

**Supporting Statement For  
Process Safety Management Standard of Highly Hazardous Chemical  
(29 CFR 1910.119, 29 CFR 1926.64)<sup>1</sup>  
(OMB Control Number 1218-0200) (March 2020)**

**A. JUSTIFICATION**

**1. Explain the circumstances that make the collections 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 of 1970 (i.e., “the 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 Act authorizes “the development and promulgation of occupational safety and health standards” (29 U.S.C. 651).

With regard to recordkeeping, the Act specifies that “[e]ach employer shall make, keep and preserve, and make available to the Secretary . . . such records . . . as the Secretary . . . may prescribe by regulation as necessary or appropriate for the enforcement of this Act . . .” (29 U.S.C. 657). The Act states further that “[t]he Secretary . . . shall prescribe such rules and regulations as [he/she] may deem necessary to carry out [his/her] responsibilities under this Act, including rules and regulations dealing with the inspection of an employer’s establishment” (29 U.S.C. 657).

The Clean Air Act Amendments (“CAAA”) of 1990 required the Occupational Safety and Health Administration (“OSHA” or “the agency”) to develop a standard on Process Safety Management of Highly Hazardous Chemicals (“the PSM Standard” or “the Standard”) containing certain minimum requirements to prevent accidental releases of chemicals that could pose a threat to workers. Under the authority granted by the Act, OSHA published the PSM Standard at 29 CFR 1910.119. The Standard, rather than setting specific engineering requirements, emphasizes the application of documented management controls; using the controls, companies address the risk associated with handling or working near highly hazardous chemicals. The Standard contains a number of collection of information requirements such as developing written process safety information, procedures and management practices; updating operating procedures and safe work practices; evaluating safety history and policies of contractors; conducting periodic evaluations; and documenting worker training. Items 2 and 12 below describe in detail the specific information collection requirements of the Standard.

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<sup>1</sup> The purpose of this Supporting Statement is to analyze and describe the burden hours and costs associated with provisions of this standard that contain paperwork requirements; this Supporting Statement does not provide information or guidance on how to comply with, or how to enforce, these provisions. Section 29 CFR 1926.64 is identical to 29 CFR 1910.119; the collections of information are approved under OMB control number 1218-0200.

**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.**

The collections of information in the PSM Standard are necessary for implementing the requirements of the Standard. The information is used by employers to assure that processes using highly hazardous chemicals with the potential for a catastrophic release are operated as safely as possible. The employer must thoroughly consider all facets of a process, as well as the involvement of workers in that process. Employers analyze processes so that they can identify, evaluate, and control problems that could lead to a major release, fire, or explosion. The Standard specifies several paperwork requirements. The purpose of these requirements is to ensure that employers collect the information necessary to control and reduce injuries and fatalities in workplaces that have the potential for highly hazardous chemical catastrophes. The following sections describe in detail the collection of information requirements in the Standard.

**(A) Employee Participation (paragraph (c)).** Employers are required by paragraph (c)(1) to develop a written plan of action regarding the implementation of the employee participation required by this paragraph. Paragraph (c)(2) requires employers to consult with workers and their representatives on the conduct and development of process hazard analyses and on the development of the other elements of process safety management in the Standard. Under paragraph (c)(3) employers must provide access to process hazard analyses and other information to workers and their representatives.<sup>2</sup>

**(B) Process Safety Information (paragraph (d)).** Paragraph (d) requires employers to complete a compilation of written process safety information prior to conducting a process hazard analysis. The compilation of written process safety information, which includes information on the hazards of chemicals, the technology of the process, and the equipment, is to enable the employer and workers involved in operating the process to identify and understand the hazards posed by processes involving highly hazardous chemicals.

**(C) Process Hazard Analysis (paragraph (e)(1)).** Paragraph (e)(1) requires the employer to perform an initial process hazard analysis on processes covered by the Standard. The evaluation must be appropriate to the complexity of the process and must identify, evaluate, and control the hazards involved in the process.

**(D) Resolution of Hazards (paragraph (e)(5)).** Paragraph (e)(5) requires documentation of the actions the employer takes to resolve the findings and recommendations of the team that performed the process hazard analysis, including a schedule for completing these actions. In addition, the employer is to communicate this information to affected operating, maintenance, and other workers whose work assignments are in the process.

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<sup>2</sup> In the 1999 Information Collection Request (ICR), OSHA indicated that the on-going burden of worker

participation required by paragraph(c) is included in other elements of the Standard and, therefore, no burden hours were assigned to this paragraph. Comments to the ICR concurred with the agency's assessment regarding this burden.

**(E) Updating, Revalidating, and Retaining the Process Hazard Analysis (paragraphs (e)(6) and (e)(7)).** Paragraph (e)(6) requires that the initial process hazard analysis be updated and revalidated by a team at least every five years. Paragraph (e)(7) requires the employer to retain process hazard analyses for the life of each process covered by this section, as well as the documented resolution of recommendations described in paragraph (e)(5).

**(F) Operating Procedures (paragraphs (f)(1) - (f)(4)).** Paragraph (f)(1) requires the employer to develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information. Paragraph (f)(2) requires the employer to make the operating procedures readily accessible to workers who work in or maintain a process. Paragraph (f)(3) requires the employer to review the operating procedures as often as necessary to assure that they reflect current operating practice, and that the employer certify annually that these operating procedures are current and accurate. Paragraph (f)(4) requires the employer to develop and implement safe work practices that provide for the control of hazards during operations such as lockout/tagout; confined-space entry; opening process equipment or piping; and control over entrance into a facility by maintenance, contractor, laboratory, or other support personnel. These safe practices apply to both the employer's workers and contractor workers.

**(G) Training (Initial, Refresher, and Documentation) (paragraphs (g)(1) - (g)(3)).** Paragraph (g)(1) requires employers to train workers presently involved in operating a process before they become involved in operating a newly assigned process. The training shall emphasize specific safety and health hazards; emergency operations, including shutdown; and safe work practices applicable to the worker's job tasks. Paragraph (g)(2) requires that the employer provide refresher training at least every three years, and more often if necessary.<sup>3</sup> Paragraph (g)(3) requires the employer to prepare a record that contains the name of worker, the date of training, and the means used to verify that the worker understood the training.

**(H) Contractors (paragraphs (h)(2)(i) - (h)(2)(iv), (h)(2)(vi), (h)(3)(iii), and (h)(3)(v)).** This paragraph imposes collections of information on both employers and on contractors. Paragraph (h)(2)(i) requires employers, when selecting a contractor, to obtain and evaluate information regarding the contract employer's safety performance and programs. Paragraph (h)(2)(ii) requires that the employer inform contract employers of known potential fire, explosion, or toxic release hazards related to the contractor's work and the process. Paragraph (h)(2)(iii) requires that the employer explain to contract employers the applicable provisions of the emergency action plan required by paragraph (n) of the Standard. Paragraph (h)(2)(iv) requires the employer to develop and implement safe work practices consistent with paragraph (f)(4) to control the entrance, presence and exit of contract employers and contract

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<sup>3</sup> The training requirements in paragraphs (g)(1) and (g)(2), as well as the training requirements in paragraphs (h)(3)(i) and (h)(3)(ii), (j)(3), and (l)(3) are not considered collection of information requirements and therefore are not included in burden-hour and cost estimates described in Item 12.

workers in covered process areas.<sup>4</sup> Paragraph (h)(2)(vi) requires the employer to maintain a contract worker injury and illness log related to the contractor’s work in process areas. Paragraph (h)(3)(iii) requires the contract employer to document: that contract workers have been trained to perform their work practices safely and are knowledgeable about the fire, explosion, and toxic hazards in the workplace; and the identity of the contract worker who received the training, the date of training, and the means used to verify that the worker understood the training.<sup>5</sup> Paragraph (h)(3)(v) requires the contractor to advise the employer of any unique hazard presented by the contract employer’s work, or any hazards found by the contract employer’s work.

