

DATE: August 22, 2022
TO: PRR Lead Task Force
FROM: Helen Cleary
RE: Lead Task Force Meeting Summary – August 15, 2022

On August 15, 2022, fourteen members of the Phylmar Regulatory Roundtable – PRR Lead Task Force met to discuss PRR’s written comments to Federal OSHA on the Advanced Notice of Proposed Rulemaking ([ANPRM](#)): Blood Lead Level for Medical Removal. PRR’s Overview of the ANPRM can be found [here](#). The video/audio of the Task Force meeting can be found [here](#).

Many thanks to the members of the 2022 Phylmar Regulatory COVID-19 Task Force Members: Breanna Skinner; Brian Anzelc; Brian Heramb; Claude Golden; David Woodard; Edna Lehnert; Hillary Thomas; Jamie Carlile; Jim Weber; Jo Forchione; John Malone; Marc Hendon; Michelle Stewart; Ofelia Perez; Paul Costa; Rod Collins; and Roxana Ramirez. To all of you, your service is much appreciated.

Comments are due August 29th, but PRR expects there to be an extension of at least 30 days.

PRR Staff Update: On Thursday, August 18, 2022, FedOSHA [extended](#) the comment deadline by 60 days; comments are now due October 28, 2022.

Action Item: Task Force members to review the questions sent via email on August 15th and provide specific input and feedback by September 9, 2022. (Questions are included below and attached as a Word doc. with this email.)

PRR Staff discussed that Fed/OSHA posted the ANPRM for the Lead Standard in June and are looking for information and input prior to proposed revisions to the current rule. Fed/OSHA is asking for comments on the following:

- Reducing the current triggers in the medical surveillance and medical removal protection provision in general industry and construction.
- How current ancillary provisions in the lead standards can be modified to reduce worker Blood Lead Levels (BLLs).

Although Fed/OSHA does not say what they are proposing for triggers, they do reference a number of public health organizations that have recommended lower triggers and more stringent standards. California is proposing to drop the PEL from 50 $\mu\text{g}/\text{m}^3$ to 10 $\mu\text{g}/\text{m}^3$. A big push for this change came from California Department of Public Health (CDPH) who recommended 3 $\mu\text{g}/\text{m}^3$ - 10 $\mu\text{g}/\text{m}^3$; The Occupational Lead Poisoning Prevention Program developed by the CDPH can be found [here](#). The Health-Based Guidelines for Blood Lead Levels in Adults publication by CDPH can be found [here](#).

PRR Staff pointed to recent research conducted, that OSHA included in the ANPRM, to assess the impact of occupational exposure to lead. The research found that the national prevalence rate of BLLs ≥ 10 $\mu\text{g}/\text{dL}$ for adults declined from 26.6 adults per 100,000 employed in 2010 to 15.8 in 2016. Of the 11,695 adults with lead exposure of ≥ 10 $\mu\text{g}/\text{dL}$ in 2016, 90.3% were from occupational exposures. Majority of those adults were employed in manufacturing, construction, services, and mining.

One member stated his company has never provided information to a regulatory agency this early in the process and is hesitant to supply OSHA with his companies' current processes. PRR Staff pointed out that this an opportunity to weigh in on lowered triggers (PEL and BLL) prior to OSHA proposing actual numbers in the anticipated proposed revision to the rule.

Another member brought up the unanticipated consequences of lowering the PEL standards, particularly due to soils disturbance which naturally occurs near freeways and residential areas during construction. He suggested discussing the impacts related to disturbance of soil for construction and mediation crews as well as residents. He offered to touch base with his Environmental Department to put together a document on Unanticipated Consequences.

PRR Staff asked the Task Force members for specific challenges they are facing such as workers who seldom work on lead pipes for short periods of time have very low exposure levels.

Another Task Force member brought up two points:

- Because the lead standard currently relies on the airborne exposure as a trigger for medical and biological blood testing, his company built their program to ensure that exposures never reach that trigger level.
- Currently CalTrans requires lead protection programs for every project that will potentially disturb soil near a project. He suggested there should be plenty of data already produced and available.

