



**BILLING CODE: 4510-26-P**

**DEPARTMENT OF LABOR**

**Occupational Safety and Health Administration**

**29 CFR Part 1910**

**[Docket ID- OSHA-H005C-2006-0870]**

**RIN 1218-AD19**

**Limited Extension of Select Compliance Dates for Occupational Exposure to Beryllium in General Industry**

**AGENCY:** Occupational Safety and Health Administration (OSHA), Labor.

**ACTION:** Final rule.

**SUMMARY:** With this final rule, OSHA is extending the compliance date for certain ancillary requirements of the general industry beryllium standard to December 12, 2018.

This standard protects workers from the hazards of beryllium exposure. OSHA has determined that this final rule will maintain essential safety and health protections for workers while OSHA prepares a Notice of Proposed Rulemaking (NPRM) to clarify specific provisions of the beryllium standard in accordance with a settlement agreement entered into with stakeholders. The December 12, 2018, compliance date affects only certain ancillary provisions, i.e., methods of compliance, beryllium work areas, regulated areas, personal protective clothing and equipment, hygiene areas and practices, housekeeping, communication of hazards, and recordkeeping.

**DATES:** This rule is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For purposes of 28 U.S.C. 2112(a), OSHA designates Edmund Baird, Acting Associate Solicitor of Labor for Occupational Safety and Health, to receive petitions for review of the final rule. Contact the Acting Associate Solicitor at the Office of the Solicitor, Room S-4004, U.S. Department of Labor, 200 Constitution Avenue, NW, Washington, DC 20210; telephone: (202) 693-5445.

### **Citation Method**

In the docket for the beryllium rulemaking, found at <http://www.regulations.gov>, every submission was assigned a document identification (ID) number that consists of the docket number (OSHA-H005C-2006-0870) followed by an additional four-digit number. For example, the document ID number for OSHA's Preliminary Economic Analysis and Initial Regulatory Flexibility Analysis is OSHA-H005C-2006-0870-0426. Some document ID numbers include one or more attachments, such as the National Institute for Occupational Safety and Health (NIOSH) prehearing submission (see Document ID OSHA-H005C-2006-0870-1671).

When citing exhibits in the docket, OSHA includes the term "Document ID" followed by the last four digits of the document ID number, the attachment number or other attachment identifier, if applicable, and page numbers (designated "p." or "Tr." for pages from a hearing transcript). In a citation that contains two or more document ID numbers, the document ID numbers are separated by semicolons.

**FOR FURTHER INFORMATION CONTACT:**

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*Copies of this Federal Register document and news releases:* Electronic copies of these documents are available at OSHA's webpage at <https://www.osha.gov>.

## **SUPPLEMENTARY INFORMATION:**

### **I. Explanation of Regulatory Action**

#### **A. Introduction**

This final rule extends the compliance date to December 12, 2018, for certain ancillary provisions of the beryllium rule for general industry, specifically provisions related to methods of compliance, beryllium work areas, regulated areas, personal protective clothing and equipment, hygiene areas and practices, housekeeping, communication of hazards, and recordkeeping. This rule does not affect the new permissible exposure limits (PELs) for general industry, construction, and shipyards or the general industry provisions for exposure assessment, respiratory protection, medical surveillance, and medical removal, which OSHA began enforcing on May 11, 2018. This final rule also does not affect the March 11, 2019, compliance date for the provisions on change rooms and showers in paragraph (i) (hygiene areas and practices) or the March 10, 2020, compliance date for implementation of the engineering controls required by paragraph (f) (methods of compliance). Finally, this rule does not affect the applicability of paragraph (a) (scope and application) or paragraph (b) (definitions). (Document ID

2156). OSHA has determined that this final rule will maintain essential safety and health protections for workers while OSHA prepares a Notice of Proposed Rulemaking (NPRM) to clarify specific provisions of the beryllium standard in accordance with a settlement agreement entered into with stakeholders. The revisions that OSHA plans to propose are designed to enhance worker protections by ensuring that the rule is well-understood and compliance is simple and straightforward.

### **B. Summary of Economic Impact**

OSHA has determined that this final rule is not economically significant. The rule revises 29 CFR 1910.1024(o)(2) to extend the deadline for compliance with certain provisions of the general industry beryllium standard until December 12, 2018. OSHA's final economic analysis shows that this compliance date extension will result in a net cost savings for the affected industries. At a 3 percent discount rate over 10 years, the extension will result in net annual cost savings of \$0.76 million per year; at a discount rate of 7 percent over 10 years, the net annual cost savings is \$1.73 million per year. When the Department uses a perpetual time horizon, the annualized cost savings of the final rule is \$1.65 million with a 7 percent discount rate. The detailed final economic analysis, which includes more information on OSHA's cost/cost savings estimates for this final rule, can be found in the "Agency Determinations" section of this preamble. The rule is also an Executive Order (E.O.) 13771 deregulatory action.

### **C. Regulatory Background**

OSHA published a Notice of Proposed Rulemaking (NPRM) for occupational exposure to beryllium in the *Federal Register* on August 7, 2015. (80 FR 47566). In the NPRM, the agency made a preliminary determination that employees exposed to beryllium and beryllium compounds at the previous PEL faced a significant risk to their health and that promulgating the NPRM's proposed standard would substantially reduce that risk. The NPRM invited interested stakeholders to submit comments on a variety of issues.

OSHA held a public hearing in Washington, DC, on March 21 and 22, 2016. The agency heard testimony from a number of organizations, including public health groups, industry representatives, and labor unions. Following the hearing, participants had an opportunity to submit additional evidence and data, as well as final briefs, arguments, and summations (Document ID 1756, Tr. 326).

On January 9, 2017, after considering the entire record, OSHA issued a final rule with separate standards for general industry, shipyards, and construction, in order to tailor requirements to the circumstances found in these sectors. See 82 FR 2470. The general industry standard became effective on March 10, 2017, and the compliance date for most of the standard's provisions was March 12, 2018. However, on March 2, 2018, OSHA issued a memorandum stating that no provisions of the general industry standard would be enforced until May 11, 2018.<sup>1</sup> Two subsequent enforcement delays followed—the first, on May 9, 2018, delayed enforcement until June 25, 2018, of some of the general

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<sup>1</sup> On May 7, 2018, OSHA published a Direct Final Rule (DFR) which became effective July 6, 2018. (83 FR 19936; 83 FR 31045). The DFR clarified the definitions of “beryllium work area,” “emergency,” “dermal contact,” and “beryllium contamination.” It also clarified OSHA's intent with respect to provisions for disposal and recycling of materials that contain or are contaminated with beryllium, and with respect to provisions that the agency intends to apply only where skin can be exposed to materials containing at least 0.1 percent beryllium by weight.

industry standard's ancillary provisions (related to methods of compliance, beryllium work areas, regulated areas, personal protective clothing and equipment, hygiene areas and practices, housekeeping, communication of hazards, and recordkeeping). The second delay, on June 21, 2018, postponed enforcement of those provisions until August 9, 2018.

Following promulgation of the final rule in January 2017, several general industry employers, including Materion Corporation ("Materion"), challenged the rule in federal court. As part of a settlement agreement with Materion,<sup>2</sup> OSHA is planning to propose revisions to certain provisions in the general industry standard and to rely on its de minimis policy while the rulemaking is pending so that employers may comply with the proposed revisions to the standard without risk of a citation.<sup>3</sup> The revisions OSHA plans to propose under the settlement agreement are generally designed to clarify the standard in response to stakeholder questions or to simplify compliance, while in all cases maintaining a high degree of protection from the adverse health effects of beryllium exposure (Document ID 2156).

#### **D. Summary of Public Comments and Explanation of Final Action**

On June 1, 2018, OSHA published a proposed rule to extend the compliance date to December 12, 2018 for certain ancillary requirements of the general industry beryllium

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<sup>2</sup> The Materion settlement agreement can be viewed on regulations.gov (Document ID 2156): <https://www.regulations.gov/document?D=OSHA-H005C-2006-0870-2156>

<sup>3</sup> The OSH Act allows the Secretary of Labor to prescribe procedures for issuing notices instead of citations for "de minimis violations" that have no direct or immediate relationship to safety or health. 29 U.S.C. 658(a). OSHA's de minimis policy is set forth in its Field Operations Manual, available at [https://www.osha.gov/OshDoc/Directive\\_pdf/CPL\\_02-00-160.pdf](https://www.osha.gov/OshDoc/Directive_pdf/CPL_02-00-160.pdf). OSHA considers it a de minimis condition when an employer "complies with a proposed OSHA standard or amendment or a consensus standard rather than with the standard in effect at the time of the inspection and the employer's action clearly provides equal or greater employee protection." De minimis conditions do not result in citations or penalties. See 29 CFR 1903.15(c) ("Penalties shall not be proposed for de minimis violations which have no direct or immediate relationship to safety or health."); See Employer Rights and Responsibilities Following a Federal OSHA Inspection, <https://www.osha.gov/Publications/osha3000.pdf>.

standard. (83 FR 25536). OSHA explained that the proposed extension would give the agency time to prepare and publish a planned NPRM to amend the general industry standard before employers would be required to comply with certain ancillary provisions affected by that NPRM. That in turn would allow employers to comply with the proposed provisions without risk of a citation until any such changes are finalized (Document ID 2156).

In the proposal, OSHA requested comments from the public on both the duration and scope of the proposed compliance date extension (83 FR 25539). OSHA asked commenters to include a rationale for any concerns they had with the proposal, as well as for any alternatives they suggested. OSHA also requested comments on the “Agency Determinations” section of the proposal, including the preliminary economic analysis and other regulatory effects on employers and workers.

OSHA received ten comments in response to the proposal (Document IDs 2159-2168). The comments generally focused on three issues arising from the proposed extension: (1) whether to extend the compliance date, (2) the scope of any extension, and (3) the appropriate duration of any extension. Below we examine these three issues, in that order—by summarizing the comments and then explaining the agency’s determinations based on the record as a whole. We then address two miscellaneous comments.

*1. Extension of the Compliance Date for Certain Ancillary Provisions in the General Industry Standard*

Five commenters supported the agency’s proposed extension of the compliance date for ancillary provisions affected by OSHA’s forthcoming, substantive NPRM. (See Document ID 2161; 2165-2168). For example, Century Aluminum Company stated that

“the affected portions of the Standard should be delayed to allow OSHA time to prepare and publish the substantive proposed rule so that employers do not take unnecessary and costly measures.” (Document ID 2165, p.1). It added that the proposed delay would also limit confusion among employers and other stakeholders. (Document ID 2165, p.1).

Materion similarly observed that the proposed extension would address the concern that beginning enforcement of provisions affected by the NPRM could result in employer confusion or improper implementation of the relevant provisions of the rule. (Document ID 2161, p.2). Airborn Inc., Mead Metals, Inc., and the National Association of Manufacturers (NAM) supported Materion’s comments and registered their own support for the extension. (Document ID 2166, p.1; 2167, p.1; 2168, pp.1–2). These three stakeholders agreed that an extension is “necessary to give OSHA enough time to draft and publish” the forthcoming, substantive NPRM. (Document ID 2166, p.1; 2167, p.1; 2168, p.1). NAM added that the proposed extension was “another positive step toward a more effective general industry standard for the benefit of workers.” (Document ID 2168, p.2). NAM also expressed its appreciation for “OSHA’s recognition of employers’ reasonable and practical concerns regarding compliance in anticipation of [the forthcoming, substantive NPRM].” (Document ID 2168, p.2).

Four other commenters, the United Steelworkers (USW), Public Citizen, UNITE HERE! International Union (UNITE HERE), and the National Employment Law Project (NELP), opposed the proposed extension. (Document ID 2160; 2162-2164). These commenters argued that the extension would be unnecessary and unjustified, and would delay the implementation of important protections for workers. (See, e.g., Document ID 2160, pp. 1-2). For example, Public Citizen maintained that “[e]xpeditious

implementation of the ancillary provisions in general industry is absolutely necessary to enhance the benefits of the newly adopted PEL, ultimately providing another level of protection in occupational settings.” (Document ID 2162, p.3). It argued that delaying implementation would allow employers to continue to expose workers to unsafe levels of beryllium, ensuring “the occurrence of even more cases of beryllium sensitization, chronic beryllium disease,....lung cancer,” and other adverse health effects. (Document ID 2162, p.3).

OSHA understands Public Citizen’s concerns; the agency’s goal is to protect the health and safety of workers. That is why OSHA has narrowly tailored the scope of the compliance date extension to cover only provisions that will be affected by the forthcoming, substantive NPRM. OSHA is enforcing, and will continue to enforce, many of the provisions that provide critical protection to general industry employees. This final rule does not affect critical worker protections afforded by enforcement of the revised lower PEL, the new short-term exposure limit (STEL), and requirements for exposure assessment, respiratory protection, medical surveillance, and medical removal.

Moreover, in adopting this final rule, OSHA recognizes that the goal of worker protection can be frustrated where employers do not clearly understand OSHA’s requirements or how to implement them. OSHA appreciates the concerns of those stakeholders who note that, until OSHA releases its planned NPRM, employers may lack clarity regarding how to implement and comply with the beryllium standard. OSHA has determined that it would be undesirable, for both the agency and those it regulates, to begin enforcement of certain ancillary provisions of the standard that will likely be affected by the upcoming rulemaking—a scenario that could result in employers taking

unnecessary measures to comply with provisions to which OSHA intends to propose clarifications.