**(I) Written Procedures, Inspections, and Testing (paragraphs (j)(2) and (j)(4)(iv)).**

Paragraph (j)(2) requires the employer to establish written procedures to maintain the on-going integrity of process equipment. Paragraph (j)(4)(iv) requires that employers document inspections and tests performed on process equipment. The documentation shall identify the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test.

**(J) Hot Work Permit (paragraph (k)(2)).** Paragraph (k)(2) requires the employer to provide the following information on permits issued for hot work operations conducted on or near a covered process: the date(s) authorized for hot work, the identity of the object on which hot work is to be performed, and documentation that the appropriate fire protection and prevention plans have been implemented. The permit must be kept on file until completion of the hot work operations.

**(K) Management of Change (paragraphs (l)(1), (l)(4), and (l)(5)).** Paragraph (l)(1) requires the employer to establish and implement written procedures to manage changes (except for “replacements in kind”) to process chemicals, technology, equipment, and procedures; and for changes to facilities that affect a covered process. Paragraph (l)(4) requires the employer to update the procedures and practices set forth in paragraph (d) of the Standard if a change in paragraph (l) results in a change to the process safety information. Similarly, paragraph (l)(5) requires the employer to update the relevant information in paragraph (f) of the Standard if a change in paragraph (l) results in a change to the operating procedures and practices.

**(L) Incident Investigation (paragraphs (m)(4)–(m)(7)).** Paragraph (m)(4) requires that a report be prepared at the conclusion of any incident investigation, and that the report include, at a minimum, the date of the incident; the date the investigation began; a description of

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<sup>4</sup>The burden-hour and cost estimates associated with paragraph (h)(2)(iv) are included in the estimates for paragraph (f) in Item 12.

<sup>5</sup>In Item 12, OSHA is accounting for the training documentation requirements for contract employers specified by paragraph (h)(3)(iii) under the training documentation provision of paragraph (g)(3).

the incident; the factors that contributed to the incident; and any recommendations resulting from the investigation. Paragraph (m)(5) specifies that the employer must document resolutions and corrective measures taken with regard to the findings and recommendations provided in an incident investigation report. Paragraph (m)(6) states that the employer must allow affected personnel (including contract workers), whose job tasks are relevant to the incident findings, to review the report. Paragraph (m)(7) requires that incident investigation reports be retained for five years.

**(M) Emergency Planning and Response (paragraph (n)).** Paragraph (n) requires the employer to establish and implement an emergency action plan in accordance with the provisions of 29 CFR 1910.38(a). In addition, the emergency action plan shall include procedures for handling small releases.

**(N) Compliance Audits (paragraphs (o)(1) and (o)(3) – (o)(5)).** Under paragraph (o) (1), employers are required to certify that they have evaluated compliance with the provisions of this section at least every three years to ensure that the procedures and practices developed under the Standard are adequate and are being followed. Paragraph (o)(3) requires that a report of the audit findings be developed, while paragraph (o)(4) states that the employer must promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that the deficiencies have been corrected. Paragraph (o)(5) requires that the last two reports be retained.

**(O) Trade Secrets (paragraphs (p)(1) – (p)(3)).** Under paragraph (p)(1), employers are required to make all information necessary to comply with the Standard available to those persons responsible for compiling the process safety information (required by paragraph (d) of the Standard), those assisting in the development of the process hazard analysis (required by paragraph (e) of the Standard), those responsible for developing the operating procedures (required by paragraph (f) of the Standard), and those involved in incident investigations (required by paragraph (m) of the Standard), emergency planning and response (paragraph (n) of the Standard) and compliance audits (paragraph (o) of the Standard) without regard to possible trade secret status of such information. The burden hours and costs for providing workers with access to these categories of information are included in the estimates for paragraphs (d), (e)(5), (f)(2), (m)(6), (n) and (o).

Paragraph (p)(2) indicates that employers may require the persons to whom the information is made available under paragraph (p)(1) of this section to enter into confidentiality agreements not to disclose the information as set forth in 29 CFR 1910.1200, the Hazard Communication Standard (HCS). Last, paragraph (p)(3) requires, subject to the rules and procedures set forth in 29 CFR 1910.1200(i)(1) through 1910.1200(i)(12), employees and their designated representatives to have access to trade secret information contained within the process hazard analysis and other documents required to be developed by this standard. The burden hours and costs for employers' responses to requests from workers and their representatives for trade secret information are included in the HCS ICR, OMB Control No. 1218-0072.

**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 automated, electronic, mechanical, or other technological information collection techniques, or other forms of information technology (e.g., electronic submission of responses), when establishing and maintaining the required records. The agency wrote the paperwork requirements of the Standard in performance-oriented language (i.e., in terms of what data to collect, not how to record the data).

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

Section 304 of the CAAA required that the Secretary of Labor and the Administrator of the Environmental Protection Agency (EPA) promulgate a chemical process safety standard to prevent accidental releases of chemicals that could pose a threat to workers, including development of a list of highly hazardous chemicals that include toxic, flammable, highly reactive and explosive substances. The CAAA also specified the minimum elements to be covered by the Standard.

Some information developed under OSHA's Hazard Communication Standard duplicates the requirements in the PSM Standard. However, OSHA will accept the information collected under the Hazard Communication Standard, or similar information developed in response to the requirements of other agencies, provided it fulfills the requirements of the PSM Standard.

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

Small firms account for approximately 10 percent of the total costs of the PSM Standard. OSHA specifically addressed small business concerns in the Standard. For example, a small business might control its on-site inventory of highly hazardous chemicals by ordering more frequent, smaller shipments so that they do not exceed the threshold for coverage specified in the Standard. Also, they may segregate their inventory by dispersing storage around the worksite so that release of a highly hazardous chemical from one storage area would not cause the release of other hazardous chemicals stored on site. Moreover, small employers who use several batch processes may be able to use a generic approach to process hazard analysis to further reduce the estimated cost of compliance. For example, a generic process hazard analysis may be used if a representative chemical process can be documented for the range of batch processes involved.

**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 the burden.**

The agency believes that the information collection frequencies required by the Standard are the minimum frequencies necessary to effectively regulate process safety management of highly hazardous chemicals and, thereby, to fulfill its mandate “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” as specified by the Act at 29 U.S.C. 651. The Standard also directly carries out the explicit requirements of the CAAA.

**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.**

Paragraph (e)(6) requires that the initial process hazard analysis be updated and revalidated by a team at least every five years. The agency believes that this five year update and revalidation interval is a reasonable timeframe, particularly in consideration of the long life span, without change, of many processes. Paragraph (e)(7) requires the employer to retain process hazard analyses for the life of each process covered by this section, as well as the documented resolution of recommendations described in paragraph (e)(5). The agency does not believe that this requirement poses an undue burden on employers in that retention of these documents is necessary to conduct the periodic updates and revalidations which are required under the Standard.



Paragraph (m)(7) requires that incident investigation reports be retained for five years. The agency believes it is extremely useful if the incident report findings and recommendations are reviewed during the subsequent update or revalidation of the process hazard analysis. Consequently, the agency believes a five year retention period is appropriate, to be consistent with paragraph (e) of the Standard, which requires the process hazard analysis to be updated or revalidated every five years.

Under paragraph (o)(1), employers are required to certify that they have evaluated compliance with the provisions of this section at least every three years to ensure that the procedures and practices developed under the Standard are adequate and are being followed. Paragraph (o)(5) requires that the last two reports be retained. OSHA believes that an audit with respect to compliance with the provisions contained in this section is an extremely important function. This is because it serves as a self-evaluation for employers to measure the effectiveness of their process safety management system. The audit can identify problem areas, and assist employers in directing attention to process safety management weaknesses. The agency believes that it is necessary that audits be performed at least every three years in order to measure the effectiveness of the process safety management system. Paragraph (o)(5) requires employers to retain the two most recent compliance audit reports, as well as the documented actions described in paragraph (o)(4). The purpose of this proposed provision is to focus on any continuing areas of concern that are identified through the compliance audits.

**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 those 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. 3506(c)(2)(A)), OSHA published a notice in the *Federal Register* [on June 28, 2019, 84 FR 31119] soliciting comments on its proposal to extend the Office of Management and Budget's approval of the information collection requirements specified by the Process Safety Management Standard of Highly Hazardous Chemicals (29 CFR 1910.119, 29 CFR 1926.64). This notice is part of a preclearance

consultation program that provides the general public and government agencies with an opportunity to comment. The agency received one public comment in the docket that was outside of the scope of this Process Safety Management information collection request.

**9. Explain any decision to provide any payments or gift to respondents, other than remuneration of contractors or grantees.**

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

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

Paragraph (p)(1) of the Standard states that employers must provide the specified information to individuals involved in meeting the paperwork requirements of the Standard. To protect the confidentiality of this information, OSHA incorporated the disclosure procedures in the Hazard Communication Standard at 29 CFR 1910.1200(i)(1) through (i)(12), into paragraph (p)(2) of the Standard.

**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.**

None of the provisions in the Standard require sensitive information.

**12. Provide estimates of the hour burden of the collection of information. The statement should:**

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**
- **If this request for approval covers more than one form, provide separate hour burden estimates for each form.**
- **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 14.**

### **Burden-Hour and Cost Determinations**

OSHA uses the EPA's Risk Management Program (RMP) database to estimate the number of establishments, employees, and processes<sup>6</sup> that must comply with the paperwork requirements of the PSM Standard. All establishments in certain industries (chemical manufacturers, for example) are required by the RMP to report information about their chemical inventories and risk management plans to EPA. In addition, any establishment with chemical inventories that meet or exceed EPA's RMP threshold quantities (for chemicals and flammables) must also supply information. The required information is extensive and includes: whether a process is covered by OSHA's PSM Standard; the establishment's North American Industry Classification System (NAICS); number of full-time workers; and the chemical(s) or flammable(s) on site that are covered by EPA's standard. The RMP final standard had a list of 77 chemicals and explosives, and more than 60 flammable substances that were covered, although regulation of flammables and explosives was later revised.

Most RMP chemicals are also on OSHA's list of chemicals covered by the PSM Standard. A few chemicals (chlorine, ammonia, flammable liquids, sulfur dioxide) account for as much as 80 percent of the sites reporting to RMP (see "Accident Epidemiology and the RMP Rule" Wharton, December 18, 2007, Table 2.2B, page 69; [http://opim.wharton.upenn.edu/risk/library/2007\\_EPA-Wharton\\_RMPRule.pdf](http://opim.wharton.upenn.edu/risk/library/2007_EPA-Wharton_RMPRule.pdf)), which is also consistent with OSHA's analysis of its PSM Standard. Hence, for purposes of counting paperwork burden, the agency concludes that the two agencies' lists of chemicals are similar and that RMP data provides a baseline estimate of many establishments covered by the PSM Standard which can be adjusted as explained below.

There were approximately 12,232 establishments in the RMP database as of February 2019. This represents a decrease from the March 2015 RMP data (as reported in the previous ICR) of 3%, or 314 facilities (from 12,546 to 12,232).

Three states--California, Delaware, and New Jersey--have regulations with similar requirements to PSM. These regulations pre-date PSM. Because facilities in these state were already complying with PSM requirements, they were not included in the Regulatory Impact Analysis accompanying OSHA's final PSM Standard, and consequently are not included here. The current RMP database has 931 sites in these three states. All numbers presented here (other than the 12,232 overall totals in the database) do not include these sites. Taking out these 931 sites leaves 11,301 sites

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<sup>6</sup> A process for RMP is "Any activity involving a regulated substance, including any use, storage, manufacturing, handling, or on-site movement of such substances, or combination of these activities. For the purpose of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process" (EPA RMP general documentation, Chap. 1). A single establishment can have multiple processes.

potentially under the PSM rule in the dataset. RMP categorizes facilities generally, and processes in particular, fall into 3 categories: Program 1 being the smallest risk and the fewest requirements, Program 2 is intermediate, and Program 3 is the riskiest with the strictest requirements. Program 3 facilities are explicitly covered under PSM. There are (excluding the above 3 states) 661 Program 1 establishments, 4,235 Program 2 establishments and 6,405 Program 3 establishments. The associated number of Program 3 processes is 9,731.<sup>7</sup>

#### Establishment Changes since the Last ICR

There are a few changes in this ICR beyond the updating of the base RMP dataset since the previous ICR submission in 2016.

First, there is one program change due to OSHA's rescission of its previous revision in the agency's interpretation of the scope of the retail exemption of the Standard, 1910.119(a)(2)(i)<sup>8</sup>. Thus all facilities that were included in the previous ICR due to the now obsolete revision: EPA RMP Program 2 facilities in the RMP database that are both not in retail NAICS 44-45 and not in agriculture (NAICS 111), are taken out. Thus 4,671 retail establishments along with their associated 4,971 processes are dropped from the analysis.

Second, the agency is making several methodological changes as part of its hours adjustment. OSHA's internal technical staff has estimated that PSM covers some establishments that are both not included in the RMP data nor in previous ICRs. These are new additions to the ICR analysis and will be included in this cost analysis. Note while they are new to the analysis they have continually been under the PSM standard and are presumed to be in compliance with all PSM provisions. Hence, these "methodological" establishments will only have ongoing burdens in this analysis, their startup costs have already been borne. The estimates are mostly based on adding an extra percentage of the RMP data to the final number of PSM facilities, the RMP data being the best base with which to extrapolate the number of extra facilities.<sup>9</sup>

- The first category is for facilities with reactive chemicals, that EPA's RMP does not cover. OSHA estimates this adds ten percent of RMP Program 3 facilities and processes to the total. This gives 641 establishments ( $0.10 \times 6,405$ ). OSHA staff estimates that there would be one process at each establishment giving 641 more processes.

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<sup>7</sup> An email communication from EPA (2/15/2019) puts the number of Program 3 processes for the entire RMP dataset at 11,000. Assuming the three left out states have establishments and associated processes like the rest of the country, an estimate of the number of processes can be gotten from the percentage of Program 3 establishments in the entire dataset (7,240) with those without the 3 states (6,405), or 88% ( $6,405/7,240$ ). Multiplying this percentage times the total 11,000 number of processes gives an estimate of 9,731 ( $0.88 \times 11,000$ ). Note all totals in the text are exact while intermediate calculations are rounded, so shown calculations will only be approximately the correct total.

<sup>8</sup> <https://www.osha.gov/laws-regs/standardinterpretations/2018-04-30>

<sup>9</sup> These methodological changes together are judged to include an estimate of the number of establishments under PSM due to a previous revision in minimum concentration levels. Hence a separate estimate used in the previous ICR for these concentration establishments and burdens is dropped in this analysis.

- The second category is for flammables, where OSHA's coverage starts at a lower flash point than RMP's criteria. OSHA estimates this will add 25 percent of RMP Program 3 facilities, again with one process each. This gives 1,601 establishments ( $.25 \times 6,405$ ) and the same number of processes.
- The third category is RMP Program 1 facilities that OSHA did not previously include in its estimate. Technical staff estimates that 70 percent, one process each, are covered by PSM. This gives 463 ( $.70 \times 661$ ) additional establishments and processes.
- Finally, OSHA is including explosive and pyrotechnic manufacturing facilities. These facilities are covered by PSM but not RMP. Here OSHA takes all of NAICS 325920 (explosives manufacturing) and then approximately 35 percent of NAICS 325998 (miscellaneous explosives manufacturing) to account for pyrotechnics, as facilities that are both covered by PSM.<sup>10</sup> Again OSHA estimates one process per establishment. The most recent County Business Patterns data of 2016 has 83 establishments in NAICS 325920 and 1,177 in NAICS 325998. This gives 495 establishments due to explosives ( $83 + (.35 * 1,177)$ ) and the same number of processes.

The inclusion due to the methodological change for reactives, flammables, RMP Program 1 facilities, and explosives, gives a total of 3,200 establishments ( $641 + 1,601 + 463 + 495$ ) and the same number of processes. Estimates for elements consistent with the previous ICR are for Program 3 facilities which are 6,405 establishments and 9,371 processes. Finally, altogether total estimates are 9,605 establishments ( $3,200 + 6,405$ ) and 12,931 processes ( $3,200 + 9,731$ ). OSHA is also adjusting burden hour calculations that fall into two categories. The first category pertains to facilities added due to methodological changes and the second category adjust the calculations for ongoing requirements.

#### Burden Hour Calculations for Facilities Added Due to Methodological Changes

Facilities are in RMP Program 1 because any releases would have smaller impact. They are already subject to some requirements under EPA RPM and their technology is much less complex. Similarly, this will also mean the hour burden and cost for PSM will also be less than for the average facility in this ICR analysis. The number of employees at a facility is a rough proxy for technological complexity, but is suggestive. There are a few very large facilities in RMP Program 1 that lead to a mean employment of 112 versus a median of only 19. Technical staff judges that in many of these very large facilities only a small part would be covered by PSM, that the covered process would only be a small portion of the facility's production, and that therefore the median of 19 is a better proxy for the typical complexity of these facilities. This compares to the mean of 214 for tier 3 facilities.

If employment was a perfect measure of technology complexity and hours burdens this would give

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<sup>10</sup> The 35 percent comes from looking at Dun and Bradstreet data for this NAICS for an earlier year.

an estimate of 8% (19/241) as the typical burden that should be given to RMP program 1 facilities. This is just suggestive and given the only rough proxy of employment to technological complexity, the technical staff judges that 20% of the burden for the RMP program 3 facilities is a reasonable estimate. The technical staff also judges the other methodological additions: reactives, flammables, and explosives are also at this lower range of complexity and assigns the same 20% factor for hours burden.

#### Burden Hour Changes for Ongoing Requirements

Another methodological change is for recurring requirements under PSM, in provisions F and I. Initial implementation of the requirements is a naturally higher burden than for maintenance of the requirements, where there is only updating of previous procedures due to any changes that have occurred during the past year. Previous ICRs did not consider this. Technical staff judges that the burden should, on average, be about 20% of the initial installation and this will be used here.

Similarly provision E. (e)(6) and (e)(7), Updating, Revalidating, and Retaining the Process Hazard Analysis (PHA) in previous ICRs took the same amount of time, 100 hours, as initially doing the PHA in paragraph (e)(1). Technical staff judges that an estimate of 50 hours is correct, and drops the extra 50 hours of a level VI engineer.

Management of Change, provision K, breaks out burden and cost by large and small facilities. The agency judges that provisions L and N should also have this same breakout and treats current unit burden as those for large facilities. Hence small facilities will have their burdens be one third of those of previous ICRs.

#### Determination of Burden Hours

There is a small inflow of new facilities covered by the PSM standard each year that will result in an addition in burden hours and costs. The agency identified all new PSM facilities (all RMP Program 3 facilities and taking 70 percent of RMP Program 1 facilities) that entered the RMP database over the last five years (2014 to 2018) and divided them by five to get an estimate of the annual number of new facilities entering PSM within the RMP dataset (this is the same methodology as past ICRs). This same percentage of new PSM facilities to all facilities in the RMP dataset (6%) was then used to estimate the number of new facilities and processes among the extrapolated categories: reactives, flammables, and explosives. Altogether, this leads to an estimate that there are annually 181 new PSM-covered facilities with 246 associated processes.

The overall number of new facilities and processes brought under PSM in the first year due to adjustments, the methodological changes plus the new inflow for previous ICR components (RMP Program 3), is a total of 3,327 facilities and 3,397 processes (3,201 methodological change facilities + 126 new establishments; and 3,201 methodological change processes + 197 new processes.) The program change due to retail is a decrease of 4,671 facilities and 4,971 processes. Hence the net change in facilities and processes due to both adjustments and the program change is a decrease of 1,344 facilities and 1,574 processes.

There are a total of 9,787 establishments that report annually (9,606 current facilities and 181 new PSM-covered facilities). All estimates for future years assume a total fixed number of establishments so the analysis is assuming the same number of establishments drop out of the PSM standard as the number who join (this is the same assumption as in past ICR's).

The agency determined the wage rate from mean hourly wage earnings to represent the cost of employee time. For the relevant standard occupation classification category, OSHA used the wage rates reported in the Bureau of Labor Statistics (BLS), U.S. Department of Labor, Occupational Employment Statistics (OES), May 2018 [[https://www.bls.gov/oes/current/oes\\_nat.htm](https://www.bls.gov/oes/current/oes_nat.htm). date accessed: June 6, 2019].

To account for fringe benefits, the agency used the BLS *Employer Costs for Employee Compensation (2018)*. Fringe markup is from the following BLS release: *Employer Costs for Employee Compensation* news release text; for release December 2018. [<https://www.bls.gov/news.release/pdf/ecec.pdf>]. BLS reported that for civilian workers, fringe benefits accounted for 31.4 percent of total compensation and wages accounted for the remaining 68.6 percent.

<b>WAGE HOUR ESTIMATES TABLE</b>				
<b>Occupational Title</b>	<b>Standard Occupation Code</b>	<b>Mean Hour Wage Range (A)</b>	<b>Fringe Benefits (B)</b>	<b>Loaded Hourly Wage Range (C) = (A)/((1-(B)))</b>
Engineers				
Level III	17-0000	\$42.01	.314	\$61.24
Level IV	17-2199	\$47.80	.314	\$69.68
Level V	17-2041	\$55.03	.314	\$80.22
Level VI	11-9041	\$71.62	.314	\$104.40
Blue-Collar Supervisor	51-1010	\$30.93	.314	\$45.09
Production Workers	51-0000	\$18.84	.314	\$27.46
Service Worker	39-0000	\$13.51	.314	\$19.69
Clerical Worker	43-9061	\$16.92	.314	\$24.66

OSHA is basing its hour assumptions for all facilities (methodological change and new facilities) from the same estimates as the original PSM rule. These estimates were an average over all facilities in scope and will be an overestimate to the extent that facilities brought in under the methodological change (RMP Program 1 facilities for example) have a burden that is less than the overall average.

**(A) Employee Participation (paragraph (c)).** In the 1999 ICR, OSHA indicated that the on-going burden of employee participation required by paragraph (c) is included in other elements of the Standard and, therefore, no burden hours were assigned to this paragraph. Comments to the

ICR concurred with the agency's assessment regarding this burden.

**(B) Process Safety Information (paragraph (d)).** Based on the compliance schedule specified in paragraphs (e)(1)(i)-(e)(1)(v) of the Standard, OSHA believes only new establishments need to compile the written process safety information required by this provision. Therefore, the agency is determining burden hour and cost estimates only for new establishments. For each of these establishments, this task requires 50 hours each from a level IV engineer and a blue-collar supervisor, as well as 54 hours each from two production workers, for a total of 208 hours per establishment. The total cost per establishment is \$8,704 (i.e., \$3,484 for a level IV engineer (\$69.68/hour x 50 hours), \$2,254 for a blue-collar supervisor (\$45.75/hour x 50 hours), and \$2,966 for 2 production workers (\$27.46/hour x 108 hours (54 hours each)).

As discussed above, the facilities included as part of the methodological change have lower technological complexity than previously included facilities (RMP Program 3) and are estimated to have 20% of the burdens and costs of a RMP Program 3 facility. There are 55 new facilities resulting from the methodological change each year and 126 new RMP Program 3 facilities.

Numbers presented in formulas in text are rounded though all spreadsheet calculations use exact numbers so that formulas may not match. All total numbers are correct.

### **Annual Burden Hours and Costs**

#### **Burden hours:**

##### RMP Program 3 facilities

126 establishments x 208 hours = 26,125 hours

##### Methodological facilities

55 establishments x 208 hours x (.20) = 2,308 hours

##### Total

26,126 + 2,308 = 28,433 hours

#### **Costs:**

28,433 hours x \$41.85 (avg.) ≈ \$1,189,913

**(C) Process Hazard Analysis (paragraph (e)(1)).** Only new establishments need to perform an initial process hazard analysis for each covered process. Accordingly, for each of these establishments, this task is estimated to require 100 hours each from a level IV engineer and a blue-collar supervisor, as well as 18 hours each from two production workers, for a total of 236 hours per establishment. The total cost for each of these establishments is \$12,466 (i.e., \$6,968 for a level IV engineer (\$69.68/hour x 100 hours), \$4,509 for a blue-collar supervisor (\$45.09/hour x 100 hours), and \$989 for two production workers (\$27.46/hour x 36 hours (18 hours each)).

As discussed above, the methodological change facilities have lower technological complexity than RMP Program 3 facilities and are estimated to have 20% of the burdens and costs of a RMP Program 3 facility. There are 55 new facilities resulting from the methodological change each year



and 126 new RMP Program 3 facilities.

### **Annual Burden Hours and Costs**

#### **Burden hours:**

##### RMP Program 3 facilities

126 establishments x 236 hours = 29,642 hours

##### Methodological facilities

55 establishments x 236 hours x (.20) = 2,619 hours

##### Total

29,642 + 2,619 = 32,260 hours

#### **Costs:**

32,260 hours x \$52.82 (avg.) ≈ \$1,703,989

**(D) Resolution of Hazards (paragraph (e)(5)).** Documenting how and when the employer resolves the findings and recommendations of the team that conducted the process hazard analysis, and communicating this information to the appropriate workers, takes a level IV engineer 22 hours per establishment. As this provision addresses initial process hazard analyses, only new establishments are affected.

As discussed above, the facilities included as part of the methodological change have lower technological complexity than previously included facilities (RMP Program 3) and are estimated to have 20% of the burdens and costs of a RMP Program 3 facility. There are 55 new facilities resulting from the methodological change each year and 126 new RMP Program 3 facilities. The agency determined the annual estimated burden hours and cost for this provision as follows:

### **Annual Burden Hours and Costs**

#### **Burden hours:**

##### RMP Program 3 facilities

126 establishments x 22 hours = 2,763 hours

##### Methodological facilities

55 establishments x 22 hours x (.20) = 244 hours

##### Total

244 + 2,763 = 3,007 hours

#### **Costs:**

3,007 hours x \$69.68 = \$209,550

**(E) Updating, Revalidating, and Retaining the Process Hazard Analysis (paragraphs (e)(6) and (e)(7)).** Updating or revalidating the hazard analysis for each existing process every five years (i.e., 20% of 12,933 processes, or 2,587 per year), and retaining process-analysis information and the documents specified by paragraph (e)(5), requires 50 hours from a level IV

engineer. The total cost per process is \$3,484 for a level IV engineer (\$69.68/hour x 50 hours). For all covered processes, the estimated burden hours and costs each year is:<sup>11</sup>

The number of RMP program 3 processes is 1,946 while the number of methodological processes is 640 (1,946 + 640 = 2,587).

### **Annual Burden Hours and Costs**

#### **Burden Hours:**

##### RMP Program 3 facilities

1,946 processes x 50 hours = 97,314 hours

##### Methodological facilities

640 processes x 22 hours x (.20) = 6,402 hours

##### Total

97,314 + 6,402 = 103,716 hours

#### **Costs:**

103,716 hours x \$69.68 = \$7,226,925

**(F) Operating Procedures (paragraph (f)(1)-(f)(4)).** It takes a level IV engineer 22 hours, at a cost of (\$69.68/hour), to develop written operating procedures and safe work practices to control the movement of the contractor and its workers in process areas for each new process. For existing processes updating operating procedures would be 20% of this, or 4.4 hours (20% x 22 hours). In each year there are 246 new processes (191 RMP 3 facility processes and 55 methodological facility processes) and 12,933 existing processes (9,731 RMP 3 facility processes and 3,201 methodological facility processes.)

The yearly burden hours and costs for this provision are estimated to be:

### **Annual Burden Hours and Costs**

#### **Burden hours:**

##### New

##### RMP Program 3 facilities

191 processes x 22 hours = 4,198 hours

##### Methodological facilities

55 processes x 22 hours x (.20) = 244 hours

##### Existing

##### RMP Program 3 facilities

9,731 processes x 22 hours x (.20) = 42,818 hours

##### Methodological facilities

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<sup>11</sup> Although these paragraphs do not explicitly require that employers retain these records, OSHA is taking burden for record retention because it believes the 5-year updating and revalidation requirement specified by paragraph (e)(6) implies that employers retain these records.

3,201 processes x 22 hours x (.20) x (.20) = 2,817 hours

Total

4,198 + 244 + 42,818 + 2,817 = 50,007 hours

Costs:

50,007 hours x \$69.68 = \$3,489,390

**(G) Training (Initial, Refresher, and Documentation) (paragraphs (g)(1)-(g)(3)).** The agency estimates that the Standard covers approximately 1,522,750 workers. This is made up of 1,494,795 employees in existing establishments, and 27,955 for new establishments.<sup>12</sup> OSHA assumes that the worker turnover rate for the affected establishments is 10% of the workers per year, and that the 149,480 (.10 x 1,494,795) replacement workers require initial training under paragraph (g)(1). Then all workers in new establishments will also need initial training, giving a total of 177,434 (149,480 + 27,955) employees.

In addition, paragraph (g)(2) requires that workers receive refresher training at least once every three years, for an annual total of 498,265 workers (i.e., one-third of 1,494,795 workers in existing establishments).<sup>13</sup> The total number of both types of training is then 675,700 (177,434 + 498,265). A clerical worker takes three minutes (3/60) to generate and maintain the training record specified by paragraph (g)(3) for each of these workers, at an hourly wage rate of \$24.66.

The estimated annual burden hours and cost for this provision are:

**Annual Burden Hours and Costs**

**Burden hours:**

675,700 employees x (3/60) hours = 33,785 hours

**Costs:**

33,785 hours x \$24.66 = \$833,297

**(H) Contractors (paragraphs (h)(2)(i)-(h)(2)(iv), (h)(2)(vi), (h)(3)(iii)), and (h)(3)(v)).**

Paragraph (h) imposes collections of information on both employers and contractors. Obtaining and evaluating information regarding a contractor's safety performance and programs, informing a contractor of the specified hazards and the applicable provisions of the emergency action plan, developing and implementing safe work practices to control the entrance, presence and exit of

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<sup>12</sup> There are cases where the employment in the RMP dataset is zero. For RMP Program 3 cases we substitute the average Program 3 employment (214 employees) among all non-zero values. For the methodological change establishments we use the median value of RMP program 1 establishments of 19. Note for RMP program 1 establishments if we do have employment we use it, though above it was judged that large RMP program 1 establishments will typically only have a portion of their facility under PSM. Hence for these facilities there will be an overestimate of the number of employees covered and needing training.

<sup>13</sup> The timing of turnover and retraining matters here. If retraining is all at the beginning of the year and turnover at the end then this calculation is correct. To the extent that turnover happens earlier and that new firms may also have some turnover then refresher training numbers would be slightly smaller and initial training numbers slightly larger. Both effects would be negligible.

contract employers and contract workers in covered process areas, maintaining a contract worker injury and illness log, documenting that contract workers have been trained to perform their work practices safely, and requiring the contractor to advise the employer of any unique hazard presented by the contract employer's work, or any hazards found by the contract employer's work requires 50 hours each from a level IV engineer, a blue-collar supervisor, and two production workers, for a total of 200 hours per establishment. The total cost per establishment is \$8,485 (i.e., \$3,484 for a level IV engineer (\$69.68/hour x 50 hours), \$2,255 for a blue-collar supervisor (\$45.09/hour x 50 hours), and \$2,746 for two production workers (\$27.46/hour x 100 hours (50 hours each)). In addition, the agency finds that these paperwork requirements affect 50 percent of all existing establishments each year as well as all new establishments. Annually we have 3,203 existing RMP 3 facilities (.50 x 6,405) and 1,601 methodological facilities (.50 x 3,201) as well as 126 new RMP 3 facilities and 55 new methodological facilities.

OSHA estimates the total burden hours and cost for these establishments each year to be:

### **Annual Burden Hours and Costs**

#### **Burden hours:**

##### New

##### RMP Program 3 facilities

126 establishments x 200 hours = 25,120 hours

##### Methodological facilities

55 establishments x 200 hours x (.20) = 2,219 hours

##### Existing

##### RMP 3 facilities

3,203 establishments x 200 hours x (.20) = 128,100 hours

##### Methodological facilities

1,601 establishments x 200 hours x (.20) x (.20) = 12,805 hours

##### Total

25,120 + 2,219 + 128,100 + 12,805 = 168,244 hours

#### **Costs:**

168,244 hours x \$42.43 (avg.) ≈ \$7,138,593

**(I) Written Procedures, Inspections, and Testing (paragraphs (j)(2) and (j)(4)(iv)).** OSHA estimates that all processes, new and existing, must establish and implement the required written procedures, and to document each inspection and test performed on process equipment (including the specified information). For each new process, this task requires 8 hours of a level III engineer's time, 8.5 hours of a blue-collar supervisor's time, and 130 hours of a service worker's time, for a total of 146.5 hours per establishment. The total cost for each of these processes is \$3,433 (i.e., \$490 for a level III engineer (\$61.24/hour x 8 hours), \$383 for a blue-collar supervisor (\$45.09/hour x 8.5 hours), and \$2,560 for a service worker (\$19.69/hour x 130 hours)). For existing processes the same operations will take considerably less effort and the agency

estimates that it will be 20% of new processes. In each year there are 246 new processes (191 RMP 3 facility processes and 55 methodological facility processes) and 12,933 existing processes (9,731 RMP 3 facility processes and 3,201 methodological facility processes.)

The estimated total burden hours and cost for these processes each year are:

### **Annual Burden Hours and Costs**

#### **Burden hours:**

##### New

##### RMP 3 Facilities

191 processes x 146.5 hours = 27,956 hours

##### Methodological Facilities

55 processes x 146.5 hours x (.20) = 1,626 hours

##### Existing

##### RMP 3 Facilities

9,731 processes x 146.5 hours x (.20) = 285,129 hours

##### Methodological Facilities

3,201 processes x 146.5 hours x (.20) x (.20) = 18,759 hours

##### Total

27,956 + 1,626 + 285,129 + 18,759 = 333,470 hours

#### **Costs:**

333,470 hours x \$ 23.43 (avg.) ≈ \$7,813,194

**(J) Hot Work Permits (paragraph (k)).** The agency estimates that small establishments issue 6 hot work permits per year for each covered process, while large establishments issue twice as many per year for each process due to the additional complexity of their operations. All small establishments are assumed to have 1 process and thus issue a total of six permits annually, while the average number for large establishments for different groups is presented below. The inflow of new establishments is assumed to have the same percentage of large and small establishments as the existing population. In addition, a blue-collar supervisor, earning \$45.09 per hour, takes six minutes (6/60 hours) to complete this task.

The annual burden-hour and cost estimates for these establishments are:

### **Annual Burden Hours and Costs**

#### **Burden hours:**

((7,393 large establishments x 1.43 average processes x 12 permits = 126,868) + (2,394 small establishments x 6 permits = 14,364) = 141,232 permits x (6/60) = 14,123 hours

#### **Costs:**

14,123 hours x \$45.09 = \$636,781

**(K) Management of Change (paragraphs (l)(1), (l)(4), and (l)(5)).** To estimate the burden

hours and cost associated with developing written management-of-change procedures and updating process safety information and operating procedures, the agency determined different hour requirements for large and small establishments, shown below. New establishments are assumed to have the same percentage of large and small establishments as the existing population. The agency estimates that affected small establishments have one covered process each. The agency estimated that on average each small establishment would require 6 hours for a level IV engineer, earning \$69.68 per hour (69.68/hour x 6 hours = \$418), and 12.3 hours for production workers earning \$27.46 per hour (\$27.46/hour x 12.3 hours = 338). The total burden unit hours per small establishment are 18.3 hours (6 + 12.3). The average cost per hour is \$28.85 ((\$418 + 338 = 756)/18.3). To account for the greater complexity of processes utilized by large establishments, the agency increased the estimated burden hours for large establishments by a factor of three so giving 54.9 (18.3 x 3) hours per process.

The estimated total burden hours and cost are:

### **Annual Burden Hours and Costs:**

#### **Burden hours:**

(7,393 large establishments x 1.43 average processes x 54.9 hours = 580,422) + (2,394 small establishments x 18.3 hours = 43,810) = 624,233 hours

#### **Costs:**

624,233 hours x \$41.31 = \$25,783,798

**(L) Incident Investigations (paragraphs (m)(4)-(m)(7)).** To prepare an incident investigation report containing the specified information, document resolutions and corrective actions, provide the report for review by workers whose job tasks are relevant to the incident findings, and retain the reports for five years requires 16 hours from a level V engineer, 48 hours from a level IV engineer, 32 hours from a blue-collar supervisor, and 4 hours from a clerical worker, for a total of 100 hours to perform these tasks for each incident.<sup>14</sup> The agency estimates that each establishment has one reportable incident each year.<sup>15</sup> The total cost per concentration establishment is \$6,171 (i.e., \$1,284 for a level V engineer (\$80.22/hour x 16 hours), \$3,345 for a level IV engineer (\$69.68 x 48 hours), \$1,443 for a blue-collar supervisor (\$45.09/hour x 32 hours), and \$99 for a clerical worker (\$24.66/hour x 4 hours). To account for the lesser complexity of processes utilized by small establishments, the agency decreased the estimated burden hours for large establishments by a factor of three so giving 33.3 (100 x (1/3)) hours per process.

The estimated total burden hours and cost are:

### **Annual Burden Hours and Costs**

<sup>14</sup> The 100-hour estimate is based on comments submitted in response to the 1996 ICR.

<sup>15</sup> From the original RIA.