PRR confirmed that OSHA should get the data to complete a data-driven analysis before determining levels in order to scrutinize the results.

Another Task Force member confirmed that if Fed/OSHA's standard is more stringent than the existing Cal/OSHA standard, Cal/OSHA will have to adopt a standard at least the same as Fed/OSHA. PRR Staff said, regardless, Cal/OSHA will continue to push their standard through the process – it is too far along in the process not to complete the rulemaking process. Also, it will take years for FedOSHA to draft, publish and complete the final rulemaking process.

One member explained the Cal/OSHA standard requires a medical evaluation prior to any exposure at or above the action level, and immediately after exposure along with sampling requirements that will kick in at the action level.

Another member added that currently if you anticipate exposure at or above the limit, you are supposed to have Blood Lead Monitoring done. Now the level is lower so it would be easier to exceed it, and more businesses should be doing blood sampling.

One Task Force member suggested there is industry uses of lead and the associated exposure issues that now come into the workplace.

Another Task Force member asked the group what they believe the recommended permissible exposure limit (PEL) should be as a specific recommendation would be helpful to the Agency. The Task Force as a group was unable to come up with a specific number.

One member explained they have data from forty years ago using Flame AA Analysis for Airborne Lead. This technique requires 8-hours of testing. He mentioned ICP is used often when the work on lead is brief (20 – 30 minutes). Currently the regulation does not specify methods but the sample collection flow rates and media is the same for all methods.

With regards to the hygiene controls in the proposal Cal/OSHA standard, one Task Force member stated that currently, the standard requires the on-site showers "as feasible". Cal/OSHA has removed "as feasible" from the proposed draft which would require a portable shower system. Another member agreed it would not be feasible to install "portable showers" along a roadside.

With regards to PPE, the current California standard states if the employee requests a PAPR, the employer must supply that respirator to the employee. However, it is unclear if PPE can be required only if the employee is over the action level or PEL or if the employee could request a PAPR at any time.

PRR Staff brought up the topic of Current Practices. She suggested not getting too specific but feels this is where PRR can share the perspectives on the following:

- Processes are employers currently utilizing
- Current employer challenges
- How the process is working
- How employers are handling the current process

Implementation issues affect the industries with low frequencies of exposure. The Task Force felt the standard should apply to certain high-risk industries or specific NAICS Codes. If the standard is applied to everyone, it will create a burden for other employers.

Additional Resources:

[ICP Analysis of Metal and Metalloid Particulates from Solder Operations](#)
[Metal and Metalloid Particulates in Workplace Atmospheres \(ICP Analysis\)](#)
[Metal and Metalloid Particulates in Workplace Atmospheres \(Atomic Absorption\)](#)

Adjournment: 10:58 am

Next Meeting: September 27, 2022; 10 – 11am (pacific)

Questions for PRR Members**RE: FedOSHA’s ANPRM: Blood Lead Level for Medical Removal**

PRR will use the responses to these questions as the basis for our comments. **Please include specific operational examples that support your suggestions.** For example, what types of tasks and workers demonstrate the need for OSHA to consider frequency.

General Questions/considerations discussed by the Task Force

- How should OSHA consider frequency of exposure when determining PEL and Action Level?
- What would be an effective and reasonable PEL we can recommend?
- Which industries/NAICS codes should the revised rule focus on?

Specific Questions from OSHA’s ANPRM

Following are the specific questions OSHA is asking. Questions (32) – (57) in section H are specifically addressed to employers. For additional background and detail on the question, please review the text of the [ANPRM](#).

A. Blood Lead Triggers for Medical Removal Protection**1. Requirements for Medical Removal**

- (1)** Should OSHA consider changing the BLL at which an employee in general industry or construction is to be removed from lead exposure to match any of the approaches described above? Is there a different BLL trigger for removing a worker from lead-exposed work that you would suggest? Please explain your answer and provide supporting information or data, if available.

2. Requirements for Return to Lead-Exposed Work

- (2) Should OSHA consider changing the BLL below which an employee shall be returned to lead exposure to 15 µg/dL? Is there a different BLL trigger for returning a worker to lead-exposed work following medical removal that you would suggest? Please explain your answer and provide supporting information or data, if available.

B. Medical Surveillance Provisions

1. Medical Examination and Consultation Requirements

- (3) Are these still appropriate tests [full medical exam and consultations] or should a full medical examination include any other tests? OSHA is also requesting comment on the appropriateness of including the ZPP given its limitations (see also Section #6, "ZPP", below).

2. Triggers for Routine Blood Lead Monitoring

- (4) Should OSHA consider expanding its criteria for blood lead monitoring to resemble the ongoing blood lead monitoring criteria that Washington DOSH and/or Cal/OSHA is considering? Are there different criteria you would suggest? Please explain your answers.

- (5) Should OSHA consider adding criteria other than airborne lead exposure to its requirements for blood lead testing, such as contact with lead-contaminated surfaces, disturbance of lead-containing materials or direct contact with high-percentage lead materials? In particular, should OSHA consider adopting criteria based on contact with lead-contaminated surfaces, disturbance of lead-containing materials, or contact high lead-content metals, as Washington DOSH's stakeholder review draft and Cal/OSHA's discussion draft contemplate? Please explain your answer.

3. Frequency of Blood Lead Monitoring

- (6) Should OSHA consider revising the required frequency and the BLLs related to the schedule of blood lead testing? Would requirements similar to those included in Washington DOSH and Cal/OSHA's drafts be appropriate? If not, what would be an appropriate frequency for blood lead testing? Please explain your answer.

4. Analytical Methods for BLL Testing

- (7) Should OSHA consider revising its standard to require the use of a blood lead analysis laboratory that has been approved under the CMS blood lead laboratory monitoring

system pursuant to the CLIA regulations, consistent with OSHA's 2018 memorandum?
Please explain your answer.

- (8) Are there methods other than collecting a venous sample that would meet the accuracy requirements of the lead standard? Please describe the advantages and limitations of such methods.
- (9) Are portable direct reading instruments for measuring BLL available that meet the accuracy requirements of the OSHA lead standards and would be considered equivalent to an analysis conducted by a laboratory approved by OSHA or CDC?
- (10) Do you use or have knowledge of other measures of lead in the body? Please describe and explain whether and how they could be used effectively for medical monitoring of workers exposed to lead and the relative costs of those measures (*i.e.*, cost-effectiveness).

5. Employee Notification of BLL Results

- (11) Should OSHA revise its general industry standard to require employers to notify all employees who receive blood lead testing of their results, similar to the requirements of its construction standard and requirements under consideration by Washington DOSH and Cal/OSHA? If not, what criteria should be used to determine which employees should be notified of their results? Please explain your answer.

6. ZPP

- (12) Should OSHA remove the requirement for ZPP testing currently included in its lead standards? Please explain your recommendation to continue or discontinue ZPP testing as part of medical surveillance for lead-exposed workers.

7. Provisions for Worker Privacy

- (13) Should OSHA update the lead standards' employee privacy protections, including restriction of employer access to an individual employee's BLL measurements? Please explain your recommendation.

C. **Permissible Exposure Limits (PEL)**

- (14) Should OSHA consider reducing its PEL of 50 µg/m³ for occupational lead exposure or its action level of 30 µg/m³ ? At what level do you believe the PEL should be set to reduce the harmful effects of lead exposure in exposed workers? Do you think

this level would be technologically and economically feasible for affected industries (see OSH Act Sec. 6(b)(5), [29 U.S.C. 655\(b\)\(5\)](#))? Please explain your answer and, if available, provide data pertinent to the benefits, feasibility, and expected increase in costs of revising the federal PEL or action level for airborne lead. (Please note that OSHA requests detailed information on costs of already-existing requirements and voluntary practices in a series of provision-specific questions in Section H, Questions for Employers on Current Practices).

- (15)** Cal/OSHA's discussion draft includes a Separate Engineering Control Airborne Limit (SECAL) for selected processes in lead acid battery manufacturing.^[13] Should OSHA consider implementing a SECAL for occupational lead exposure for specific processes if industry-wide compliance with a proposed revision to the PEL is demonstrably infeasible for specific processes?
- (16)** Should OSHA consider removing the provision of OSHA's general industry lead standard that allows employers to use respiratory protection to comply with the PEL for workers exposed to lead above the PEL for 30 days or less per year? Please explain your answer and, if applicable, your recommendation on how employers should be required to limit exposures of workers exposed above the PEL for 30 days or less per year.

D. Personal Protective Equipment (PPE), Hygiene, and Training

- (17)** The Washington DOSH stakeholder review draft would require employers to provide and ensure the use of impermeable PPE when employees are working with lead compounds that may be absorbed through the skin for any work covered by the scope of the rule. Should OSHA consider a similar requirement for its lead standards? Please explain your answer and any evidence available on the feasibility and cost of this requirement if adopted by OSHA.
- (18)** The Washington DOSH stakeholder review draft would require employers to prohibit workers covered by the scope of the rule from cleaning or laundering protective clothing or equipment at home. Should OSHA consider a similar requirement for its lead standards? Please explain your answer and any evidence available on the feasibility and cost of this requirement if adopted by OSHA.
- (19)** The Washington DOSH stakeholder review draft includes requirements that employees be provided with hygiene facilities and PPE when any of the following criteria are met:

1. Employees work in areas with surfaces at a "Surface Action Level" of 1000 µg/dm (equivalent to 9290 µg/ft);

2. Employees disturb or touch metals with a "Metals Action Level" of 20 percent or more lead content by weight;
3. Employees disturb any materials with a "Non-metal Action Level" of 0.5 percent or more lead content by weight (5000 ppm); or
4. Employees welding, burning, or grinding, or otherwise creating aerosols or fumes from materials with a "Burning/Grinding/Blasting Action Level" of 0.1 percent or more lead content by weight (1000 ppm).

Material content criteria (items #2 through 4) are applied during any activity that could release lead or lead compounds from the material in a form that could be inhaled, ingested, or absorbed through the skin. The metals action level (item #2) also applies when workers directly contact the metal with skin, personal protective equipment, or clothing.

Should OSHA add hygiene and PPE provisions similar to any or all of those described above, which are being considered for adoption by Washington DOSH? Please explain your answer and, if available, provide information on the feasibility and cost of these requirements if adopted by OSHA.

- (20) Are there issues or concerns related to surface contamination or material content criteria for hygiene and PPE requirements that OSHA should consider?
- (21) Should OSHA consider revising the requirements for employers to provide clean or new PPE to workers? Please provide specific recommendations for frequency and exposure triggers, and please explain your answers.
- (22) Washington DOSH's stakeholder review draft would require that the training provided to all lead-exposed workers include information on special precautions for pregnant workers. Should OSHA consider including a similar requirement to include material on precautions for pregnant workers in the training provisions of its lead standards?

E. Safe Harbor Compliance Protocols

1. Well Managed Blood Lead Levels Safe Harbor Protocols

- (23) Should OSHA consider a safe harbor protocol approach similar to the *Well Managed Blood Lead Levels* protocol described above, which is being considered for adoption in Washington State? What aspects of the protocol would be beneficial? Are

there issues, concerns, or different approaches to a “safe harbor” based on well-managed BLLs that OSHA should consider?

2. Clean Areas Safe Harbor Protocol

- (24) Should OSHA consider a safe harbor protocol approach similar to the *Clean Areas* protocol described above, which is being considered for adoption in Washington State? What aspects of the protocol would be beneficial? Are there issues, concerns, or different approaches to a “safe harbor” based on identification of clean areas using surface sampling that OSHA should consider?

3. Safe Harbor Protocol for Handling Lead-Containing Articles in Retail Settings

- (25) Should OSHA consider a safe harbor protocol approach similar to the Retail Settings Protocol described above, which is being considered for adoption in Washington? What aspects of the Protocol would be beneficial? Are there issues, concerns, or different approaches to a “safe harbor” for retail settings that OSHA should consider?

4. Safe Harbor Protocol for Office and Residential Settings

- (26) Should OSHA consider a safe harbor protocol approach similar to the Office and Residential Settings protocol described above, which is being considered for adoption in Washington? What aspects of the protocol would be beneficial? Are there issues, concerns, or different approaches to a “safe harbor” that OSHA should consider for work in office and residential settings that does not involve maintenance, remodeling, or repair work?

5. Safe Harbor Protocol for Incidental Lead Paint in Construction/Renovation, Repair, and Painting (RRP) Work

- (27) Should OSHA adopt a safe harbor protocol approach similar to the protocol described above for incidental lead paint in RRP work that is being considered for adoption in Washington? What aspects of the protocol would be beneficial? Are there issues, concerns, or different approaches to a protocol for RRP work that OSHA should consider?

F. Environmental Effects

- (28) What is the potential direct or indirect environmental impact (for example, the effect on air and water quality, energy usage, solid waste disposal, and land use) from a reduction in BLL triggers or other changes to the OSHA lead standards?
- (29) Are there any situations in which reducing lead exposures to employees would be inconsistent with meeting environmental regulations?

G. Duplicative, Overlapping, or Conflicting Rules

- (30) Are there any federal regulations that might duplicate, overlap, or conflict with modifications to the current lead standards? If yes, please identify and explain how they would duplicate, overlap, or conflict.
- (31) Are there any federal programs in areas such as defense or energy that might be impacted by modifications to the current lead standards? If yes, please identify and explain how they would be impacted.

H. Questions for Employers on Current Practices

- (32) If you use criteria more stringent than OSHA's requirements for conducting blood lead testing on your employees, how do your criteria differ from OSHA's requirements?
- (33) If you use criteria more stringent than OSHA's requirements for notifying employees of their BLL and ZPP results, how do your criteria differ from OSHA's requirements?
- (34) If you use criteria more stringent than OSHA's requirements for medical removal protection in your work environment or industry, how do your criteria differ from OSHA's requirements? Please include the criteria, such as the BLL, for both medical removal and return to work status.
- (35) What are your current costs of medical removal per employee (where possible, please monetize in terms of dollars per time unit (e.g., per month, per year))? Would your company be able to reassign the medically removed worker to a job at least at the clerical level that the employee would find acceptable? Please include specific examples of hourly wages (per job category) for the employee's regular occupation and the hourly wages for the medically assigned clerical job, if available.
- (36) How many of your employees, over the past 10 years, have been removed from lead-exposed work due to elevated BLLs? If possible, please submit anonymized examples of employees who were brought into the medical removal program, their BLL

level at the time of removal, and the time required to bring the BLL level below 40 µg/dL (or an alternative specified level).

- (37)** Over the past ten years, how many, or what percentage, of your employees were removed from lead-exposed work due to elevated BLLs exceeding the maximum 18-month time period and were unable to return to work?
- (38)** OSHA's lead standards set a BLL of below 40 µg/dL (two consecutive tests) for return to lead-exposed work for medically removed workers. As discussed earlier in this ANPRM, in Section I.A. Background; Events Leading to this Action, OSHA is considering lowering the BLL for medical removal. If possible, please submit estimated increases in the number of affected employees and in costs if the BLL for allowing return to work were reduced to a level lower than OSHA's current BLL of 40 µg/dL. Please specify the BLL for return to work you assume in your estimation.
- (39)** How many and what percentage of your employees are currently in your medical surveillance program? How many of these employees receive BLL testing? How many receive ZPP monitoring?
- (40)** What are your current costs of medical surveillance per employee? Please include specific examples of resource requirements in terms of additional staffing or time commitments (per job category), costs for purchase of testing materials (dollar cost per unit), expected life of equipment, and costs for energy usage and any other additional expenses.
- (41)** The OSHA lead standard for general industry requires the employer to institute a medical surveillance program for all employees who are or may be exposed at or above the AL (30 µg/m³) for more than 30 days per year. There are three requirements for biological monitoring that are triggered by the current AL (30 µg/m³):
- At least every 6 months for each employee;
 - At least every two months for each employee whose last blood lead test indicated a BLL at or above 40 µg/dL. This frequency shall continue until two consecutive blood lead tests indicate a BLL below 40 µg/dL; and
 - At least monthly during the removal period of each employee removed from exposure to lead due to an elevated BLL.

If possible, please discuss and/or submit quantitative estimates of the increases in the number of affected employees and in medical surveillance costs or other pertinent costs

if the AL (30 $\mu\text{g}/\text{m}^3$) were decreased. Please specify the AL you assume in your estimation.

- (42)** Have you upgraded engineering controls to reduce airborne concentrations of lead in your facility? If yes, please describe the controls and whether you observed a subsequent reduction in BLLs. If so, did you monitor to what extent workers' BLLs were reduced following implementation of upgraded controls? Please provide data, if available, on airborne lead concentrations in your facility and on workers' BLLs prior to and following the upgrades. Also provide related initial and annual engineering control costs of upgraded controls, as well as the expected life of the equipment.
- (43)** Please describe your control strategies to reduce lead surface contamination and the potential for dermal exposure to lead in your facility, such as housekeeping procedures, hygiene areas and practices, and personal protective clothing and equipment (PPE). Please describe such controls, their costs, and explain how well they work and why. To what extent were you able to lower the surface levels of lead? Did you see a subsequent reduction in employee BLLs? Please provide supporting data, if available.
- (44)** Do you provide PPE in your workplace, including equipment providing respiratory protection? If yes, has it reduced BLLs in your workers? Please describe the type of PPE that you provide.
- (45)** Does your company have triggers for PPE that are different from requirements under OSHA's lead standards? Please describe the triggers used for providing PPE.
- (46)** If your firm purchases clothing and equipment to protect employees from lead exposure, please estimate the PPE costs necessary to comply with the current OSHA lead standard. Please give costs on a per employee basis and at an aggregated level, if available.
- (47)** Have you upgraded PPE to reduce worker exposure to lead? If yes, please describe the controls and whether you observed a subsequent reduction in BLLs. If so, to what extent were workers' BLLs reduced following implementation of upgraded PPE, if applicable? Please provide data, if available.
- (48)** Do you have housekeeping procedures? If yes, please describe.
- (49)** Does your company have cleaning criteria specific to surfaces? This may include a schedule for cleaning and periodic surface cleanliness measurements, specific types of cleaning practices and activities, or other activities associated with surface decontamination.

- (50) What are your current housekeeping costs to comply with the OSHA lead standard? Please provide the amount of time allocated for housekeeping costs calculated on an hourly basis.
- (51) Have you provided hygiene facilities or used hygiene practices beyond the requirements of OSHA's lead standards? This may include more frequent hand washing breaks or providing access and time for showers at exposures below the PEL. Please describe how your practices differ from requirements in OSHA's lead standards.
- (52) What are your current costs to comply with the hygiene provisions of OSHA's lead standards? Please provide the amount of time allocated for hygiene costs calculated on an hourly basis.
- (53) Have you taken lead dust surface measurements in your work environment? If so, what are your procedures and current costs for this testing? Please specify the labor and equipment costs for the testing. Have you experienced any impediments or limitations when using wipe sampling to identify surface contamination with lead? What can be done to overcome these barriers?
- (54) If you have taken lead dust surface measurements, are they qualitative (presence of lead only) or quantitative? If quantitative, do you use lead dust hazard levels established by HUD and EPA? