information presented and are aware of the actions to be taken to avoid or minimize exposures.

Training provides information to the employee to enable them to be able to recognize how and where he or she might be occupationally exposed and what steps should be taken to limit exposure. Workers must be provided information on location, use, and work practices.

I. Medical examinations and consultations (§1926.1101(m)(2))

§1926.1101(m)(2)(i) - The employer shall make available medical examinations and consultations to each employee covered under paragraph (m)(1)(i) of this section on the following schedules:

§1926.1101(m)(2)(i)(A) - Prior to assignment of the employee to an area where negative-pressure respirators are worn;

§1926.1101(m)(2)(i)(B) - When the employee is assigned to an area where exposure to asbestos may be at or above the permissible exposure limit for 30 or more days per year, or engage in Class I, II, or III work for a combined total of 30 or more days per year, a medical examination must be given within 10 working days following the thirtieth day of exposure;

§1926.1101(m)(2)(i)(C) - And at least annually thereafter.

§1926.1101(m)(2)(i)(D) - If the examining physician determines that any of the examinations should be provided more frequently than specified, the employer shall provide such examinations to affected employees at the frequencies specified by the physician.

§1926.1101(m)(2)(i)(E) - Exception: No medical examination is required of any employee if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

Cont. §1926.1101(m)(2)(ii) - Medical examinations made available pursuant to paragraphs (m)(2)(i)(A) through (m)(2)(i)(C) of this section shall include:

§1926.1101(m)(2)(ii)(A) - A medical and work history with special emphasis directed to the pulmonary, cardiovascular, and gastrointestinal systems.

§1926.1101(m)(2)(ii)(B) - On initial examination, the standardized questionnaire contained in Part 1 of Appendix D to this section, and, on annual examination, the abbreviated standardized questionnaire contained in Part 2 of Appendix D to this section.

§1926.1101(m)(2)(ii)(C) - A physical examination directed to the pulmonary and gastrointestinal systems, including a 14- by 17-inch or other reasonably-sized standard film or digital posterior-anterior chest X-ray to be administered at the discretion of the

physician, and pulmonary function tests of forced vital capacity (FVC) and forced expiratory volume at one second (FEV(1)). Classification of chest X-rays shall be conducted in accordance with Appendix E to this section.

§1926.1101(m)(2)(ii)(D) - Any other examinations or tests deemed necessary by the examining physician.

Purpose: Medical examinations and the related collection of information requirements provide continuous monitoring of the health of potentially exposed employees. Records of medical examinations are used by physicians who must periodically examine employees exposed to asbestos. Without records of previous medical examinations, the physician may not be able to determine whether an employee has suffered adverse health effects since his or her last examination. Further, when symptoms of organ damage appear, the physician often needs information as to the patient's previous medical conditions to make an accurate diagnosis of the new problem, its apparent cause, and the course of treatment required.

Medical records are also designed so that employees can determine whether or not treatment is needed for occupational exposures.

The maintenance period for records regarding employee health is necessary because of the lengthy latency periods associated with the manifestation of disease due to exposure to asbestos.

Information provided to physician (§1926.1101(m)(3))

The employer shall provide the following information to the examining physician:

§1926.1101(m)(3)(i) - A copy of this standard and Appendices D, E, and I to this section;

§1926.1101(m)(3)(ii) - A description of the affected employee's duties as they relate to the employee's exposure;

§1926.1101(m)(3)(iii) - The employee's representative exposure level or anticipated exposure level;

§1926.1101(m)(3)(iv) - A description of any personal protective and respiratory equipment used or to be used; and

§1926.1101(m)(3)(v) - Information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

Purpose: Making the required information available to the physician will aid in the evaluation of the employee's health and fitness for particular asbestos exposed job assignment.

Physician's written opinion (§1926.1101(m)(4))

§1926.1101(m)(4)(i) - The employer shall obtain a written opinion from the examining physician. This written opinion shall contain the results of the medical examination and shall include:

§1926.1101(m)(4)(i)(A) - The physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to asbestos;

§1926.1101(m)(4)(i)(B) - Any recommended limitations on the employee or on the use of personal protective equipment such as respirators; and

§1926.1101(m)(4)(i)(C) - A statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.

§1926.1101(m)(4)(i)(D) - A statement that the employee has been informed by the physician of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure.

§1926.1101(m)(4)(ii) - The employer shall instruct the physician not to reveal in the written opinion given to the employer specific findings or diagnoses unrelated to occupational exposure to asbestos.

§1926.1101(m)(4)(iii) - The employer shall provide a copy of the physician's written opinion to the affected employee within 30 days from its receipt.

Purpose: The purpose in requiring the employer to obtain a written opinion from the examining physician is to provide the employer with a medical basis to aid in the determination of placement of employees and to assess the employee's ability to use protective clothing and equipment. The requirement that an employee be provided a copy of the physician's written opinion will ensure that the employee is informed of the results of the medical examination.

J. Recordkeeping (§1926.1101(n))

Objective Data (§1926.1101(n)(1))

1926.1101(n)(1)(i) - Where the employer has relied on objective data that demonstrates that products made from or containing asbestos or the activity involving such products or material are not capable of releasing fibers of asbestos in concentrations at or above the permissible exposure limit and/or excursion limit under the expected conditions of processing, use, or handling to satisfy the requirements of paragraph (f), the employer shall establish and maintain an accurate

record of objective data reasonably relied upon in support of the exemption.

1926.1101(n)(1)(ii) - The record shall include at least the following information:

1926.1101(n)(1)(ii)(A) - The product qualifying for exemption;

1926.1101(n)(1)(ii)(B) - The source of the objective data;

1926.1101(n)(1)(ii)(C) - The testing protocol, results of testing, and/or analysis of the material for the release of asbestos;

1926.1101(n)(1)(ii)(D) - A description of the operation exempted and how the data support the exemption; and

1926.1101(n)(1)(ii)(E) - Other data relevant to the operations, materials, processing, or employee exposures covered by the exemption.

1926.1101(n)(1)(iii) - The employer shall maintain this record for the duration of the employer's reliance upon such objective data.

Purpose: The purpose of requiring an employer to document objective data determinations and retain them is to discourage abuse of this provision since employees and their representatives are permitted access to this information. Access enables employees and their representatives to ensure that the exemption determination is a reasonable one, thereby encouraging use of objective data determinations only in cases where the data warrant such use. Maintaining a record of the objective data determinations will permit OSHA to ascertain whether compliance with the standard has been achieved.

Exposure monitoring (§1926.1101(n)(2))

§1926.1101(n)(2)(i) - The employer shall keep an accurate record of all measurements taken to monitor employee exposure to asbestos as prescribed in paragraph (f) of this section. NOTE: The employer may utilize the services of competent organizations such as industry trade associations and employee associations to maintain the records required by this section.

§1926.1101(n)(2)(ii) - This record shall include at least the following information:

§1926.1101(n)(2)(ii)(A) - The date of measurement;

§1926.1101(n)(2)(ii)(B) - The operation involving exposure to asbestos that is being monitored;

§1926.1101(n)(2)(ii)(C) - Sampling and analytical methods used and evidence of their

accuracy;

§1926.1101(n)(2)(ii)(D) - Number, duration, and results of samples taken;

§1926.1101(n)(2)(ii)(E) - Type of protective devices worn, if any; and

§1926.1101(n)(2)(ii)(F) - Name and exposure of the employees whose exposures are represented.

§1926.1101(n)(2)(iii) - The employer shall maintain this record for at least thirty (30) years, in accordance with 29 CFR 1910.20.

Medical surveillance (§1926.1101(n)(3))

§1926.1101(n)(3)(i) - The employer shall establish and maintain an accurate record for each employee subject to medical surveillance by paragraph (m) of this section, in accordance with 29 CFR 1910.20.

§1926.1101(n)(3)(ii) - The record shall include at least the following information:

§1926.1101(n)(3)(ii)(A) - The name of the employee;

§1926.1101(n)(3)(ii)(B) - A copy of the employee's medical examination results, including the medical history, questionnaire responses, results of any tests, and physician's recommendations.

§1926.1101(n)(3)(ii)(C) - Physician's written opinions;

§1926.1101(n)(3)(ii)(D) - Any employee medical complaints related to exposure to asbestos; and

§1926.1101(n)(3)(ii)(E) - A copy of the information provided to the physician as required by paragraph (m) of this section.

§1926.1101(n)(3)(iii) - The employer shall ensure that this record is maintained for the duration of employment plus thirty (30) years, in accordance with 29 CFR 1910.20.

Purpose: The employer benefits by keeping these records, since the information will enable the employer to better ensure that employees are not being overexposed; such information may alert the employer that steps must be initiated in order to reduce exposures. It is necessary to keep these records for extended periods of time because of the long latency period commonly associated with carcinogenesis. Cancer often cannot be detected until 20 or more years after first exposure.

Training records (§1926.1101(n)(4))

The employer shall maintain all employee training records for one (1) year beyond the last date of employment by that employer.

Purpose: Maintaining training programs/materials provides a resource for an employee to refresh his or her training should they need it during the year. Retaining records of training demonstrates to OSHA, that the employer has been conducting annual training.

Data to rebut PACM (§1926.1101(n)(5))

Where the building owner and employer have relied on data to demonstrate that PACM is not asbestos-containing, such data shall be maintained for as long as they are relied upon to rebut the presumption.

Purpose: To ensure that all PACMs are properly distinguished from ACMs. This is important in the communications of asbestos hazards to both employers and employees.

Records of required notification (§1926.1101(n)(6))

Where the building owner has communicated and received information concerning the identification, location and quantity of ACM and PACM, written records of such notifications and their content shall be maintained by the building owner for the duration of ownership and shall be transferred to successive owners of such buildings/facilities.

Purpose: This is to ensure that any new owners of such buildings are aware of the presence of asbestos.

Availability (§1926.1101(n)(7))

§1926.1101(n)(7)(i) - The employer, upon written request, shall make all records required to be maintained by this section available to the Assistant Secretary and the Director for examination and copying.⁵

⁵The 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).

§1926.1101(n)(7)(ii) - The employer must comply with the requirements concerning availability of records set forth in 29 CFR 1910.1020.

Purpose: Workers and their designated representatives use exposure-monitoring and medical-surveillance records to assess worker medical status over the course of employment, to evaluate the effectiveness of the employer's exposure-reduction program, and for other reasons.

Accordingly, access to these records is necessary to provide both direct and indirect improvements in the detection, treatment, and prevention of occupational exposure to asbestos.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also, describe any consideration of using information technology to reduce burden.

Employers may use improved information technology when establishing and maintaining exposure-monitoring and medical-surveillance records. OSHA wrote the collection of information requirements of the Standard in performance-oriented language (i.e., in terms of what data to maintain, not how to maintain the data).

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

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

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

The collection of information requirements of the Standard do not have a significant impact on a substantial number of small entities.

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

The information collection frequencies specified by this Standard are the minimum that OSHA believes are necessary to ensure that the employer and OSHA can effectively monitor the exposure and health status of employees working with asbestos in construction.

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

Under paragraph (f)(5) of the Standard, employers must inform workers of the results of

exposure monitoring, either individually in writing or by posting the exposure monitoring results, as soon as possible but no later than 5 working days after receipt of the results.

In accordance with paragraph (k)(3)(iii), once an employer has completed work subject to this standard, the employer must inform the building/facility owner and any employers whose employees may be working in the area, of the current location and quantity of PACM and/or ACM that is remaining in the former regulated area and final monitoring results if any, within 10 days of completion of such work.

Paragraph (k)(4) requires all employers who discover ACM and/or PACM on a worksite to convey information concerning the presence, location, and quantity of the newly discovered ACM and/or PACM to the owner and to other employers of employees working at the worksite, within 24 hours. This is also to ensure that everyone is aware that the toxin is present.

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

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

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years -- even if the collection-of-information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

As required by the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 506(c)(2)(A)), OSHA published a notice in the *Federal Register* on June 23, 2021 (86 FR 32980) soliciting comments on its proposal to extend the Office of Management and Budget's (OMB) approval of the information collection requirements specified in the Asbestos in Construction Standard (29 CFR 1926.1101), (Docket No. OSHA-2012-0002). This notice is part of a preclearance consultation program that provides interested parties the opportunity to comment on OSHA's request for an

extension by OMB of a previous approval of the information collection requirements found in the above Standard. The Agency did not receive any comments in response to this notice.

9. Explain any decision to provide any payments or gifts 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.

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 Standard 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 cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item**

13.

Annual Burden Hour and Cost Determinations

The initial development of the industry profile of affected establishments and workers began with a delineation of the different types of construction activities involving exposure to asbestos. This identification process was based on extensive review of the occupational health literature describing where exposure to asbestos typically occurs, and was augmented and refined from conversations with industry and labor experts. Information was also gained by a series of surveys of building owners and contractors (performed by CONSAD in its rulemaking support for OSHA in 1984) and from information submitted to the public record in the course of various rulemaking activities.

Once the different types of construction activities were identified, the numbers of establishments, workers, and projects were estimated for each activity. A wide variety of approaches and data sources, reflecting the range of construction activities included in the analysis, were used to first ascertain the general level of construction activity involving exposure to asbestos products. For example, for new construction activities, the annual consumption of different types of products containing asbestos was used.⁶ For asbestos abatement, encapsulation, and demolition activities, establishment data for NAICS 5629102 Asbestos Abatement and Lead Paint Removal and 562910 Remediation Services from the Economic Census were used. For general building renovation and remodeling activities, the amount of particular construction products (for example, drywall or roofing products) installed or removed annually, or the number of buildings containing asbestos products (for example, drywall or roofing products) installed or removed annually, or the number of buildings containing asbestos products (for example flooring products) were used.

For routine maintenance work and custodial activities in commercial and residential buildings, the number of buildings containing different maintenance work and custodial activities in general industry, the number of establishments in those industrial sectors that typically either use asbestos-containing products (such as gaskets or insulation) during repair, work, and/or perform other maintenance or custodial activities involving contact with asbestos-containing products were used.

In addition, with each of the above construction activities, a characterization of a typical project was also needed. Much of the information for these project characterizations came from conversations with industry and labor experts, as well as from information gained from a series of surveys of building owners and contractors performed by the contractor, CONSAD, in 1984 in

⁶ Installation of new asbestos-cement (AC) pipe and sheet no longer occurs in the United States. The last domestic producer of asbestos ceased operations in 2002. While AC products are still currently available in the international market, import data compiled by the USGS indicates that virtually all asbestos imports are accounted for by the chloroalkali industry (USGS, 2018). Hence new construction activities have been removed from the analysis.

its rulemaking support for OSHA. The pertinent information included data such as the average amount of asbestos products used or removed on a typical project, the typical frequency with which a construction activity took place in a building, the average number of crews (and crew sizes) needed to perform each type of construction activity, the average duration of each type of activity, the normal duration of the construction season for each type of activity, and the percentage of the work year that construction firms spend performing each type of construction activity involving asbestos exposure.

For certain types of construction renovation/remodeling activities (for example, the removal of building roofing materials or the removal of asbestos floor products), the data suggested that the frequency of performing work on the same structure is often once every 20 - 30 years. For other routine maintenance activities (for example, the repair of ceiling tiles, drywall, flooring, plumbing, or work on boilers), the activities are ongoing on an annual basis and exposures to asbestos would not end unless all asbestos in a structure was removed or unless asbestos-containing products were no longer used.

To update the economic statistics, OSHA analyzed the Final Regulatory Impact Analysis (RIA) for the Revised Asbestos Standard for Construction, General Industry and Shipyards published July 21, 1994. This document provides a comprehensive discussion of the number of firms and employees working in specific construction activities as covered by the Asbestos in Construction Standard.

OSHA reviewed the six general activities where employees could be exposed in construction: new construction, asbestos abatement and demolition, renovation and remodeling, routine maintenance in public, commercial and residential buildings, routine maintenance in industrial facilities, custodial work in public commercial and residential buildings, and custodial work in industrial facilities. OSHA reviewed updated data sources such as the U.S. Department of Labor, Bureau of Labor Statistics *Occupational Employment and Wage Statistics* (2020 data); U.S. Census Bureau - American Community Survey (2019 data); and the County Business Patterns (2018 data). This ICR renewal also takes into account, for the first time, the reduction in buildings containing asbestos due to renovation and remediation, based on Massachusetts Department of Energy and Environmental Affairs (MA EEA) data on asbestos projects from 2002 through 2021.

In summary, OSHA estimates that the number of workers potentially exposed to asbestos during new construction, abatement, renovation, routine maintenance work and custodial activities has declined approximately 23 percent since 1994. (The methodology used to calculate the 23 percent was to subtract the new total of 2,404,658 from the old total of 3,130,751, and then divide by 3,130,751.)

The Agency originally estimated that the Standard affected 1,833,429 employees and 1,434,105 employers.⁷ Applying the approximate 23 percent decline in general construction activities since then, and in light of the fact that much of the remediation of asbestos products has likely taken place, OSHA

⁷ According to previous ICRs, this figure was an estimate in the RIA.

estimates there are now 1,411,740 workers and 1,104,261 employers for the purposes of calculating burden hours and costs associated with this ICR. In comparison to the ICR approved in 2018, the Agency estimates the number of workers increased by 110,005 workers (from 1,301,735 to 1,411,740 workers) and the number of employers increased by 86,046 (from 1,018,215 to 1,104,261 employers).

Respondent Burden-Hour and Cost Burden Determinations

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 and Wage Statistics (OEWS), May 2020* [date accessed April 1, 2021].⁸

To derive the loaded hourly wage rates presented in the table below, the Agency used data from the BLS OEWS, as described in the paragraph above. Then, the Agency applied to the wage rate a fringe benefit markup based on Table 1 of the following BLS release: *Employer Costs for Compensation* news release text released 10:00 AM (EDT), March 18, 2021 (https://www.bls.gov/news.release/archives/ecec_03182021.pdf). BLS reported that for civilian workers, fringe benefits accounted for 31.3 percent of total compensation and wages accounted for the remaining 68.7 percent. To calculate the loaded hourly wage for each occupation, the Agency divided the mean hourly wage rate by 1 minus the fringe benefits.

Occupational Title	Standard Occupation Code	Mean Hourly Wage Rate	Fringe Benefits	Loaded Hourly Wage Rate
Professional/Manager	51-1011	\$32.12	31.3%	\$46.75
Production Supervisor	51-1011	\$32.12	31.3%	\$46.75
Employee	51-0000	\$20.08	31.3%	\$29.23
Clerical/Secretary	43-6014	\$19.43	31.3%	\$28.28

A. Multi-employer worksites (§1926.1101(d))

On multi-employer worksites, employers performing work requiring the establishment of a regulated area must inform other employers on site of the nature of the employer's work with asbestos and/or PACM, of the existence of and requirements pertaining to the regulated areas, and of the measures taken to ensure that employees of other employers are not being exposed to asbestos. Notifying other employers takes place after the exposure assessment and monitoring and can be done by posting the information. OSHA estimates that 20 percent of 1,104,261 employers (220,852 employers) conduct exposure monitoring sampling three times annually. Posting of each notification would take 5 minutes (5/60 hour) of secretarial time.

Burden hours: 220,852 employers × 3 notifications annually × 5/60 hour = 55,213

⁸ OEWS data is available at <https://www.bls.gov/oes/tables.htm>. To access a wage rate, select the year, "Occupational Profiles," and the Standard Occupational Classification (SOC) Code.

hours
Cost: 55,213 hours × \$28.28 = \$1,561,423.64

B. Regulated areas (§1926.1101(e))

All class I, II and III asbestos work is to be conducted within regulated areas and such areas must be demarcated. Employers may use signs as prescribed in section (k) of the standard. Burden for this activity is therefore addressed in that section.

C. Exposure Assessments and monitoring (§1926.1101(f))

Initial assessments and monitoring

OSHA estimates that 1,104,261 employers conduct exposure assessments, and that 80 percent of these employers use means other than exposure-monitoring (sampling), i.e., objective data, prior sampling, etc., to demonstrate compliance with the PEL. The remaining 20 percent of the employers, 220,852 employers, conduct either initial, or in some cases, additional exposure monitoring of the job sites. These employers take an average of three samples annually and each sample takes a supervisor 1 hour to collect and mail the sample off for analysis.

Burden hours: 220,852 employers × 3 samples per year × 1 hour = 662,556 hours
Cost: 662,556 hours × \$46.75 = \$30,974,493.00

Periodic monitoring

In addition to initial monitoring, employers must conduct periodic monitoring at various times when workers are being exposed above the PELs. However, it has been assumed that no periodic monitoring will occur. Monitoring is expensive and it is more beneficial for employers to take other measures to ensure compliance with the PELs such as equipping employees with supplied-air respirators and following control methods outlined in the standard. Employers use the least burdensome method to comply with exposure provisions and therefore no burden has been taken for periodic monitoring.