**Burden hours:**

$(7,393 \text{ large establishments} \times 100 \text{ hours} = 739,325) + (2,394 \text{ small establishments} \times 33.3 \text{ hours} = 79,801) = 819,126 \text{ hours}$

**Costs:**

$819,126 \text{ hours} \times \$61.71 \text{ (avg.)} \approx \$50,548,265$

**(M) Emergency Planning and Response (paragraph (n)).** It takes one hour of a level V engineer's time (at \$80.22 per hour) to establish an emergency action plan that includes procedures for handling small releases. OSHA estimates that this requirement affects only new establishments because existing establishments have already established action plans. Each year there will be 181 new facilities. Given the fixed elements of creating such a plan, regardless of the complexity of the technology, the agency judges that all establishments will have this same one hour burden.

The yearly burden hours and cost for these establishments are estimated to be:

**Annual Burden Hours and Costs**

**Burden hours:**

$181 \text{ establishments} \times 1 \text{ hour} = 181 \text{ hours}$

**Costs:**

$181 \text{ hours} \times \$80.22 = \$14,526$

**(N) Compliance Audits (paragraphs (o)(1) and (o)(3)–(o)(5)).** Certifying compliance with the standard once every three years after conducting a compliance audit, developing a report of the audit findings, determining and documenting an appropriate response to each of the audit findings, documenting that any deficiencies have been corrected, and retaining the last two audit reports, takes 32 hours from a level V engineer, 48 hours from a level IV engineer, 32 hours from a blue-collar supervisor, and 8 hours from a clerical worker, for a total of 120 hours to complete these paperwork tasks. The agency estimates that 2,135 RMP 3 facilities are affected by these provisions (6,405 existing RMP 3 establishments divided by 3) and 1,067 methodological facilities (3,201 methodological establishments divided by 3).<sup>16</sup> The total cost per establishment is \$7,552 (i.e., \$2,567 for a level V engineer (\$80.22/hour x 32 hours), \$3,345 for a level IV engineer (\$69.68 x 48 hours), \$1,443 for a blue-collar supervisor (\$45.09/hour x 32 hours), and \$197 for a clerical worker (\$24.66/hour x 8 hours). For each year, the estimated total burden hours and cost for these establishments are:

**Annual Burden Hours and Costs**

**Burden hours:**

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<sup>16</sup> This uniform rate is the same as the one used in the original RIA.

RMP 3 facilities

2,135 establishments x 120 hours = 256,200 hours

Methodological facilities

1,067 establishments x 120 hours x (.20) = 25,610 hours

Total

256,200 + 25,610 = 281,810 hours

Costs:

281,810 hours x \$62.93 (avg.) ≈ \$17,734,273

**(O) Records Disclosure.** OSHA has determined that employers disclosing training records to OSHA during an inspection is not covered by the PRA.



**Estimated Annualized Respondent Hour and Cost Burden Table**

<b>Information Collection Requirement</b>	<b>Type of Respondent</b>	<b>Number of Respondents</b>	<b>Number of Responses per Respondent</b>	<b>Total Number of Responses</b>	<b>Average Burden per Response (In Hours)</b>	<b>Total Burden Hours</b>	<b>Avg. Hourly Wage Rate*</b>	<b>Total Burden Costs</b>
(A) Employee Participation (paragraph (c))		0	0	0	0	0	0	0
(B) Process Safety Information (paragraph (d))	Level IV engineer-RMP 3 facility	126	1	126	50	6,280	\$69.68	\$437,590
	Level IV engineer-methodological facility	55	1	55	10	555	\$69.68	\$38,659
	Blue-collar supervisor-RMP 3 facility	126	1	126	50	6,280	\$45.09	\$283,165
	Blue-collar supervisor-methodological facility	55	1	55	10	555	\$45.09	\$25,016

	2 Production workers-RMP 3 facility	126	1	126	108	13,565	\$27.46	\$372,489
	2 Production workers- methodological facility	55	1	55	22	1,198	\$27.46	\$32,908
	<b>Subtotal</b>	<b>181</b>	--	<b>181</b>	--	<b>28433</b>	--	<b>\$1,189,828</b>
(C) Process Hazard Analysis (paragraph (e) (1))	Level IV engineer-RMP 3 facility	126	1	126	100	12,560	\$69.68	\$875,181
	Level IV engineer- methodological facility	55	1	55	20	1,110	\$69.68	\$77,318
	Blue-collar supervisor- RMP 3 facility	126	1	126	100	12,560	\$45.09	\$566,330
	Blue-collar supervisor- methodological facility	55	1	55	20	1,110	\$45.09	\$50,033
	2 Production workers-RMP 3 facility	126	1	126	36	4,522	\$27.46	\$124,163
	2 Production	55	1	55	7	399	\$27.46	\$10,969

	workers- methodological facility								
<b>Subtotal</b>		<b>181</b>	--	<b>181</b>		<b>32260</b>	--	<b>\$1,703,995</b>	
(D) Resolution of Hazards (paragraph (e) (5))	Level IV engineer-RMP 3 facility	126	1	126	22	2,763	\$69.68	\$192,540	
	Level IV engineer- methodological facility	55	1	55	4	244	\$69.68	\$17,010	
<b>Subtotal</b>		<b>181</b>	--	<b>181</b>		<b>3007</b>	--	<b>\$209,550</b>	
(E) Updating, Revalidating, & Retaining the Process Hazard Analysis (paragraph (e) (6) & (e)(7))	Level IV engineer-RMP 3 facility	1,946	1	1946	50	97,314	\$69.68	\$6,780,807	
	Level IV engineer- methodological facility	640	1	640	10	6,402	\$69.68	\$446,118	
<b>Subtotal</b>		<b>2,587</b>	--	<b>2,587</b>	--	<b>103,716</b>	--	<b>\$7,226,925</b>	

(F) Operating Procedures (paragraph (f) (1)-(f)4))	Level IV engineer-New RMP 3 facility	191	1	191	22	4,198	\$69.68	\$292,533
	Level IV engineer-New methodological facility	55	1	55	4	244	\$69.68	\$17,010
	Level IV engineer-Existing RMP 3 facility	9,731	1	9731	4	42,818	\$69.68	\$2,983,555
	Level IV engineer-Existing methodological facility	3,201	1	3201	1	2,817	\$69.68	\$196,292
<b>Subtotal</b>		<b>13,179</b>	--	<b>13,179</b>	--	<b>50,077</b>	--	<b>\$3,489,390</b>
(G) Training: Initial, Refresher, & Documentation (paragraph (g) (1)-(g)(3))	Clerical worker	675,700	1	675700	0.05	33,785	\$24.66	\$833,138

(H) Contractors (paragraphs (h) (2)(i)-(h)(2) (iv), (h)(2)(vi), (h)(3)(iii), & (h)(3)(v))	Level IV engineer-New RMP 3 facility	126	1	126	50	6,280	\$69.68	\$437,590
	Level IV engineer-New methodological facility	55	1	55	10	555	\$69.68	\$38,659
	Level IV engineer- Existing RMP 3 facility	3,203	1	3203	10	32,025	\$69.68	\$2,231,502
	Level IV engineer- Existing methodological facility	1,601	1	1601	2	3,201	\$69.68	\$223,059
	Blue-collar supervisor- New RMP 3 facility	126	1	126	50	6,280	\$45.09	\$283,165
	Blue-collar supervisor- New methodological facility	55	1	55	10	555	\$45.09	\$25,016

	Blue-collar supervisor-Existing RMP 3 facility	3,203	1	3203	10	32,025	\$45.09	\$1,444,007
	Blue-collar supervisor-Existing methodological facility	1,601	1	1601	2	3,201	\$45.09	\$144,342
	2 Production workers-New RMP 3 facility	126	1	126	100	12,560	\$27.49	\$345,274
	2 Production workers-New methodological facility	55	1	55	20	1,110	\$27.49	\$30,503
	2 Production workers-Existing RMP 3 facility	3,203	1	3203	20	64,050	\$27.49	\$1,760,735
	2 Production workers-Existing methodological facility	1,601	1	1601	4	6,402	\$27.49	\$176,001
<b>Subtotal</b>		<b>4,984</b>	--	<b>4,984</b>	--	<b>168,244</b>	--	<b>\$7,139,855</b>

