Congress of the United States
Washington, DC 20515

August 28, 2017

The Honorable R. Alexander Acosta
Secretary of Labor
U.S. Department of Labor
200 Constitution Avenue NW
Washington, DC 20210

RE: Comments on Notice of Proposed Rulemaking "Occupational Exposure to Beryllium and Beryllium Compounds in Construction and Shipyard Sectors," Docket OSHA-H005C-2006-0870

Dear Secretary Acosta:

For reasons set forth below, this letter opposes weakening health protections for occupational exposure to beryllium for the construction and maritime sectors as proposed by the Department of Labor in a Notice of Proposed Rulemaking (NPRM) published in the Federal Register (82 FR 29182) on June 27, 2017. That proposal retains the new Permissible Exposure Limit (PEL) of 0.2 ug/m3, but revokes all "ancillary" health protections applicable to the construction and maritime industries that had been adopted in a final rule promulgated by the Occupational Safety and Health Administration (OSHA) on January 9, 2017.

The NPRM requests comments on: 1) whether OSHA should revoke all ancillary provisions, or retain some; 2) whether there is an incremental benefit in retaining some or all medical surveillance provisions; and 3) whether to extend the compliance date for an additional year beyond the March 12, 2018 deadline in light of the uncertainty created by this proposed rule change.

OSHA's January 9, 2017 Beryllium Rule Reduces the Risk of Beryllium Sensitization and Chronic Beryllium Disease for Construction and Maritime Workers

OSHA's January 9, 2017 final rule contained three standards for protecting workers from occupational exposure to beryllium: one covering general industry (29 CFR 1910), a second covering the shipyard industry (29 CFR 1915), and a third covering the construction industry (29 CFR 1926). These three standards were based upon evidence which documented a significant risk to workers in each of the three industry sectors at the previous Permissible Exposure Limit for beryllium of 2.0 ug/m3 – an obsolete standard which had first been adopted in 1949 by the Atomic Energy Commission and subsequently adopted by OSHA in 1972. In its final rule, OSHA reduced the PEL to 0.2 ug/m3, which is a 90 percent reduction from the previous standard.

This reduction did not eliminate the significant risk to workers, however. Based on a review of the scientific literature, OSHA determined that the newly adopted PEL of 0.2 ug/m3 continued to present a significant risk of material impairment for construction and shipyard workers because

beryllium exposure at this limit could lead to chronic beryllium disease (CBD) and lung cancer. This conclusion was affirmed by the peer review of OSHA's risk assessment for this rule. The peer review found that there is substantial risk of beryllium sensitization and chronic beryllium disease when median full shift exposures were 0.2 ug/m3, and that the greatest reduction in risk was achieved when exposures were lowered to 0.1 ug/m3. OSHA did not lower the PEL to 0.1 ug/m3, as had been requested by unions and other public health groups; instead, OSHA made a determination that a PEL of 0.2 ug/m3 was the lowest level that was feasible.

The primary source of beryllium exposure for construction and shipyard workers comes from beryllium-containing coal slag, copper slag, and other mineral slags that are used for abrasive blasting. According to OSHA, nearly one third of abrasive blasting workers are exposed to unsafe levels of beryllium above the current "action level" of 0.1 ug/m3, but below the newly adopted PEL of 0.2 ug/m3, according to an aggregation of data conducted by the National Institute for Occupational Safety and Health (NIOSH) and the U.S. Navy and published in OSHA's Final Economic Assessment. It is noteworthy that this assessment is unchanged in the June 27 proposed rule.

Further, the courts have found that OSHA should use its regulatory authority to impose additional requirements where there is significant risk below the PEL, if these would result in a greater than *de minimus* incremental benefit to workers' health.

Accordingly, OSHA determined that such risk below the PEL could be reduced by more protective employer work practices, and adopted requirements that were reasonably necessary and appropriate, and it did so to the extent technically and economically feasible. OSHA tailored so-called "ancillary" provisions for construction and maritime "to ensure that workers exposed to beryllium in the construction and shipyard industries are provided protection that is comparable to the protection afforded to workers in general industry."

OSHA's Proposal Creates Two Classes of Workers Exposed to Beryllium; Provides Inferior Protections for Construction and Maritime Workers

The June 27 proposed rule retains the PEL of 0.2 ug/m3, but it completely eliminates at least 7 critical "ancillary" provisions covered in 29 CFR 1915.1024 (Shipyards) and 29 CFR 1926.124 (Construction), including requirements for:

- Workplace exposure assessment, including assessing which workers are exposed to beryllium in excess of the action level, the PEL or the Short Term Exposure Limit (STEL), and the notification of employees of the results from such assessment;
- Written exposure control plan to standardize methods for controlling exposures within a specific company, plant, or operation;
- Medical surveillance for workers exposed to beryllium in excess of prudent monitoring thresholds, including a requirement for employers to offer a Beryllium Lymphocyte Proliferation Test (Be LPT) and medical examination;
- Option for medical removal for those confirmed positive with a Be LPT or are diagnosed with CBD;

- Training on health hazards of beryllium, the workplace exposure control plan, and employee protections in the standard, including medical surveillance and medical removal provisions;
- Housekeeping methods to prevent exposures outside of the actual operation, including safe recovery of spent abrasive; and
- Recordkeeping of exposure data, medical surveillance data, as well as "objective data" showing that workers are not exposed above the action level used to determine if materials containing less than 0.1% beryllium will be exempted from the lower PEL.

By arbitrarily eliminating these ancillary protections for construction and maritime workers, but retaining these protections for workers in general industry, OSHA has created two classes of workers exposed to beryllium – greater protections for those in general industry and inferior protections for those employed in construction and maritime. OSHA has provided no evidence that workers in construction and maritime are at less risk of beryllium-related diseases than workers exposed to similar levels in general industry. Nor has the agency provided any evidence that the ancillary protections are technically and economically feasible for general industry, but somehow infeasible for construction and maritime.

Additionally, there are a number of significant harms from eliminating the ancillary provisions. Without an exposure assessment, workers are left unaware of potentially harmful exposures to beryllium, and employers will lack the information needed to implement additional work controls or personal protective equipment. Absent an employer requirement to offer medical monitoring, workers who are susceptible to CBD will have no means to know if they are suffering an adverse health effect from beryllium, as indicated by positive Be LPT tests or a CBD diagnosis. Without a medical removal provision that protects workers' incomes, workers will face a choice between losing their health or their incomes – if they elect to stay in their current job, they risk aggravating health conditions caused by continued exposure to beryllium, but if they transfer out of their position, they face a potential loss of income from a different job.

If medical surveillance and medical removal are going to be retained in this rule, which we support, there are significant unanswered questions about how OSHA will determine who qualifies for medical surveillance. Under the January 9 rule, OSHA established a threshold for medical surveillance based on whether a construction or shipyard worker is reasonably expected to be exposed in excess of the action level of 0.1 ug/m3 for at least 30 days.[1] To get that information, the rule required periodic exposure monitoring, whose frequency is linked to the magnitude of the exposures (*e.g.*, in excess of the action level, the PEL or the STEL.) The rule required that workers be notified of this assessment, that workers are trained on the provisions of the standard, and that exposure assessment records must be in writing and retained by the employer. Hence, the determination for who receives medical surveillance and medical removal depends on the conduct of exposure assessments, training, and recordkeeping. Absent such provisions, the rule lacks a practical mechanism for implementation.

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[1] *See:* "Medical Surveillance" provisions in January 9 rule at 29 CFR 1915.1024(k) and 29 CFR 1926.1024(k).

Exposure monitoring also lets employers know if the exposures are below the PEL. But without the ancillary provision on exposure assessment, there is no specific obligation to monitor, and thus to have a basis on whether there is compliance with the PEL.

There is a well-reasoned foundation in the record for the January 9 rule to retain these ancillary provisions, which have been found to be technically and economically feasible and, in the case of medical surveillance, is expressly authorized by statute. Since clear harm would result from eliminating these ancillary provisions, they should not be revoked.