Monitoring triggered by alternative control methods for Class I work (§1926.1101(g)(6)(iii))

The Agency assumes that 45 employers monitor their workplace due to this provision. Therefore, using similar assumptions as those previously stated in the initial exposure/assessment section, the burden is as follows:

Burden hours: 45 employers × 3 samples/year × 1 hour per sample = 135 hours
Cost: 135 hours × \$46.75 = \$6,311.25

Notification of monitoring results (§1926.1101(f)(5))

The Agency assumes employers will post the monitoring results in a central location. This takes 5 minutes (5/60 hour) of secretarial time, thus the burden and associated cost is as follows:

Burden hours: $(1,104,261 \text{ employers} \times 20 \text{ percent}) \times 3 \text{ samples/year} \times 5/60 \text{ hour}$
 $= 55,213 \text{ hours}$
Cost: $55,213 \text{ hours} \times \$28.28 = \$1,561,423.64$

D. Methods of compliance (§1926.1101(g))

Provisions contained in this paragraph of the regulation require employers to use prescribed engineering controls and work practices, including monitoring and notifying employers of findings ((g)(4)(ii)(B)). The burden for this requirement is included under the exposure monitoring section or the methods of compliance section for alternate methods of compliance in this Supporting Statement (see narrative below).

The standard prescribes work practices for various operations involving asbestos. However, employers involved with Class I and II operations may choose to use an alternate control method. The burden for this requirement follows.

OSHA estimates seven employers will choose new or modified control technology to reduce exposures in Class I asbestos work. OSHA estimates that a manager takes one hour and 50 minutes (110/60 hours) to develop the alternative control methods.

Burden hours: $7 \text{ notifications} \times 110/60 \text{ hours} = 12.83 \text{ hours}$
Costs: $12.83 \text{ hours} \times \$46.75 = \$599.80$

Additional controls for Class II work

Since new or other control technology is most likely to be more expensive, OSHA assumes that 1 percent of the 58,205 employers performing Class II operations, or 582 employers, use another method and incur burden.⁹ OSHA estimates it takes 1 hour to conduct an evaluation of a Class II operation; therefore the burden is as follows:

Burden hours: $582 \text{ employers} \times 1 \text{ time per year} \times 1 \text{ hour} = 582.05 \text{ hours}$
Costs: $582.05 \text{ hours} \times \$46.75 = \$27,210.84$

E. Respiratory protection (§1926.1101(h))

Respirator program

The standard requires the employer to institute a respiratory protection program in accordance with 29 CFR 1910.134. There will be no burden taken for this requirement. The burden is taken in the Information Collection Request for §1910.134 (OMB Control Number 1218-0099).

Respirator fit-testing

⁹The Agency attempted to obtain new data but no sources were found. Estimate based on Agency's professional judgment.

Since the December 3, 1997, OMB approval of this information collection request, OSHA published a Respiratory Protection final rule (January 8, 1998 (63 FR 1152)). OSHA consolidated the fit-testing burden hours and costs into the Respirator Standard, which has OMB clearance under the number 1218-0099.

F. Laundering protective clothing (§1926.1101(i)(2)(ii))

The standard requires that the employer inform any person who launders or cleans asbestos-contaminated protective clothing of the potential asbestos hazard. In the Regulatory Impact Analysis, it was assumed that all affected employers will provide their employees with disposable clothing, which requires no laundering. Therefore, no burden has been taken for this provision.

G. Communication of hazards (§1926.1101(k))

Under this section, building and facility owners, along with employers of potentially exposed employees, must convey specific information to building tenants, employees and other employers/contractors regarding the location of ACM and PACM in their work environment. Burden for this activity follows.

Duties of building and facility owners

Identification of ACM/PACM and notification by building owners to their employees and tenants

OSHA assumes an average of 60 percent of 10,340,309 projects or 6,204,185 projects will involve communication between building owners and their employees and tenants.¹⁰ OSHA estimates that a facility owner takes a maximum of 45 minutes (45/60 hour) to evaluate high risk jobs and 5 minutes (5/60 hour) to notify persons. A facility owner takes 5 minutes (5/60 hour) to evaluate low risk jobs and another 3 minutes (3/60 hour) for notifications. More jobs are in the low risk category.

Using these assumptions and estimates of time a weighted average of 8 minutes (8/60 hour) was used; thus the burden is as follows:

Burden hours:	$6,204,185 \text{ projects} \times 8/60 \text{ hour} = 827,224.67 \text{ hours}$
Cost:	$827,224.67 \text{ hours} \times \$46.75 = \$38,672,753.32$

Notification by building owners to contractors (other employers)

Building owners take 3 minutes (3/60 hour) to notify contractors. The universe is the same as above (6,204,185 projects); thus the burden is as follows:

Burden hours:	$6,204,185 \text{ projects} \times 3/60 \text{ hour} = 310,209.25 \text{ hours}$
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¹⁰ The Agency attempted to obtain new data but no sources were found. Estimate based on Agency's professional judgment.

Cost: 310,209.25 hours × \$46.75 = \$14,502,282.44

Duties of employers

Identification of ACM/PACM and notification by contractors to building owners

Time to identify/document and notify owners of ACM/PACM in high risk projects takes no longer than in low risk projects, and there are more jobs in low risk areas. Further, there may be some overlap in the counting of building owner notification to contractors in this provision. Taking these assumptions into account, the RIA estimated that the weighted time for this provision is 3 minutes (3/60 hours). The number of projects and compliance rate is the same as above.

Burden hours: 6,204,185 projects × 3/60 hour = 310,209.25 hours

Cost: 310,209.25 hours × \$46.75 = \$14,502,282.44

Notification by contractors to employees and employers

The time to notify employees and other employers at the project takes approximately 5 minutes (5/60 hour). The number of projects and compliance rate is the same as above.

Burden hours: 6,204,185 projects × 5/60 hour = 517,015.42 hours

Cost: 517,015.42 hours × \$46.75 = \$24,170,470.89

Notification by contractors to owners on asbestos remaining in the building

Within 10 days after a job is completed, employers whose employees have performed the asbestos work must inform the building owners of remaining asbestos. OSHA assumes that some of the job sites involve new construction and therefore the number of this type of notification is less than the projects above, i.e. (60 percent of 10,340,309 projects) because once a job is completed, the asbestos products would be intact and would not result in friable conditions that would require notification. The compliance rate is the same as above. OSHA estimates a contractor takes 5 minutes (5/60 hour), to perform this notification.

Burden hours: 6,204,185 projects × 5/60 hour = 517,015.42 hours

Cost: 517,015.42 hours × \$46.75 = \$24,170,470.89

In addition to the above requirements, all employers who discover ACM and/or PACM on a worksite must convey information concerning the presence, location and quantity of the newly discovered ACM and/or PACM to the owner and to other employers of employees working at the work site, within 24 hours of the discovery. The burden for this activity has been accounted for in the above notification estimates.

Criteria to rebut the designation of installed material as PACM

This evaluation was to be conducted for buildings constructed before 1981. The evaluation was for one time only. Therefore, the Agency assumes that all buildings before 1981 have been evaluated and the burden has been taken in previous information collection requests; thus no burden will be incurred for this provision.