(I) Written Procedures, Inspections, & Testing (paragraphs (j) (2) & (j)(4) (iv))	Level III engineer-New RMP 3 facility	191	1	191	8	1,527	\$61.24	\$93,491
	Level III engineer-New methodological facility	55	1	55	2	89	\$61.24	\$5,436
	Level III engineer-Existing RMP 3 facility	9,731	1	9731	2	15,570	\$61.24	\$953,517
	Level III engineer-Existing methodological facility	3,201	1	3201	0.3	1,024	\$61.24	\$62,733
	Blue-collar supervisor-New RMP 3 facility	191	1	191	8.5	1,622	\$45.09	\$73,138
	Blue-collar supervisor-New methodological facility	55	1	55	2	94	\$45.09	\$4,253

	Blue-collar supervisor-Existing RMP 3 facility	9,731	1	9731	2	16,543	\$45.09	\$745,937
	Blue-collar supervisor-Existing methodological facility	3,201	1	3201	0.3	1,088	\$45.09	\$49,076
	Service worker-New RMP 3 facility	191	1	191	130	24,808	\$19.69	\$488,464
	Service worker-New methodological facility	55	1	55	26.0	1,443	\$19.69	\$28,403
	Service worker-Existing RMP 3 facility	9,731	1	9731	26.0	253,015	\$19.69	\$4,981,869
	Service worker-Existing methodological facility	3,201	1	3201	5.2	16,646	\$19.69	\$327,763
<b>Subtotal</b>		<b>13,179</b>	--	<b>13,179</b>	--	<b>333,470</b>	--	<b>\$7,814,081</b>



(J) Hot Work Permits (paragraph (k))	Large establishments	7,393	17.16	126868	0.1	12,687	\$45.09	\$572,049
	Small establishments	2,394	6	14364	0.1	1,436	\$45.09	\$64,768
<b>Subtotal</b>		<b>9,787</b>	--	<b>141,232</b>	--	<b>14,123</b>	--	<b>\$636,817</b>
(K) Management of Change (paragraph (l) (1), (l)(4) & (l) (5))	Large establishments	7,393	1.43	10572	54.9	580,422	\$41.31	\$23,977,242
	Small establishments	2,394	1	2394	18.3	43,810	\$41.31	\$1,809,812
<b>Subtotal</b>		<b>9,787</b>	--	<b>12,966</b>	--	<b>624,233</b>	--	<b>\$25,787,054</b>
(L) Incident Investigation (paragraphs (m)(4)-(m)(7))	Large establishments	7,393	1	7393	100	739,325	\$61.71	\$45,623,774
	Small establishments	2,394	1	2394	33.3	79,801	\$61.71	\$4,924,491
<b>Subtotal</b>		<b>9,787</b>	--	<b>9,787</b>	--	<b>819,126</b>	--	<b>\$50,548,265</b>
(M) Emergency Planning & Response (paragraph (n))	Level V engineer	181	1	181	1	181	\$80.22	\$14,520

(N) Compliance Audits (paragraphs (o) (1) & (o)(3)- (o)(5))	Level V engineer-RMP 3 facility	2135	1	2135	32	68,320	\$80.22	\$5,480,630
	Level V engineer- methodological facility	1067	1	1067	6.4	6,829	\$80.22	\$547,839
	Level IV engineer-RMP 3 facility	2,135	1	2135	48	102,480	\$69.68	\$7,140,806
	Level IV engineer- methodological facility	1,067	1	1067	9.6	10,244	\$69.68	\$713,788
	Blue-collar supervisor- RMP 3 facility	2,135	1	2135	32	68,320	\$45.09	\$3,080,549
	Blue-collar supervisor- methodological facility	1,067	1	1067	6.4	6,829	\$45.09	\$307,929
	Clerical worker- RMP 3 facility	2,135	1	2135	8	17,080	\$24.66	\$421,193
	Clerical worker-	1,067	1	1067	1.6	1,707	\$24.66	\$42,102

	methodological facility							
<b>Subtotal</b>		<b>3,202</b>	--	<b>3,202</b>	--	<b>281,810</b>	--	<b>\$17,734,837</b>
(O) Records Disclosure		0	0	0	0	0	0	0
<b>Unduplicated TOTAL</b>		-	-	<b>877,540</b>		<b>2,492,465</b>	-	<b>\$124,328,253</b>

**13. Provide an estimate for 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 respondent (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.**

The cost determinations made under Item 12 account for the total annual cost burden to respondents or recordkeepers resulting from these collection of information requirements. There are no additional costs to the respondents other than their time.

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

The disclosure of records during an inspection is not subject to the PRA under 5 CFR 1320.4(a)(2). OSHA would only review records in the context of an open investigation of a particular employer to determine compliance with the Standard. Therefore, OSHA takes no burden or cost in this Supporting Statement for disclosing information during an inspection.

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

OSHA is requesting a net total decrease of 1,590,151 hours from the currently approved hours (4,082,616 to 2,492,465 hours). This net decrease is made up of two elements. First, there is a program change decrease in the total number of covered establishments due to the agency rescinding its interpretation of the scope of the retail exemption of the PSM Standard. This lowers the burden by 77,480 hours. Second, there are adjustments to methodology and creating more effective categorizations which causes a further decrease of 1,512,671 hours.

Table 1 (located on the last page) provides the burden hours for both the program change and adjustments.

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

OSHA will not publish the information collected under the Standard.

**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. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS.**

There are no collections of information employing statistical methods.

<b>Table 1 Requested Burden Hour Adjustments</b>				
<b>Information Collection Requirement</b>	<b>2016 Currently Approved Burden Hours</b>	<b>2019 Requested Burden Hours</b>	<b>Total Burden Hour Program Changes</b>	<b>Total Burden Hour Adjustments</b>
(A) Employee Participation (paragraph (c))	0	0	0	0
(B) Process Safety Information (paragraph (d))	52,919	28,433	-2,102	-22,384
(C) Process Hazard Analysis (paragraph (e) (1))	76,844	32,260	-18,682	-25,901
(D) Resolution of Hazards (paragraph (e)(5))	5,368	3,007	0	-2,361
(E) Updating, Revalidating, and Retaining the Process Hazard Analysis (paragraphs (e) (6) and (e)(7))	189,600	103,716	0	-85,884
(F) Operating Procedures (paragraph (f)(1) - (f)(4))	217,043	50,077	-994	-165,971
(G) Training (Initial, Refresher, and Documentation) (paragraphs (g)(1) - (g)(3))	34,285	33,785	-4,671	4,171
(H) Contractors (paragraphs (h)(2)(i) – (h)(2)(iii), (h)(2)(vi), and (h)(3)(iii))	645,200	168,244	0	-476,956
(I) Written Procedures, Inspections, and Testing (paragraphs (j)(2) and (j)(4)(iv))	1,440,534	333,470	-1,989	-1,105,076
(J) Hot Work Permits (paragraph (k))	10,598	14,123	0	3,525
(K) Management of Change (paragraphs (l) (1), (l)(4) and (l)(5))	470,538	624,233	-4,671	158,365
(L) Incident Investigations (paragraphs (m) (4) – (m)(7))	686,228	819,126	-39,700	172,598
(M) Emergency Planning and Response (paragraph (n))	5,059	181	-4,671	-207
(N) Compliance Audits (paragraphs (o)(1) and (o)(3) – (o)(5))	248,400	281,810	0	33,410
(O) Records Disclosure	0	0	\$0	0
<b>TOTALS</b>	<b>4,082,616</b>	<b>2,492,465</b>	<b>-77,480</b>	<b>-1,512,671</b>