NELP and Public Citizen also asserted that the proposed compliance-date extension conflicted with OSHA's finding that a comprehensive standard is needed to protect workers exposed to beryllium. (Document ID 2162; 2163). OSHA disagrees with that assertion that this extension is in conflict with OSHA's findings. OSHA believes that a comprehensive standard is critically important for the protection of workers exposed to beryllium in general industry settings. However, the benefits of a comprehensive standard may not be fully realized where employers do not clearly understand, and have trouble implementing, its requirements. OSHA finds that this limited, short-term extension of the compliance date for certain ancillary requirements of the standard will give the agency the time necessary to ensure that employers have clear direction on how to protect workers exposed to beryllium. Additionally, as noted previously, OSHA will continue to maintain essential safety and health protections for workers through ongoing enforcement of many of the beryllium standard's key provisions. Enforcement of other OSHA standards, such as the Hazard Communication Standard (29 CFR 1910.1200) and Access to Employee Exposure and Medical Records (29 CFR 1910.1020) will also provide other important protections for workers in general industry. In particular, employers are, and will remain, obligated to label hazardous chemicals containing beryllium, ensure that safety data sheets are readily available, and train workers on the hazards of beryllium in accordance with the Hazard Communication Standard. OSHA encourages employers to review their hazard communication programs, employee training, and other hazard

communication practices (such as workplace labeling) to ensure continued compliance with the Hazard Communication Standard.

USW and UNITE HERE also questioned OSHA's justification for the proposed extension of compliance dates. USW objected to OSHA's preliminary determination that beginning enforcement of the ancillary provisions identified in the proposal before publication of the substantive NPRM could result in employer confusion or improper implementation of the relevant provisions of the rule. (Document ID 2160, p.2). USW argued that employers could avoid confusion by complying with the revisions that are identified in the settlement agreement. (Document ID 2160, p.2). In addition, USW and UNITE HERE claimed that OSHA proposed this extension to "demonstrate that it has taken deregulatory action." (Document ID 2160, p.2; 2164).

OSHA does not agree with the USW that this extension of compliance dates is unnecessary because employers can rely on the regulatory revisions identified in the settlement agreement before publication of the substantive NPRM. The settlement agreement contains only a redlined version of the relevant regulatory text. It does not include a full summary and explanation of the revisions, in which OSHA explains the meaning of the proposed revisions to the regulatory text and, in some cases, provides further information and examples to aid compliance. For example, OSHA is planning to propose changes to paragraph (j)(3), to address reuse of beryllium-containing materials in addition to disposal and recycling, because in some cases materials may be directly reused without being recycled. In the summary and explanation for the proposed rule, OSHA will explain the intended meaning of the term "reuse" and the circumstances

under which the cleaning and bagging requirements included in paragraph (j)(3) would apply to the reuse of materials that contain beryllium.

OSHA also disagrees with USW and UNITE HERE's characterization of the rationale for this extension. Although OSHA noted in the proposal that the proposed extension was "expected to be an . . . E.O.[] 13771 deregulatory action," it included that statement to carry out its obligations under E.O. 13771, not to justify the rulemaking. As stated above, the reason for this rulemaking is to provide OSHA sufficient time to promulgate proposed clarifications to the general industry standard, so that employers can easily understand and properly implement the standard in order to keep workers healthy and safe.

Based on the record as a whole, OSHA finds the arguments in favor of the proposed extension of compliance dates to be more persuasive than those against the proposal. Therefore, the agency has decided to adopt the proposed extension of compliance dates to allow time for the preparation and publication of the planned, substantive NPRM.

## *2. Scope of the Extension*

Having determined that an extension of the compliance date for certain ancillary provisions in the beryllium standard for general industry is appropriate, OSHA next addresses comments regarding which provisions will be included in the extension. In the NPRM, OSHA proposed extending the compliance date for the following provisions: beryllium work areas and regulated areas (paragraph (e)), written exposure control plans (paragraph (f)(1)), personal protective clothing and equipment (paragraph (h)), hygiene areas and practices (paragraph (i) except for change rooms and showers), housekeeping

(paragraph (j)), communication of hazards (paragraph (m)), and recordkeeping (paragraph (n)). OSHA requested comments on the proposed scope of the extension.

Several commenters objected to the scope of the proposed compliance-date extension. For example, USW asserted that the underlying settlement agreement only “affects beryllium products whose content is less [than] 1% by weight, but which does not generate exposures above the PEL.” (Document ID 2160, p. 1). Therefore, USW argued, “[t]here is no basis for staying ancillary provisions of the standard in workplaces where exposures to beryllium are above the PEL.” (Document ID 2160, pp. 1–2). UNITE HERE also asserted that the proposed extension of compliance dates should be limited to provisions that OSHA intends to change. (Document ID 2164). It further argued that “there is no justification to delay any provision of the standard to the extent that it would regulate exposures above the PEL.” (Document ID 2164). NELP similarly commented that the proposal was “broad and needlessly pushes back compliance dates of important worker protections to a highly toxic substance.” (Document ID 2163, p.1).

Century Aluminum, however, argued that OSHA should not extend the compliance date for only certain portions of affected paragraphs, as proposed by some of the other commenters. Beyond making it clear that the compliance dates for engineering and work practice controls (March 10, 2020) and change rooms and showers (March 11, 2019) remain unchanged, Century Aluminum asserted that differentiating by portions of affected paragraphs would lead to substantial confusion among employers and other stakeholders.<sup>4</sup>

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<sup>4</sup> Materion commented that the proposed extension of compliance dates did not cover all of the provisions that could be affected by the forthcoming, substantive NPRM. (Document ID 2161, p.1). Specifically, Materion noted that the NPRM could also affect the requirements for medical surveillance and change

OSHA agrees with Century Aluminum's assessment that an extension of compliance dates that differentiated between individual subparagraphs of the affected ancillary provisions, as suggested by USW and UNITE HERE, would create substantial confusion.<sup>5</sup> In addition, OSHA does not find that the extension should be limited to only those situations where beryllium exposures do not exceed the PEL. Contrary to USW's assertion, the substantive changes OSHA intends to propose to the beryllium standard for general industry *do* apply to processes that generate exposures above the PEL, and they are not limited to products whose beryllium content is less than one percent by weight. For example, changes to provisions for methods of compliance, personal protective clothing and equipment, housekeeping, and hygiene areas and practices involve *all* beryllium-containing materials where exposures may occur. Therefore, OSHA's rationale for the extension of compliance dates applies to all general industry workplaces within the scope of the beryllium standard, including those where beryllium exposures may exceed the PEL. Finally, as to UNITE HERE's comment that the extension should be limited to provisions that OSHA intends to change in the final standard, OSHA has

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rooms. (Document ID 2161, p.1 (citing Document ID 2156, Appendix B)). However, Materion did not ask OSHA to make any changes to the scope of the extension based on its comment. Rather, its comment appeared to serve as a recommendation to other employers to "take careful note of the proposed changes identified in the settlement agreement, and to take them into account when implementing their compliance programs for medical surveillance and change rooms." (Document ID 2161, p.1). OSHA notes that, until the NPRM is published, employers may comply with the medical surveillance provisions as clarified by the definitions of "CBD diagnostic center," "chronic beryllium disease," and "confirmed positive" that OSHA has agreed to propose, which are available in the docket (Document ID 2156) and in OSHA's interim enforcement guidance (<https://www.osha.gov/laws-regs/standardinterpretations/2018-05-09>).