OSHA Has Proposed Health and Safety Rollbacks Based on Unstated Economic Considerations That Are at Odds with the Requirements of the OSH Act

One of the entities demanding that OSHA roll back beryllium protections in the maritime and construction industries is HARSCO, the largest producer of coal slag abrasives, along with other companies who process and sell beryllium-containing coal slag used in abrasive blasting. They operate under the umbrella of the Abrasive Blasting Manufacturers Association (AMBA), which lists its address as Camp Hill, PA, the same location as the headquarters for HARSCO.[2] AMBA member companies do not employ abrasive blasting workers in the construction and maritime industry, and lack standing to raise objections to stronger health protections for workers they do not even employ.

AMBA's objection to this rule is borne out of a concern that they will lose market share for their beryllium-containing coal slag abrasives, if their customers in the construction and maritime sectors switch to beryllium-free abrasive blasting materials that have equivalent performance (and in some cases a lower cost) because they face increased regulatory compliance costs to protect their workers from exposure to beryllium.

In comments submitted during the rulemaking process, and in its comments regarding an extension of the effective date of the January 9 rule, it is noteworthy that AMBA companies did not object to the economic feasibility of implementing the ancillary provisions in coal slag processing plants, which are covered under OSHA's general industry standards. Rather, AMBA objects to the health and safety protections that would be provided to the employees of their customers in the shipyard and construction sectors, where AMBA employs no one.

There is nothing in the OSH Act that authorizes OSHA to assess the economic feasibility of health standards based on whether a vendor, marketer, or importer of materials sold to a covered industry (in this case construction or maritime) might lose market share in a competitive marketplace to a less toxic and equally effective alternative. Feasibility is based on the impact to the regulated industry. Had the economic impacts to third party suppliers been a requirement in determining economic feasibility, OSHA would have been blocked from ever reducing PELs or imposing more protective standards for asbestos or other toxic materials.

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[2] *Under Trump Worker Protections Are Viewed with New Skepticism,* New York Times, June 5, 2017. https://www.nytimes.com/2017/06/05/business/under-trump-worker-protections-are-viewed-with-new-skepticism.html

OSHA's proposal would establish inferior health standards for construction and maritime workers for one purpose: to satisfy the interests of companies who want to sell their beryllium-containing abrasives to shipyards and construction companies, despite the fact that OSHA established in the Final Economic Assessment that there are alternatives to coal slag that contain no beryllium. NIOSH-funded studies of alternatives show, for example, that crushed glass contains no beryllium.[3] The Committee on Education and the Workforce Democratic staff has been advised by a major shipyard that abrasives made from recycled crushed glass can provide the appropriate "profile" necessary for coating or recoating the hull of ships, and that recycled crushed glass is less costly than the coal slag abrasives they have been buying. Research by the U.S. Navy indicates that crushed glass is comparable to coal slag in its efficiency for many tasks involving paint removal from ships.[4]

Shipyard Worker Testimony in the Hearing Record Underscores the Need for Ancillary Provisions to Protect Workers from Beryllium Exposure

OSHA contends that since there are other pre-existing standards which could protect workers in abrasive blasting, OSHA is proposing to jettison some or all of the ancillary provisions. The proposed rule points to pre-existing provisions for respiratory protection, ventilation, and housekeeping for abrasive blasters in construction (29 CFR 1926.57 (f)), and requirements for respiratory and personal protective equipment for mechanical paint removal in shipyards (29 CFR 1915.34).

In general, it is true that abrasive blasters wear respirators for protection because of their very high exposures to dusts, including beryllium dust; however, testimony presented at the OSHA rulemaking hearing on March 22, 2015 indicates that pot tenders, cleanup workers, and workers working downwind or adjacent to abrasive blasting areas are exposed to clouds of beryllium-containing dust without any respiratory protections. Donning and doffing also exposes the blaster to beryllium-containing dust. Dennis Johnson, an employee at the Newport News Shipyard, submitted written testimony about his work after he was promoted to the job as an abrasive blaster:[5]

> *I started my first day and was sent to work in Dry Dock 12. It is a half-mile long open pit. On my first day, there wasn't any formal training of what exactly the job entailed, however, I was assigned to work with a more experienced blaster. I did go to the safety class on grit and blasting agents that were used and we discussed PPE, but there was no training specific as to what the material contained. While I was training, the blasting*

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[3] Porter DW, Hubbs AF, Robinson VA, Battelli LA, Greskevitch M, Barger M, Landsittel D, Jones W, Castranova V. *Comparative pulmonary toxicity of blasting sand and five substitute abrasive blasting agents.* J Toxicol Environ Health A. 2002 Aug 23;65(16):1121-40. PubMed PMID: 12167212; *Evaluation of Substitute Materials for Silica Sand in Abrasive Blasting,* KTA-Tator, Inc., September 1998. https://www.cdc.gov/niosh/topics/silica/pdfs/ab_p1abd.pdf

[4] *Users Guide to Selection of Blasting Abrasives,* The National Shipbuilding Research Program, U.S. Department of the Navy, April 6, 1998 (NSRP 0511).

[5] Testimony of Dennis Johnson, Tr. 246-249. https://www.regulations.gov/contentStreamer?documentId=OSHA-H005C-2006-0870-1756&attachmentNumber=1&contentType=pdf

> *supervisor would come and check on me and talk about the job, but nothing was really discussed about the health effects associated with the blasting media.*
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> *On the job, blasters like me would wear air-supplied respirators and coveralls. After we put on our PPE, we would walk down about five flights of stairs to the bottom of the pit and begin blasting the bottom halls of the ship. We would probably have blasted for five or six straight hours. Sometimes we were standing several feet away from the material we were blasting, but oftentimes, we had to crawl in spaces where we could be less than a foot away from what we were blasting. No matter how far away I was from the hull, it was still very cloudy and dusty. Sometimes I would not be able to see my hand a half-inch in front of my face. Whenever I would go to break, I would be covered in dust from head to toe, even underneath my respirator and coveralls.*
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> *Oftentimes I could even blow my nose and black dust would come out. Even if the section we had was under containment, this dust would still float out into the dry dock.*
>
> *Given the job, there could anywhere from one to 12 blasters doing this at once. Each of us would have a blaster helper that would load the material into the blaster and several safety men, if our job was considered to be occurring in a confined space; however, only the blasters had the respirators.*
>
> *Other than makeshift containment, there was no specific control to protect the helpers or bystanders. Even with the containment, the gaps and leaks let dust out.*

Mr. Johnson also pointed out that beryllium-containing abrasive is used in large quantities.

> *The blasting agent used then and now, to the best of my knowledge, contains beryllium. Though there is just a small percentage in it, it is used in large amounts. And in some cases, we can even haul this in by the truckload.*[6]

At this hearing, OSHA officials questioned Alan Harville, the Safety Representative for USW Local 8888, which represents hourly workers at the Newport News Shipyard.[7]

> MR. COBLE (OSHA): *And if I could follow-up with regard to whether these helpers and pot-tenders ever wear respirators, it sounded like you were saying they don't, as a rule. But would they; and under what circumstances would they wear respirators?*
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> MR. HARVILLE (USW): *The pot-tenders and helpers, to my knowledge, I have never physically seen them wear a respirator. Basically, right now with their requirement, the shipyard treats sandblasting dust as a nuisance dust. So if the helper wants a respirator, they have to get it on his own, but the blaster, however, has to be in that air supply. It has to be in a specific equipment.*

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[6] Ibid. Tr. 250

[7] Testimony of Alan Harville, Tr. 271. https://www.regulations.gov/contentStreamer?documentId=OSHA-H005C-2006-0870-1756&attachmentNumber=1&contentType=pdf

OSHA estimated in the June 27 proposed rule that there is already 75 percent employer compliance with respiratory and other protections for worker exposures to beryllium under pre-existing construction and maritime standards – protections that would be applicable in lieu of the more protective standards in the final January 9 beryllium rule.[8] This does not appear to be supported by testimony from the hearing, which suggests that while the abrasive blasters may have protections, there is limited or no protection for many other workers, including bystanders, who are exposed to beryllium-containing dust under the pre-existing standards. Not only are there pot tenders and cleanup workers who are exposed, but also "safety watches" – workers who must maintain a line of sight with the blasters who are working in confined spaces. OSHA should reassess the accuracy of its compliance estimate by observing abrasive blasting activities in a representative number of shipyards and construction sites. OSHA should also reassess whether the pre-existing standards provide protections from exposure to beryllium that are as robust as the exposure assessment and exposure control plans contained in the January 9 rule.

Risks for Recycled Glass Substitutes

Questions have been raised about whether substitutes, such as recycled glass, present the same occupational health risks as blasting sand or silica sand, which is known to contain crystalline silica and cause silicosis. According to the National Institute for Occupational Safety and Health, "Although the glass is chemically identical to crystalline silica (i.e., quartz, cristobalite, and tridymite), glass is amorphous, i.e., lacking the crystalline structure that is associated with silicosis, lung cancer, and several other silica-associated diseases."[9]

Hence, it appears that the contention that recycled glass would reinstate the same toxicity hazard as blasting sand is without merit.

State OSHA Actions

On February 15, 2017, the Virginia Safety and Health Codes Board incorporated by reference OSHA's beryllium standards for general industry, construction and maritime; however, enforcement of maritime standards at private sector facilities is carried out by federal OSHA.[10] On July 7, 2017, the State of Oregon adopted the January 9 beryllium rule for construction and general industry to be effective March 12, 2018.[11] On August 17, 2017, the California Occupational Safety and Health Standards Board voted 5-0 to adopt OSHA's January 9

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[8] Estimated Current Compliance Rates for Industries Affected by OSHA Proposed Deregulatory Action on Beryllium, Table V-11, 82 FR 29199

[9] Email communications between NIOSH and the staff of the Committee on Education and the Workforce, July 24, 2017. NIOSH noted that "Recycled glass, which is amorphous silica, is regulated by OSHA under a Table Z-3 limit of: PEL = (80 mg/m^3) /%SiO. If the dust was 100% amorphous silica this would give a PEL of 0.80 mg/m^3. This compares with the crystalline silica limit of 0.05 mg/m^3.

[10] Virginia Safety and Health Codes Board. http://register.dls.virginia.gov/details.aspx?id=6301

[11] Oregon Department of Consumer and Business Services, Oregon Occupational Safety and Health Division. http://osha.oregon.gov/OSHARules/adopted/2017/ao4-2017-ltr-beryllium.pdf

beryllium rule for general industry, construction and maritime. Washington State published a notice that it is developing a beryllium rule in response to the January 9 rule issued by OSHA.[12]

Conclusion and Summary

The proposed rule to eliminate ancillary provisions lacks merit, and should be rejected. As these comments make clear:

1) Construction and shipyard workers are treated as second class workers (compared with workers employed in general industry) by revoking the ancillary provisions. The ancillary provisions are included in the rule for one clear purpose: to reduce significant risks that exist below the PEL of 0.2 ug/m3. In its final rule issued in January, OSHA tailored the "ancillary" provisions for construction and maritime "to ensure that workers exposed to beryllium in the construction and shipyard industries are provided protection that is comparable to the protection afforded to workers general industry."
2) The risks to construction and maritime workers do not disappear by making unrealistic assumptions about employer compliance with or the adequacy of existing respiratory protection or ventilation standards.
3) Reducing protections for shipyard and construction workers to protect the market share of companies selling abrasive blasting materials, such as "Black Beauty" coal slag, is not valid under the OSH Act. Given there are abrasive blasting substitutes which do not contain beryllium, the costs of employer compliance with this rule can be potentially reduced or eliminated outright.
4) With respect to the overlap in requirements between existing OSHA standards and new beryllium rule, nothing in the proposed rule indicates that the pre-existing protections adequately protect workers from harmful beryllium exposures, and that the "ancillary" provisions are superfluous.
5) The deadline for compliance should not be extended beyond March 12, 2018, because this proposed rule lacks merit and should not be adopted.

Finally, we would urge OSHA to consult with the Maritime Advisory Committee on Occupational Safety and Health, in addition to the Advisory Committee on Construction Safety and Health, in reviewing its proposed changes to the beryllium rule.

Thank you for your consideration of these comments. Please contact Richard Miller of the Democratic staff of the Committee on Education and the Workforce with any questions at 202-225-3725 or by email at richard.miller@mail.house.gov.

[12] Washington State Department of Labor and Industries, Rules under Development http://www.lni.wa.gov/rules/AO17/07/1707CR101.pdf

Sincerely,

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Ranking Member
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