Warning signs

The paragraph requires that warning signs be posted and displayed at each regulated area. The standard provides the language to be included on the signs, therefore, no burden is assumed for this provision.

Labels

Employers must affix labels to all products containing asbestos and to all containers containing such products. The standard provides the language to be included on the labels, therefore no burden is assumed for this provision.

Employee information and training (Qualified Person Training)

See discussion of training in Item 2, above.

H. Medical surveillance (§1926.1101(m))

Medical examinations

OSHA estimates that 22 percent of 380,526 workers, 83,716 workers, require examinations annually. An employee turnover rate (current and new workers) of 68.6 percent is considered in the next calculation.¹¹ This yields an estimated 141,145 workers ($83,716 \times 1.686$). It takes an estimated 1.5 hours (90/60 hour) of worker time per examination (this includes 30 minutes of travel time).

Burden hours: $141,145 \text{ workers} \times 1 \text{ per year} \times 90/60 \text{ hour} = 211,717.50$

Cost: $211,717.50 \text{ hours} \times \$29.23 = \$6,188,502.53$

Medical questionnaire (§1926.1101(m)(2)(ii)(B)) Part I

As part of the initial examination, Part I of a medical questionnaire is administered. The number of new employees is based on a 68.6 percent turnover rate for employees, applied to the 22 percent of 380,526 employees, or 83,716 employees, subject to medical surveillance. Thus, there are 57,429 new workers ($83,716 \times 68.6 \text{ percent}$). OSHA estimates it takes 30 minutes (30/60 hour) per questionnaire for each new employee to complete the questionnaire.

Burden hours: $57,429 \text{ workers} \times 1 \text{ per year} \times 30/60 \text{ hour} = 28,714.50 \text{ hours}$

¹¹ Based on BLS's 2016 Job Openings and Labor Turnover Survey, the total annual separations rate for the construction industry in 2020 was 68.6 percent. Available at <http://www.bls.gov/jlt/data.htm> (Accessed March 25, 2021).

Cost: 28,714.50 hours × \$29.23 = \$839,324.84

Medical questionnaire (§1926.1101(m)(2)(ii)(B)) Part II

As part of the medical examination, a follow-up medical questionnaire is administered for each employee. The number of employee examinations is based on 22 percent of 380,526 employees or 83,716 employees subject to medical surveillance. The abbreviated questionnaire takes an employee 10 minutes (10/60 hour) to complete.

Burden hours: 83,716 workers × 1 per year × 10/60 hour = 13,952.62 hours
Cost: 13,952.62 hours × \$29.23 = \$407,835.08

Information provided to the physician (§1926.1101(m)(3))

Employers must provide information to the physician for the 83,716 existing employees and, using a 68.6 percent turnover rate, for 57,429 new workers. The total number of examinations that a secretary will provide information to the physician for is 141,145.

Burden hours: 141,145 examinations × 1 per year × 5/60 hour = 11,762.08 hours
Cost: 11,762.08 hours × \$28.28 = \$332,631.62

Physician's written opinion (§1926.1101(m)(4))

As stated above, the estimated number of examinations is based on the total number of current and new employees (141,145 examinations) and 5 minutes (5/60 hour) of secretarial time per written opinion.

Burden hours: 141,145 examinations × 1 per year × 5/60 hour = 11,762.08 hours
Cost: 11,762.08 hours × \$28.28 = \$332,631.62

I. Recordkeeping (§1926.1101(n))

The Agency estimates that it takes a secretary 5 minutes (5/60 hour) to maintain records associated with objective data, exposure monitoring, and medical records. Also a secretary takes 5 minutes to make records available to employees.

Objective Data

The Agency assumes that 80 percent of the employers will use objective data to exempt themselves from performing exposure monitoring. Therefore, the burden is as follows:

Burden hours: (1,104,261 × 80 percent) × 5/60 hour = 73,617.42 hours
Cost: 73,617.42 hours × \$28.28 = \$2,081,900.64

Exposure monitoring

Burden hours: $(1,104,261 \text{ employers} \times 20 \text{ percent}) + 45) \times 3 \text{ samples per year} \times 5/60 \text{ hour} = 55,224.25 \text{ hours}$
Cost: $55,224.25 \text{ hours} \times \$28.28 = \$1,561,741.79$

Medical records

Burden hours: $83,716 \text{ examinations} \times 1.686 \text{ turnover rate} \times 1 \text{ per year} \times 5/60 \text{ hour} = 11,762.08 \text{ hours}$
Cost: $11,762.08 \text{ hours} \times \$28.28 = \$332,631.62$

Training records

For purposes of this ICR, based on compliance rates in the RIA, the Agency estimates that 31 percent of 1,411,740 employees, or 437,639 workers, are trained annually. Also, OSHA assumes that employers maintain records of who attends sessions; not individual records for each employee.

Burden hours: $437,639 \text{ employees} \times 1.686 \text{ turnover rate} \div 20 \text{ per session} \times 5/60 \text{ hour} = 3,074.41 \text{ hours}$
Cost: $3,074.41 \text{ hours} \times \$28.28 = \$86,944.31$

Records of notifications by building owners

Burden hours: $6,204,185 \text{ projects} \times 1 \text{ time per year} \times 5/60 \text{ hour} = 517,015.42 \text{ hours}$
Cost: $517,015.42 \text{ hours} \times \$28.28 = \$14,621,196.08$

Employee access to records

The Agency assumes that 10 percent of the workers covered by medical surveillance will request to see his/her records annually, therefore, the burden and cost associated is as follows:

Burden hours: $380,526 \text{ workers} \times 10 \text{ percent} \times 1.686 \text{ turnover rate} \times 5/60 \text{ hour} = 5,346.39 \text{ hours}$
Cost: $5,346.39 \text{ hours} \times \$28.28 = \$151,195.91$

Table 2: Estimated Annualized Respondent Hour and Cost Burden Table

Information Collection Requirement (Across Top of Rows)	Type of Respondent	Number of Respondents	Number of Responses per Respondent	Total Number of Responses	Average Burden per Response (In Hrs.)	Total Burden Hours (rounded)	Avg. Hourly Wage Rate	Total Burden Costs (rounded)
A. Multi-employer worksites (§1926.1101(d))								
Multi-employer worksites	Clerical	220,852	3	662,556	5/60	55,213.00	\$28.28	\$1,561,423.64
C. Exposure Assessments and monitoring (§1926.1101(f))								
Initial assessments and monitoring	Manager	220,852	3	662,556	1	662,556.00	\$46.75	\$30,974,493.00
Monitoring triggered by alternative control methods for Class I work (§1926.1101(g)(6)(iii))	Manager	45	3	135	1	135.00	\$46.75	\$6,311.25
Notification of monitoring results (§1926.1101(f)(5))	Clerical	220,852	3	662,556	5/60	55,213.00	\$28.28	\$1,561,423.64
Subtotal C.				1,325,247		717,904.00		\$32,542,227.89
D. Methods of compliance (§1926.1101(g))								
Develop the alternative control methods	Manager	7	1	7	110/60	12.83	\$46.75	\$599.80
Additional controls for Class II work	Manager	582	1	582.05	1	582.05	\$46.75	\$27,210.84
Subtotal D.				589		594.88		\$27,810.64
G. Communication of hazards (§1926.1101(k))								
Duties of building and facility owners								
Identification of ACM/PACM and notification by building owners to their employees and tenants	Manager	6,204,185	1	6,204,185	8/60	827,224.67	\$46.75	\$38,672,753.32
Notification by building owners to contractors (other employers)	Manager	6,204,185	1	6,204,185	3/60	310,209.25	\$46.75	\$14,502,282.44
Duties of employers								
Identification of ACM/PACM and notification by contractors to building owners	Manager	6,204,185	1	6,204,185	3/60	310,209.25	\$46.75	\$14,502,282.44
Notification by contractors to employees and employers	Manager	6,204,185	1	6,204,185	5/60	517,015.42	\$46.75	\$24,170,470.89
Notification by contractors to owners on asbestos remaining in the building	Manager	6,204,185	1	6,204,185	5/60	517,015.42	\$46.75	\$24,170,470.89
Subtotal								

Table 2: Estimated Annualized Respondent Hour and Cost Burden Table

Information Collection Requirement (Across Top of Rows)	Type of Respondent	Number of Respondents	Number of Responses per Respondent	Total Number of Responses	Average Burden per Response (In Hrs.)	Total Burden Hours (rounded)	Avg. Hourly Wage Rate	Total Burden Costs (rounded)
Subtotal G				31,020,925		2,481,674.01		\$116,018,259.98
H. Medical surveillance (§1926.1101(m))								
Medical examinations	Employee	141,145	1	141,145	90/60	211,717.50	\$29.23	\$6,188,502.53
Medical questionnaire (§1926.1101(m)(2)(ii)(B)) Part I	Employee	57,429	1	57,429	30/60	28,714.50	\$29.23	\$839,324.84
Medical questionnaire (§1926.1101(m)(2)(ii)(B)) Part II	Employee	83,716	1	83,716	10/60	13,952.62	\$29.23	\$407,835.08
Information provided to the physician (§1926.1101(m)(3))	Clerical	141,145	1	141,145	5/60	11,762.08	\$28.28	\$332,631.62
Physician's written opinion (§1926.1101(m)(4))	Clerical	141,145	1	141,145	5/60	11,762.08	\$28.28	\$332,631.62
Subtotal H.				564,580		277,908.78		\$8,100,925.69
I. Recordkeeping (§1926.1101(n))								
Objective Data	Clerical	883,409	1	883,409	5/60	73,617.42	\$28.28	\$2,081,900.64
Exposure Monitoring	Clerical	220,897	3	662,691	5/60	55,224.25	\$28.28	\$1,561,741.79
Medical Records	Clerical	141,145	1	141,145	5/60	11,762.08	\$28.28	\$332,631.62
Training Records	Clerical	737,859	0.05	36,893	5/60	3,074.41	\$28.28	\$86,944.31
Records of notifications by building owners	Clerical	6,204,185	1	6,204,185	5/60	517,015.42	\$28.28	\$14,621,196.08
Employee access to records	Clerical	64,157	1	64,157	5/60	5,346.39	\$28.28	\$151,195.91
Subtotal I.				7,992,480		666,039.97		\$18,835,610.35
Total								
Total				41,566,376		4,199,334.64		\$177,086,258.19

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 service component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**
- **If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**
- **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

Exposure monitoring

The Agency assumes that employers incur costs for purchasing exposure monitoring supplies and analyzing monitoring samples used to monitor their employees. The Agency estimates a total cost of \$19.61 per sample; this includes supplies used and the analysis of the sample taken.¹² The costs are as follows:

¹² The cost for an OSHA-accredited laboratory to analyze air monitoring samples (using the PCM NIOSH 7400 method) is estimated at \$19.00 per sample (City of Brentwood, 2019. 2019 Hazardous Materials / Abatement Bid Results for 8746 Eulalie. Available at <http://www.brentwoodmo.org/DocumentCenter/View/26662/2019-Bid-Results-for-Hazardous-Material-and-Abatement> (Accessed February 24, 2021). In addition to the above sampling costs, 25 mm, 0.8 micron filters were needed to conduct monitoring. A box of 50 costs \$30.60, or \$0.61 per cassette (Zefon International, 2021. PCM Cassette (25 mm) & MCE Asbestos Monitoring Cassette 3PC, 0.8µm 50/BX. Available at <https://www.zefon.com/cassette-25mm-3pc-08m-mce-pcm-50bx> (Accessed February 24, 2021).). Thus total cost per sample (for analysis and cassette) was \$19.61.

Cost: 1,104,261 employers × 20 percent × 3 samples per year × \$19.61 =
\$12,992,734.93

45 employers × 3 samples per year × \$19.61 = \$2,647.35

Medical examinations

The Agency assumes that employers will incur a cost of \$382 per exam.¹³ The total cost is as follows:

Cost: 83,716 employees × 1.686 turnover rate × \$382 = \$53,917,275.40

TOTAL: \$12,992,734.93 + \$2,647.35 + \$53,917,275.40 = \$66,912,658

14. Provide estimates of the 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), any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 into a single table.

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

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

The Agency is requesting an adjustment increase of 433,876 burden hours, from 3,765,459 to 4,199,335 hours. There are several reasons for this adjustment in burden hours. First, the Agency updated the data sources used to estimate the number of respondents and unit costs. Secondly, there was an increase in the number of buildings affected which increased the number of affected employees. As a result, there was an increase in burden.

The increase in the cost is due to the increase in the number of employees affected and there was increase in cost of medical exams from \$163 to \$382 as a result the cost went from \$35,917,810 to \$66,912,658.

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

The information required to be collected by the Asbestos in Construction Standard will not have

¹³ The estimated cost of a new patient outpatient visit requiring 15-29 minutes (CPT Code 99202) is \$382 (FAIR Health, 2021. New Patient Outpatient Visit, Total Time 15-29 Minutes (CPT Code 99202). Available at <https://www.fairhealthconsumer.org/medical> (Accessed February 24, 2021).

results that will be published for statistical use.

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 information-collection requirement. (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 seeking 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.

ATTACHMENT A

This addendum to the ICR update is intended to describe ERG’s methodology and reasoning behind updates to the number of employees and establishments affected by the Asbestos in Construction Standard (29 CFR 1926.1101) on an annual basis.

In an effort to provide updated statistics, ERG examined the OSHA document “Final Regulatory Impact and Regulatory Flexibility Analysis of the Revised Asbestos Standard for Construction, General Industry, and Shipyards,” published July 21, 1994 (the “RIA”). This document appears to provide the most recent and comprehensive discussion of the number of firms and employees working in specific construction activities as covered by the Asbestos in Construction Standard. Based on the discussion presented in this document, ERG updated employment estimates based on currently available information, using these estimates to provide new estimations of employers and employees covered by the Standard. This memorandum presents ERG’s explanation of changes and assumptions made.

C. NEW CONSTRUCTION

1. Asbestos/Cement Pipe and Sheet Installation

According to United States Geological Survey, installation of new asbestos-cement (AC) pipe and sheet no longer occurs in the United States (USGS, 2021).¹⁴ While not technically banned, health and liability issues preclude the use of these products. US production of AC pipe and sheet ceased in the 1970s and the EPA issued a complete ban of asbestos containing products in 1979. This ban, however, was not upheld by the courts (EPA, 2018).¹⁵ Also, the last domestic producer of asbestos ceased operations in 2002. While AC products are still currently available in the international market, import data compiled by the USGS indicates that virtually all asbestos imports are accounted for by the chloralkali industry (USGS, 2021).

D. ASBESTOS ABATEMENT AND DEMOLITION

The RIA estimated that an average of 67,231 workers were potentially exposed annually to asbestos during abatement and demolition activities. In addition, the RIA estimated that there were 2,100 asbestos abatement contractors in the U.S in 1990. While remediation efforts are no doubt on-going, much of the remediation of asbestos products has likely taken place in the fifteen years since publication of the RIA. In the 2010 Occupational Outlook Handbook, the U.S. Bureau of Labor Statistics reports that “since the 1970s, asbestos and lead-based paints and plumbing fixtures and pipes have not been used and much of the remediation stemming from those products has taken place. With the continuing decline in the number of structures that contain asbestos and lead, demand for asbestos and lead abatement workers will be somewhat limited. Some demand, however, will result from the need to abate lead and asbestos from office

14 U.S. Geological Survey (USGS), 2021. Mineral Commodity Summaries 2021. Available at <https://www.usgs.gov/centers/nmic/mineral-commodity-summaries> (Accessed February 4, 2021).

15 EPA Webpage on U.S. Federal Bans on Asbestos: Available at: <https://www.epa.gov/asbestos/us-federal-bans-asbestos>. Accessed 3/20/2018.

buildings, schools, or historic buildings that are being renovated or torn down, or in confined spaces.”¹⁶ Based on the 2018 County Business Patterns¹⁷ and the Economic Census Data for 2012,¹⁸ 1,650 establishments were estimated to be operating within NAICS 5629102 (Waste Management and Remediation Services – Asbestos Abatement and Lead Paint Removal). Assuming that the ratio of firms to employees has remained constant, ERG estimates that there are potentially 52,800 workers exposed to asbestos during abatement and demolition activities on an annual basis.

E. CHANGE IN BUILDING STOCK

The remainder of the estimates of the number of workers in scope by activity are based on the change in the stock of buildings that contain asbestos and/or presumed asbestos containing material.

Because the widespread use of asbestos in construction ceased in the mid-1970s, the number of workers potentially exposed to asbestos in renovation and maintenance activities has gradually reduced over time. This reduction can be through one of two means:

1. Entire buildings containing asbestos are **demolished** (e.g., to build a new building in its place).
2. All or part of the asbestos containing material in a building is **remediated**, either because the building is being renovated or because the asbestos hazard is specifically targeted.

The last several versions of OSHA’s asbestos in construction ICR already account for the first of these two processes, demolition (although the exact approach used has varied over time). The 2021 ICR renewal request additionally accounts for the second process, remediation and renovation.

1. Estimating Demolition Rates

Since at least 2011, OSHA’s Asbestos in Construction ICR renewal process has accounted for asbestos removed through demolition using the U.S. Census Bureau (2021) American Community Survey (ACS) data¹⁹ on the declining number of residential buildings that may

16 Source: Bureau of Labor Statistics (BLS), 2018. Occupational Outlook Handbook - Construction and Extraction - Hazardous Materials Removal Workers. U.S. Department of Labor (DOL). Available at <https://www.bls.gov/ooh/construction-and-extraction/hazardous-materials-removal-workers.htm#tab-3>. (Accessed March 5, 2018).

17 Source: U.S. Census Bureau, 2020. 2018 County Business Patterns. Complete U.S. File. Released June 25, 2020. Available at <https://www.census.gov/data/datasets/2018/econ/cbp/2018-cbp.html> (Accessed February 23, 2021).

18 Source: U.S. Census Bureau, 2021. 2017 Economic Census. All Sectors: Summary Statistics for the U.S., States, and Selected Geographies: 2017 (Table ID: EC1700BASIC). Available at <https://data.census.gov/cedsci/table?n=562910&tid=ECNBASIC2017.EC1700BASIC&hidePreview=true> (Accessed February 23, 2021).

19 U.S. Census Bureau, 2021. American Community Survey. 2019 ACS-5-Year Estimates 2015-2019.

contain asbestos and using the rate of decline to reduce the number of exposed workers.

The RIA estimated that in 1993 there were 72,500,000 residential buildings built before 1975. For this ICR renewal, ERG estimates the average number of buildings built in each year of the decades reported in the ACS data, and then sums the number of residential buildings built before 1975 (65,273,238). This represents a change of 10 percent ($72,500,000 - 65,273,238 = 7,226,762$, $7,226,762 \div 72,500,000 = 10$ percent).

2. Estimating Renovation/Remediation Rates

For this 2021 ICR renewal request, ERG additionally accounts for the change in buildings that may contain asbestos due to renovation or remediation. After reviewing available data, ERG selected the Massachusetts database²⁰ of asbestos projects as the most comprehensive and most amendable to future updates.

Using the available asbestos project type data in the Massachusetts database, ERG excluded projects where the project type either (1) contained the text string “dem” (i.e., “demolition” or some variation or misspelling thereof) or (2) had a blank project type field. ERG then counted the number of abatement and renovation projects for 2002 to 2019 (the years for which ACS building data are available).

ERG also compiled ACS data on the total number of housing units by year built for Massachusetts in each year from 2002 to 2019.²¹ The ACS has housing units grouped by year built. ERG used these groupings to determine how many residential buildings were built prior to 1975.²²

ERG then calculated the remediation rates by dividing the number of recorded remediation and renovation projects by the number of pre-1975 housing units for each year. Summing the percentages from 2002 to 2019, renovation and remediation projects amounted to 13.94 percent of the number of pre-1975 residential buildings. This same percentage is used for the entire U.S.

Selected Housing Characteristics (Table ID DP04). Available at <https://data.census.gov/cedsci/table?id=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2019.DP04> (Accessed February 23, 2021).

20 Massachusetts Department of Energy and Environmental Affairs (MA EEA), 2021. Search for Asbestos Projects. Available at <https://eeaonline.eea.state.ma.us/portal#!/search/asbestos> (Accessed January 28, 2021).

21 Sources: (1) U.S. Census Bureau, 2008. American Community Survey (ACS)-ftp Site. Available at <https://www2.census.gov/programs-surveys/acs/data/archive/> (Accessed March 16, 2021).

(2) U.S. Census Bureau, 2013. American Community Survey (ACS)-Accessing PUMS Data. Available at <https://www.census.gov/programs-surveys/acs/microdata/access.2009.html> (Accessed March 16, 2021).

(3) U.S. Census Bureau, 2021. American Community Survey. 2019 ACS-5-Year Estimates 2015-2019. Selected Housing Characteristics (Table ID DP04). Available at <https://data.census.gov/cedsci/table?id=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2019.DP04> (Accessed February 23, 2021).

22 The ACS data are grouped by decade. To limit the 1970 to 1979 data for buildings built before 1975, we multiply the total for the decade by 60 percent. This assumes an even distribution of housing units were built each year, with six of the 10 years between 1970 and 1975 (inclusive).

3. Summing Demolition and Renovation/Remediation

The demolition rate and renovation/remediation rate are summed. This results in a 23.94 percent reduction in buildings that may contain asbestos since the RIA (10 percent + 13.94 percent = 23.94 percent).

This change is applied to the employment estimates that follow.

Renovation/Remodeling

The RIA estimated that 51,300 workers in renovation and remodeling of asbestos-containing buildings are affected by the Standard, the majority of which would have been exposed to asbestos from spackling, tape, and joint compounds during drywall demolition. According to the RIA, the use of asbestos for these applications was stopped in the mid-1970s and that exposure to friable asbestos would only likely occur during demolition projects in buildings constructed before this time.

ERG uses the 23.94 percent change in building stock discussed above to estimate the current number of workers in renovation and remodeling of asbestos-containing buildings as 39,019 [$51,300 \times (1 - 23.94 \text{ percent}) = 39,019$].

The RIA notes that built up roofs constructed with asbestos roofing felts generally have long useful lives of roughly twenty years. Assuming that roofing felts have not been used substantially since the mid-1970s, ERG assumes that all asbestos roofing felts would have been removed and that there is currently **no** worker exposure to asbestos stemming from this work activity. Similarly, the RIA notes that, while asbestos flooring products “have a useful life of approximately 25-30 years, they are generally replaced more often.” ERG assumes that asbestos flooring products have not been produced since roughly 1980 and that all but a small percentage of these products would have been removed since publication of the RIA. ERG assumes **no** worker exposure to asbestos stemming from this work activity.

F. ROUTINE MAINTENANCE IN PUBLIC, COMMERCIAL, AND RESIDENTIAL BUILDINGS

Worker exposure to asbestos during routine maintenance was assumed to occur during eight separate work activities: adjustment or repair of HVAC ductwork or lighting (above a drop ceiling); replacement of drop ceiling tiles; repair of leaking water or steam pipes; boiler maintenance or repair activities; and repairs to roofing, drywall or flooring. In total, the RIA assumed that a total 128,867 workers would be potentially exposed to asbestos during these construction activities²³. As discussed earlier, ERG assumes no worker exposure during the repair of flooring and roofing as it assumed that the lifespan of these products would have required removal and replacement prior to this ICR update. Additionally, ERG assumes that all

23 Source: Occupational Safety and Health Administration (OSHA), 1994. Final Regulatory Impact and Regulatory Flexibility Analysis of the Revised Asbestos Standard for Construction, General Industry, and Shipyards. Available at https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=13404 (Accessed January 5, 2015).

drop ceiling tiles containing asbestos have since been replaced and that no worker exposure will result from this specific work activity. Excluding these workers reduces the number of workers in this category in the RIA to 62,293.

ERG uses the 23.94 percent change in building stock discussed above to estimate the current number of workers exposed during routine maintenance in public, commercial, and residential buildings as 47,380 $[62,293 \times (1 - 0.24 \text{ percent}) = 47,380]$.

G. ROUTINE MAINTENANCE IN INDUSTRIAL FACILITIES

The RIA estimated 243,454 workers exposed to asbestos during routine maintenance in industrial facilities. Worker exposure was assumed to occur during five separate work activities: gasket removal and installation; boiler removal and installation; pipe removal and installation; miscellaneous maintenance; and, miscellaneous telecommunications maintenance. The RIA notes that miscellaneous maintenance activities include the variety of building maintenance activities described earlier; as such, ERG assumes that the number of workers engaged in these activities will decline by the same overall percentage as the number of workers engaged in public, commercial and residential building maintenance.

ERG uses the 23.94 percent change in building stock discussed above to estimate the current number of workers exposed during routine maintenance in industrial facilities as 185,171 $[243,454 \times (1 - 23.94 \text{ percent}) = 185,171]$.

H. CUSTODIAL WORK IN PUBLIC, COMMERCIAL AND RESIDENTIAL BUILDINGS

The RIA estimated 2,395,500 workers exposed to asbestos during custodial work in public, commercial and residential buildings. The RIA notes that “asbestos exposure in public and commercial buildings can occur during a variety of tasks involving disturbance of asbestos or asbestos-containing materials, in addition to routine maintenance activities described above,” and can occur during sweeping, cleaning, dusting, mopping, vacuuming, stripping and buffing of floor tile, and clean-up after asbestos removal or other significant construction work.

ERG uses the 23.94 percent change in building stock discussed above to estimate the current number of workers exposed during custodial work in public, commercial and residential buildings as 1,822,017 $[2,395,500 \times (1 - 23.94 \text{ percent}) = 1,822,017]$.

I. CUSTODIAL WORK IN INDUSTRIAL FACILITIES

The RIA estimated 339,562 workers exposed to asbestos during custodial work in industrial facilities. The RIA notes that “custodial work in industrial facilities largely resembles custodial work in public, commercial, and residential buildings and was identically modeled by CONSAD.”

ERG uses the 23.94 percent change in building stock discussed above to estimate the current number of workers exposed during custodial work in industrial facilities as 258,271 $[339,562 \times (1 - 23.94 \text{ percent}) = 258,271]$.

J. TOTAL COVERED EMPLOYEES AND EMPLOYERS

Following the approach used in ICR renewals since 2011, estimates of workers in each of the categories above are summed and compared to the RIA number to estimate the employment numbers actually used to update Supporting Statement A.

As described above and shown in [Table 3](#), summing all the worker categories yields a total of 2,404,658. This is a decrease of 23.2 percent from the RIA figures of 3,130,751.

Table 3. Estimated Change in Employment by Worker Category

Category	RIA Estimate	ICR	% Change
New Construction	—	—	—
Asbestos Abatement and Demolition	38,642	52,800	36.6%
Renovation/Remodeling	51,300	39,019	-23.9%
Routine Maintenance in Public, Commercial, and Residential Buildings	62,293	47,380	-23.9%
Routine Maintenance in Industrial Facilities	243,454	185,171	-23.9%
Custodial Work in Public, Commercial and Residential Buildings	2,395,500	1,822,017	-23.9%
Custodial Work in Industrial Facilities	339,562	258,271	-23.9%
Total	3,130,751	2,404,658	-23.2%

The percentage change is then rounded to the nearest percent, 23 percent.

Finally, the RIA estimates of covered employees and employers, 1,833,429 and 1,434,105 respectively, are multiplied by the 23 percent decrease estimated above to estimate the new number of covered employees and employers (1,411,740 and 1,104,261, respectively).

These covered employee and employer estimates are ultimately the ones used in the Supporting Statement to derive the number of respondents and responses.

Table 4. Extrapolating to Total and Covered Employees

Estimate	RIA Estimate	% Change (Rounded)	ICR
Covered Employees	1,833,429	-23.0%	1,411,740
Covered Employers	1,434,105	-23.0%	1,104,261