<sup>5</sup> OSHA recognizes that three paragraphs, i.e., the paragraphs related to change rooms and showers in paragraph (i) and the requirement in paragraph (f)(2) for the implementation for engineering controls, have different compliance dates than those set for other paragraphs in paragraphs (i) and (f). However, this is a function of the way the compliance date provisions were structured in the January 9, 2017, final rule, and those dates were set based on specific findings made by the agency in that rulemaking. The agency believes employers have had ample notice of when the agency intends to begin enforcement of these particular provisions.

reexamined each of the provisions covered by the proposed extension and confirmed that the final extension of compliance dates applies only to paragraphs affected by the upcoming, substantive NPRM.

After considering these comments, OSHA has decided to retain the scope of the extension as proposed. The extension of compliance dates, therefore, will apply to the following provisions: beryllium work areas and regulated areas (paragraph (e)), written exposure control plans (paragraph (f)(1)), personal protective clothing and equipment (paragraph (h)), hygiene areas and practices (paragraph (i) except for change rooms and showers), housekeeping (paragraph (j)), communication of hazards (paragraph (m)), and recordkeeping (paragraph (n)).

### *3. Duration of the Extension*

Having determined that it is appropriate to extend the compliance date for certain ancillary provisions in the general industry beryllium standard, the remaining issue is the duration of the extension. In the NPRM, OSHA proposed extending the relevant compliance date until December 12, 2018. OSHA requested comments on the duration of the extension.

Very few commenters expressly opined on the duration of the proposed compliance date extension, and those who did disagreed as to whether a longer or shorter extension was appropriate. For example, Century Aluminum asked OSHA to consider extending the relevant compliance date for an additional three months, to March 11, 2019. (Document ID 2165, pp. 1–2). It argued that “[a]n additional three months would give OSHA the time to receive comments on the substantive proposed rule and publish a

final rule.” (Document ID 2165, p.1). It further stated that a longer extension would prevent confusion and unnecessary costs:

A delay until the substantive rulemaking is completed would also prevent a situation where employers comply with the de minimis policy, only to have to change practices if the final rule does not adopt all of the revisions in the proposed rule. The costs of such a midstream about-face could be significant. Moreover, aligning the compliance date with March 11, 2019, which is the compliance date for the change rooms and showers required by paragraph (i) of the Standard, would simplify compliance efforts and limit confusion among affected entities. Finally, the additional few months would allow state plans time to consider whether to adopt any revisions OSHA makes to the Standard without causing significant disruption in their respective states.

(Document ID 2165, p.2). USW and UNITE HERE, on the other hand, recommended that the proposed extension continue until thirty days after the substantive NPRM is issued or December 12, 2018, whichever comes first. USW maintained that the potentially shorter extension would allow time for employers to conform their practices to the content of the NPRM, while providing workers with necessary protections as soon as possible.

After considering these comments, OSHA is not persuaded that it should alter the duration of the proposed extension. Although OSHA appreciates Century Aluminum’s points, the agency must balance arguments in favor of a longer extension against the concerns raised by commenters, such as USW, that an unnecessarily lengthy extension could deny general industry workers certain protections afforded to them under the affected ancillary provisions. Moreover, although OSHA understands Century Aluminum’s concern about the potential increase in costs that could result if the provisions adopted as a result of the planned substantive rulemaking do not mirror those proposed in the substantive NPRM, the agency cannot, at this time, estimate with much

certainty when any final rule will be promulgated.<sup>6</sup> OSHA also rejects USW and UNITE HERE's call for compliance dates based on the publication of the substantive NPRM; a timeline based on a currently uncertain date would be more difficult and confusing for employers and workers. The agency finds that the proposed compliance date of December 12, 2018, appropriately balances the concerns raised by stakeholders, will provide the agency sufficient time to draft and publish the NPRM, and will give employers sufficient time to comply. Therefore, OSHA has decided to extend the compliance date for the identified provisions until December 12, 2018, as proposed.

#### *4. Miscellaneous Comments*

OSHA also received two comments that did not directly relate to the proposed extension of compliance dates. The first, from Materion, is related to a statement the agency made in the proposal. (Document ID 2161, p.2). Specifically, OSHA stated that it “expects to publish the planned, substantive NPRM well in advance of the compliance dates” for change rooms and showers (March 11, 2019) and engineering controls (March 10, 2020). Materion maintained that “it is reasonable and necessary for OSHA to not only publish the NPRM, but complete its final changes to the General Industry Standard for beryllium well ahead of March 11, 2019, since the revisions OSHA plans to propose are primarily clarifying or simplifying in nature . . . and designed to enhance worker protections by ensuring that the rule is well-understood and compliance is simple and straightforward.” (Document ID 2161, p.2 (citing Document ID 2156)). Materion further

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<sup>6</sup> Although not suggested by Century Aluminum, OSHA also notes that an indefinite extension of compliance deadlines, i.e., a compliance date determined by the date the substantive rulemaking is completed, is likely to result in greater, not less, confusion.

commented that “[e]mployees will benefit most by completion of all changes as soon as possible, and certainly before early 2019.” (Document ID 2161, p.2).

OSHA understands Materion’s concern, and agrees that prompt finalization of any substantive revisions to the general industry standard for beryllium would be ideal. Therefore, the agency will proceed with the substantive rulemaking as expeditiously as possible. However, OSHA will also need to ensure that stakeholders have a meaningful opportunity to comment on the forthcoming proposal and that the agency has adequate time to consider and address stakeholder comments. Consequently, at this time the agency does not have a specific target date for conclusion of the substantive rulemaking.

The second comment that was not directly related to the proposed extension of compliance dates was submitted by an anonymous commenter, who indicated strong support for the beryllium rule generally. (Document ID 2159). The commenter submitted summary statistics on relationships between beryllium exposure and the prevalence of beryllium sensitization and chronic beryllium disease in a cohort at a beryllium precision machining facility and stated that the results support the control of workplace beryllium exposures. However, this commenter did not address how the data or conclusions provided related to the proposed extension of compliance dates or otherwise offer any comments on the specific terms of the proposed extension. To the extent that this commenter intended to argue that the proposed extension of compliance dates would have a detrimental impact on worker health, that comment is addressed above in response to similar concerns expressed by USW, Public Citizen, UNITE HERE, and NELP.

## **II. Agency Determinations**

### **A. Final Economic Analysis and Regulatory Flexibility Certification**

Executive Orders 12866 and 13563, the Regulatory Flexibility Act (5 U.S.C. 601–612), and the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1532(a)) require that OSHA estimate the benefits, costs, and net benefits of regulations, and analyze the effects of certain rules that OSHA promulgates. Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, reducing costs, harmonizing rules, and promoting flexibility.

This final rule is not an “economically significant regulatory action” under E.O. 12866 or UMRA, or a “major rule” under the Congressional Review Act (5 U.S.C. 801 et seq.). Neither the benefits nor the costs of this final rule would exceed \$100 million in any given year. This final rule to extend the compliance date for certain ancillary provisions in the beryllium standard would result in cost savings. Cost savings arise in this context because a delay in incurred costs for employers would allow them to invest the funds (and earn an expected return at the going interest rate) that would otherwise have been spent to comply with the beryllium standard. OSHA did not receive any comments on the preliminary economic analysis OSHA prepared for the proposal.

At a discount rate of 3 percent, this final compliance-date extension yields annualized cost savings of \$0.76 million per year for 10 years. At a discount rate of 7 percent, this final rule yields an annualized cost savings of \$1.73 million per year for 10 years. When the Department uses a perpetual time horizon to allow for cost comparisons under E.O. 13771 (82 FR 9339, Jan. 30, 2017), the annualized cost savings of this final compliance date extension are \$1.65 million at a discount rate of 7 percent.

*1. Changes to the baseline: updating to 2017 dollars and removing familiarization costs; discussion of overhead costs*

More than one year has elapsed since promulgation of the beryllium standards on January 9, 2017, so OSHA has updated the projected costs for general industry contained in the final economic analysis that accompanied the rule from 2015 to 2017 dollars, using the latest Occupational Employment Statistics (OES) wage data (for 2016) and inflating them to 2017 dollars. Additionally, although familiarization costs were included in the cost estimates developed in the 2017 economic analysis, OSHA expects that those costs have already been incurred by affected employers, and is excluding them from its analysis of the cost savings associated with this extension of compliance dates. Thus, baseline costs for this final economic analysis (FEA) are the projected costs from the 2017 economic analysis, updated to 2017 dollars, less familiarization costs.

OSHA notes that it did not include an overhead labor cost in the 2017 analysis, and has not accounted for such costs in this FEA. There is not one broadly accepted overhead rate, and the use of overhead to estimate the marginal costs of labor raises a number of issues that should be addressed before applying overhead costs to analyze the cost implications of any specific regulation. There are several ways to look at the cost elements that fit the definition of overhead, and there is a range of overhead estimates currently used within the federal government—for example, the Environmental Protection Agency has used 17 percent<sup>7</sup>, and government contractors have reportedly used 50 percent for on-site (i.e., company site) overhead.<sup>8</sup> Some overhead costs, such as

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<sup>7</sup> Cody Rice, U.S. Environmental Protection Agency, “Wage Rates for Economic Analyses of the Toxics Release Inventory Program,” June 10, 2002 (document ID 2025). This analysis itself was based on a survey of several large chemical manufacturing plants: Heiden Associates, Final Report: A Study of Industry Compliance Costs Under the Final Comprehensive Assessment Information Rule, Prepared for the Chemical Manufacturers Association, December 14, 1989.

<sup>8</sup> Grant Thornton LLP, *2017 Government Contractor Survey*, <https://www.grantthornton.com/-/media/content-page-files/public-sector/pdfs/surveys/2018/2017-government-contractor-survey>. According

advertising and marketing, may be more closely correlated with output than with labor. Other overhead costs vary with the number of new employees. For example, rent or payroll processing costs may change little with the addition of 1 employee in a 500-employee firm, but may change substantially with the addition of 100 employees. If an employer is able to rearrange current employees' duties to implement a rule, then the marginal share of overhead costs, such as rent, insurance, and major office equipment (e.g., computers, printers, copiers), would be very difficult to measure with accuracy.

If OSHA had included an overhead rate when estimating the marginal cost of labor, without further analyzing an appropriate quantitative adjustment, and adopted for these purposes an overhead rate of 17 percent on base wages, the cost savings of this final rule would increase to approximately \$0.82 million per year, at a discount rate of 3 percent, or to approximately \$1.87 million per year, at a discount rate of 7 percent.<sup>9</sup> The addition of 17-percent overhead on base wages would therefore increase cost savings by approximately 8 percent above the primary estimate at either discount rate.

## *2. Changes to the standard: nine-month extension of the compliance date for some ancillary provisions*

The general industry beryllium standard went into effect on May 20, 2017, with most compliance obligations beginning on March 12, 2018. OSHA is finalizing the extension of the compliance date for specific provisions until December 12, 2018. The

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to Grant Thornton's *2017 Government Contractor Survey*, on-site rates are generally higher than off-site rates, because the on-site overhead pool includes the facility-related expenses incurred by the company to house the employee, while no such expenses are incurred or allocated to the labor costs of direct charging personnel who work at the customer site.

<sup>9</sup> OSHA used an overhead rate of 17 percent on base wages in a sensitivity analysis in the final economic analysis (OSHA-2010-0034-4247, p. VII-65) in support of the March 25, 2016, final respirable crystalline silica standards (81 FR 16286) and in the preliminary economic analysis in support of the June 27, 2017, beryllium proposal for the construction and shipyard sectors (82 FR 29201).

compliance date for the updated PELs, as well as for the exposure assessment, respiratory protection, medical surveillance, and medical removal requirements, and for provisions for which the standard already establishes compliance dates in 2019 and 2020, do not change as a result of this rule. The applicability of the scope and application paragraph and the definitions also do not change as a result of this rule, except that employers may comply with the definitions of “CBD diagnostic center,” “chronic beryllium disease,” and “confirmed positive” that will be proposed in the later substantive rulemaking NPRM (Document ID 2156). The purpose of this final rule is to provide time for OSHA to issue a planned NPRM that will affect the parts of the standard that are covered by this compliance-date extension before that compliance date is reached, so that OSHA may rely on its de minimis policy and employers may comply with the proposed provisions without risk of a citation.

OSHA estimated the cost savings of the final rule relative to baseline costs, where baseline costs reflect the costs of compliance *without* the final rule’s changes to the compliance date. OSHA calculated the cost savings by lagging the first-year costs for the affected provisions by nine months and then calculating the present value of the delayed costs over the 10 years following the new compliance date. Annualizing the present value of cost savings over ten years, the result is an annualized cost savings of \$0.76 million per year at a discount rate of 3 percent, or \$1.73 million per year at a discount rate of 7 percent. When the Department uses a perpetual time horizon to allow for cost comparisons under E.O. 13771, the annualized cost savings of this compliance date extension is \$1.65 million at a discount rate of 7 percent.

The undiscounted cost savings by provision and year are presented below in Table 1. As shown in Table 1, and described elsewhere in this final rule, the cost savings described in this FEA reflect savings only for provisions covered by the compliance date extension. OSHA estimated no cost savings for the PELs, exposure assessment, respiratory protection, medical surveillance, or medical removal provisions (as they are not covered by the extension), or for any provisions for which the rule already establishes compliance dates in 2019 (change rooms/showers) or 2020 (engineering controls).<sup>10</sup> The cost savings by year and discount rate are shown below in Table 2.

### *3. Economic and Technological Feasibility*

In the final economic analysis for the 2017 general industry beryllium standard, OSHA concluded that the rule was technologically feasible. OSHA has determined that this final rule is also technologically feasible because it does not change any of the rule's substantive requirements, and, if adopted, would simply give employers more time to comply with some of the rule's ancillary requirements. Furthermore, OSHA previously concluded that the beryllium standard was economically feasible. As this final rule does not impose any new substantive requirements, and results in cost savings, OSHA has concluded that the final rule is also economically feasible.

### *4. Effects on Benefits*

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<sup>10</sup> Note that the labor costs associated with time spent changing clothes are generally triggered by wearing personal protective equipment, as required by paragraph (h) of the beryllium standard. OSHA is extending the compliance date for paragraph (h). Thus, employers will not incur the labor costs associated with changing time for personal protective equipment until December 12, 2018, so OSHA is generally accounting for those cost savings in this FEA. OSHA has not accounted for any cost savings related to the use of head covers, however. Head covers may be used to prevent contamination of employees' hair, potentially precluding the need for showers under paragraph (i)(3) of the standard. Because this final rule does not extend the compliance date for showers, OSHA has not accounted for head covers for purposes of estimating the cost savings associated with this final rule.

The planned rulemaking to revise the general industry beryllium standard is intended to be responsive to questions and concerns expressed by stakeholders regarding ancillary provisions of the rule. Safety and health programs can be ineffective if employers and other stakeholders are unclear about OSHA requirements. Hence, by addressing stakeholder questions and concerns, the planned rulemaking will make it more likely that the regulated community will realize the full benefits of the rule, as estimated in the 2017 final economic analysis. Although it is not possible to quantify the effect of stakeholder uncertainty on the projected benefits of the rule, OSHA believes that the short-term loss of benefits associated with this extension of initial compliance dates will be more than offset in the long term by the benefits resulting from the agency's effort to clarify the rule. OSHA has determined that this final rule will maintain essential safety and health protections for workers.

*5. Certification of no significant impact on a substantial number of small entities*

This final rule will result in cost savings for affected employers, and those savings fall below levels that could be said to have a significant positive economic impact on a substantial number of small entities.<sup>11</sup> Therefore, OSHA certifies that this final rule does not have a significant impact on a substantial number of small entities.

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<sup>11</sup> OSHA investigated whether the projected cost savings would exceed 1 percent of revenues or 5 percent of profits for small entities and very small entities for every industry. To determine if this was the case, OSHA returned to its original regulatory flexibility analysis (2017) for small entities and very small entities. OSHA found that the cost savings of this final rule are such a small percentage of revenues and profits for every affected industry that OSHA's criteria would not be exceeded for any industry.

Table 1: Undiscounted Compliance Costs by Year and Provision (2017 Dollars)

| Year | Engineering Controls and Work Practices | Respirator Costs | Rule Familiarization | Exposure Assessment | Regulated Areas | Beryllium Work Areas | Medical Surveillance | Medical Removal Provision | Written Exposure Control Plan | Protective Work Clothing & Equipment | Hygiene Areas and Practices - Change Rooms | Hygiene Areas and Practices - Changing Labor Time | Hygiene Areas and Practices - Head Coverings | Housekeeping | Training    | Total         | Delayed Cost Total | Not Delayed Cost Total |
|------|---|------------------|----------------------|---------------------|-----------------|----------------------|----------------------|---------------------------|-------------------------------|--------------------------------------|--|---|--|--------------|-------------|---------------|--------------------|------------------------|
|      | Not Delayed                             | Not Delayed      | Not Delayed          | Not Delayed         | Delayed         | Delayed              | Not Delayed          | Not Delayed               | Delayed                       | Delayed                              | Not Delayed                                | Delayed   | Not Delayed                                  | Delayed      | Delayed     |               |                    |                        |
| 1    | \$48,363,092                            | \$372,038        | \$0                  | \$18,903,655        | \$686,423       | \$1,148,798          | \$16,810,498         | \$3,288,986               | \$2,772,426                   | \$1,893,890                          | \$761,953                                  | \$207,268   | \$12,211                                     | \$37,615,726 | \$9,536,539 | \$142,373,503 | \$53,861,070       | \$88,512,433           |
| 2    | \$7,899,637                             | \$252,372        | \$0                  | \$6,540,784         | \$642,631       | \$0                  | \$2,289,059          | \$256,541                 | \$1,890,613                   | \$1,893,890                          | \$677,245                                  | \$207,268   | \$12,211                                     | \$19,744,717 | \$7,586,746 | \$49,893,714  | \$31,965,865       | \$17,927,849           |
| 3    | \$8,021,023                             | \$264,285        | \$0                  | \$6,540,784         | \$642,631       | \$0                  | \$7,108,201          | \$256,541                 | \$1,890,613                   | \$1,893,890                          | \$677,245                                  | \$207,268   | \$12,211                                     | \$19,744,717 | \$7,586,746 | \$54,846,155  | \$31,965,865       | \$22,880,290           |
| 4    | \$7,899,637                             | \$306,608        | \$0                  | \$6,540,784         | \$642,631       | \$0                  | \$3,239,801          | \$256,541                 | \$1,890,613                   | \$1,893,890                          | \$677,245                                  | \$207,268   | \$12,211                                     | \$19,744,717 | \$7,586,746 | \$50,898,692  | \$31,965,865       | \$18,932,827           |
| 5    | \$8,021,023                             | \$264,285        | \$0                  | \$6,540,784         | \$642,631       | \$0                  | \$6,401,799          | \$256,541                 | \$1,890,613                   | \$1,893,890                          | \$677,245                                  | \$207,268   | \$12,211                                     | \$19,744,717 | \$7,586,746 | \$54,139,754  | \$31,965,865       | \$22,173,889           |
| 6    | \$7,899,637                             | \$252,372        | \$0                  | \$6,540,784         | \$642,631       | \$0                  | \$3,764,658          | \$256,541                 | \$1,890,613                   | \$1,893,890                          | \$677,245                                  | \$207,268   | \$12,211                                     | \$19,744,717 | \$7,586,746 | \$51,369,312  | \$31,965,865       | \$19,403,447           |
| 7    | \$8,021,023                             | \$318,521        | \$0                  | \$6,540,784         | \$642,631       | \$0                  | \$6,011,831          | \$256,541                 | \$1,890,613                   | \$1,893,890                          | \$677,245                                  | \$207,268   | \$12,211                                     | \$19,744,717 | \$7,586,746 | \$53,804,021  | \$31,965,865       | \$21,838,156           |
| 8    | \$7,899,637                             | \$252,372        | \$0                  | \$6,540,784         | \$642,631       | \$0                  | \$4,054,404          | \$256,541                 | \$1,890,613                   | \$1,893,890                          | \$677,245                                  | \$207,268   | \$12,211                                     | \$19,744,717 | \$7,586,746 | \$51,659,059  | \$31,965,865       | \$19,693,194           |
| 9    | \$8,021,023                             | \$264,285        | \$0                  | \$6,540,784         | \$642,631       | \$0                  | \$5,796,549          | \$256,541                 | \$1,890,613                   | \$1,893,890                          | \$677,245                                  | \$207,268   | \$12,211                                     | \$19,744,717 | \$7,586,746 | \$53,534,504  | \$31,965,865       | \$21,568,639           |
| 10   | \$7,899,637                             | \$306,608        | \$0                  | \$6,540,784         | \$642,631       | \$0                  | \$4,214,358          | \$256,541                 | \$1,890,613                   | \$1,893,890                          | \$677,245                                  | \$207,268   | \$12,211                                     | \$19,744,717 | \$7,586,746 | \$51,873,249  | \$31,965,865       | \$19,907,384           |

**Table 2: Cost Savings Due to Compliance Date Extension**

| <b>Year</b>                     | <i>t</i> | <b>Undiscounted Costs by Year</b> | <b>Discounted Costs - 3%</b> | <b>Discounted Costs - 7%</b> |
|---------------------------------|----------|-----------------------------------|------------------------------|------------------------------|
| <b>Baseline</b>                 |          |                                   |                              |                              |
| 1                               | 1.00     | \$53,861,070                      | \$52,292,301                 | \$50,337,449                 |
| 2                               | 2.00     | \$31,965,865                      | \$30,130,893                 | \$27,920,224                 |
| 3                               | 3.00     | \$31,965,865                      | \$29,253,295                 | \$26,093,668                 |
| 4                               | 4.00     | \$31,965,865                      | \$28,401,257                 | \$24,386,605                 |
| 5                               | 5.00     | \$31,965,865                      | \$27,574,036                 | \$22,791,220                 |
| 6                               | 6.00     | \$31,965,865                      | \$26,770,909                 | \$21,300,205                 |
| 7                               | 7.00     | \$31,965,865                      | \$25,991,173                 | \$19,906,734                 |
| 8                               | 8.00     | \$31,965,865                      | \$25,234,149                 | \$18,604,424                 |
| 9                               | 9.00     | \$31,965,865                      | \$24,499,174                 | \$17,387,312                 |
| 10                              | 10.00    | \$31,965,865                      | \$23,785,605                 | \$16,249,825                 |
| <b>Total</b>                    | —        | —                                 | <b>\$293,932,792</b>         | <b>\$244,977,667</b>         |
| <b>Annualized - 10 Years</b>    | —        | —                                 | <b>\$34,457,890</b>          | <b>\$34,879,308</b>          |
| <b>Discounting Option 1</b>     |          |                                   |                              |                              |
| 1                               | 1.75     | \$53,861,070                      | \$51,145,783                 | \$47,846,852                 |
| 2                               | 2.75     | \$31,965,865                      | \$29,470,268                 | \$26,538,787                 |
| 3                               | 3.75     | \$31,965,865                      | \$28,611,911                 | \$24,802,605                 |
| 4                               | 4.75     | \$31,965,865                      | \$27,778,554                 | \$23,180,004                 |
| 5                               | 5.75     | \$31,965,865                      | \$26,969,470                 | \$21,663,556                 |
| 6                               | 6.75     | \$31,965,865                      | \$26,183,952                 | \$20,246,314                 |
| 7                               | 7.75     | \$31,965,865                      | \$25,421,312                 | \$18,921,788                 |
| 8                               | 8.75     | \$31,965,865                      | \$24,680,886                 | \$17,683,914                 |
| 9                               | 9.75     | \$31,965,865                      | \$23,962,025                 | \$16,527,023                 |
| 10                              | 10.75    | \$31,965,865                      | \$23,264,102                 | \$15,445,816                 |
| <b>Total</b>                    | —        | —                                 | <b>\$287,488,264</b>         | <b>\$232,856,658</b>         |
| <b>Annualized - 10 Years</b>    | —        | —                                 | <b>\$33,702,395</b>          | <b>\$33,153,550</b>          |
| <b>Difference from Baseline</b> | —        | —                                 | <b>-\$755,495</b>            | <b>-\$1,725,759</b>          |

## **B. Paperwork Reduction Act**

This final rule does not change the information collections already approved by the Office of Management and Budget (OMB). OMB approved the information collection request for the general industry beryllium standard under OMB Control Number 1218-0267, with an expiration date of April 30, 2020. OSHA received no comments on the information collection request in response to the proposal.

## **C. Federalism**

OSHA reviewed this final rule in accordance with the Executive Order on Federalism (E.O. 13132, 64 FR 43255 (Aug. 10, 1999)), which requires that Federal agencies, to the extent possible, refrain from limiting state policy options, consult with states prior to taking any actions that would restrict state policy options, and take such actions only when clear constitutional authority exists and the problem is national in scope. E.O. 13132 provides for preemption of state law only with the expressed consent of Congress. Federal agencies must limit any such preemption to the extent possible.

Under Section 18 of the Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 651 et seq.), Congress expressly provides that states and U.S. territories may adopt, with Federal approval, a plan for the development and enforcement of occupational safety and health standards. OSHA refers to such states and territories as “State Plan States.” Occupational safety and health standards developed by State Plan States must be at least as effective in providing safe and healthful employment and places of employment as the Federal standards. 29 U.S.C. 667. Subject to these requirements, State Plan States are free to develop and enforce under state law their own requirements for safety and health standards.

OSHA previously concluded from its analysis that promulgation of the beryllium standard complies with E.O. 13132 (82 FR at 2633). In states without an OSHA-approved State Plan, this final rule limits state policy options in the same manner as every standard promulgated by OSHA. For State Plan States, Section 18 of the OSH Act, as noted in the previous paragraph, permits State Plan States to develop and enforce their own beryllium standards provided these requirements are at least as effective in providing

safe and healthful employment and places of employment as the requirements specified in this final rule.

#### **D. State Plans**

When Federal OSHA promulgates a new standard or a more stringent amendment to an existing standard, State Plans must amend their standards to reflect the new standard or amendment, or show OSHA why such action is unnecessary, e.g., because an existing state standard covering this area is “at least as effective” as the new Federal standard or amendment (29 CFR 1953.5(a)). The state standard must be at least as effective as the final Federal rule. State Plans must adopt the Federal standard or complete their own standard within six months of the promulgation date of the final Federal rule. When OSHA promulgates a new standard or amendment that does not impose additional or more stringent requirements than an existing standard, State Plans do not have to amend their standards, although OSHA may encourage them to do so. The 21 states and 1 U.S. territory with OSHA-approved occupational safety and health plans covering the private sector and state and local governments are: Alaska, Arizona, California, Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, and Wyoming. Connecticut, Illinois, Maine, New Jersey, New York, and the Virgin Islands have OSHA-approved State Plans that apply to state and local government employees only.

The new amendments to OSHA’s beryllium final rule do not impose any new requirements on employers. Accordingly, State Plans do not have to amend their

standards to extend the compliance dates for their beryllium rules, but they may do so within the limits of this final rule.

#### **E. Unfunded Mandates Reform Act**

When OSHA issued the final rule establishing standards for occupational exposure to beryllium, it reviewed the rule according to the Unfunded Mandates Reform Act of 1995 (UMRA) (2 U.S.C. 1501 et seq.) and E.O. 13132 (64 FR 43255 (Aug. 10, 1999)). OSHA concluded that the final rule did not meet the definition of a “Federal intergovernmental mandate” under the UMRA because OSHA standards do not apply to state or local governments except in states that voluntarily adopt State Plans. OSHA further noted that the rule did not impose costs of over \$100 million per year on the private sector. (82 FR at 2634.)

As discussed above in Section II.A of this preamble, OSHA has determined that this extension does not impose any costs on private-sector employers beyond those costs already identified in the final rule for beryllium in general industry. Because OSHA reviewed the total costs of the beryllium rule under UMRA, no further review of those costs is necessary. Therefore, for purposes of UMRA, OSHA certifies that this final rule does not mandate that state, local, or tribal governments adopt new, unfunded regulatory obligations of, or increase expenditures by the private sector by, more than \$100 million in any year.

#### **F. Consultation and Coordination with Indian Tribal Governments**

OSHA reviewed this final rule in accordance with E.O. 13175 (65 FR 67249) and determined that it does not have “tribal implications” as defined in that order. This rule does not have substantial direct effects on one or more Indian tribes, on the relationship

between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.

### **G. Legal Considerations**

The purpose of the 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(b). To achieve this goal, Congress authorized the Secretary of Labor to promulgate and enforce occupational safety and health standards. 29 U.S.C. 654(b), 655(b). A safety or health standard is a standard “which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment or places of employment.” 29 U.S.C. 652(8). A standard is reasonably necessary or appropriate within the meaning of Section 652(8) when a significant risk of material harm exists in the workplace and the standard would substantially reduce or eliminate that workplace risk. See *Indus. Union Dep’t, AFL-CIO v. Am. Petroleum Inst.*, 448 U.S. 607 (1980). In the beryllium rulemaking, OSHA made such a determination with respect to beryllium exposure in general industry (82 FR at 2479). This final rule does not impose any new requirements on employers. Therefore, this rule does not require an additional significant risk finding. See *Edison Elec. Inst. v. OSHA*, 849 F.2d 611, 620 (D.C. Cir. 1988).

In addition to materially reducing a significant risk, a health standard must be technologically and economically feasible. *United Steelworkers of Am., AFL-CIO-CLC v. Marshall*, 647 F.2d 1189, 1251 (D.C. Cir. 1980) (OSHA must reduce risk “as far as it c[an] within the limits of [technological and economic] feasibility.”). A standard is

technologically feasible when the protective measures it requires already exist, when available technology can bring the protective measures into existence, or when that technology is reasonably likely to develop. See *Am. Textile Mfrs. Inst. v. OSHA*, 452 U.S. 490, 513 (1981); *Am. Iron & Steel Inst. v. OSHA*, 939 F.2d 975, 980 (D.C. Cir. 1991). And a rule is economically feasible if it does not “threaten massive dislocation to, or imperil the existence of, [an] industry.” *United Steelworkers*, 647 F.2d at 1265 (internal citations and quotation marks omitted). In 2017, OSHA found the beryllium standard to be technologically and economically feasible. (82 FR at 2471). This final rule is technologically and economically feasible as well because it does not require employers to implement any additional protective measures and does not impose any additional costs on employers.

#### **List of Subjects in 29 CFR Part 1910**

Beryllium, Occupational safety and health.

Signed at Washington, DC, on August 6, 2018.

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**Loren Sweatt,**

*Deputy Assistant Secretary of Labor for Occupational Safety and Health.*

#### **Amendments to Standards**

For the reasons stated in the preamble of this final rule, OSHA amends 29 CFR part 1910 as follows:

#### **PART 1910--OCCUPATIONAL SAFETY AND HEALTH STANDARDS**

##### **Subpart Z—Toxic and Hazardous Substances**

1. The authority citation for subpart Z of 29 CFR part 1910 is revised to read as follows:

**Authority:** 29 U.S.C. 653, 655, 657; Secretary of Labor's Order No. 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), 6-96 (62 FR 111), 3-2000 (65 FR 50017), 5-2002 (67 FR 65008), 5-2007 (72 FR 31160), 4-2010 (75 FR 55355), or 1-2012 (77 FR 3912); 29 CFR part 1911; and 5 U.S.C. 553, as applicable.

Section 1910.1030 also issued under Pub. L. 106-430, 114 Stat. 1901.

Section 1910.1201 also issued under 40 U.S.C. 5101 *et seq.*

2. Amend § 1910.1024 by revising paragraph (o)(2) to read as follows:

**§ 1910.1024 Beryllium.**

\* \* \* \* \*

(o) \* \* \*

(2) *Compliance dates.* (i) Obligations contained in paragraphs (c), (d), (g), (k), and (l) of this standard: March 12, 2018;

(ii) Change rooms and showers required by paragraph (i) of this standard: March 11, 2019;

(iii) Engineering controls required by paragraph (f) of this standard: March 10, 2020; and

(iv) All other obligations of this standard: December 12, 2018.

\* \* \* \* \*

[FR Doc. 2018-17106 Filed: 8/8/2018 8:45 am; Publication Date: 8/9/2018]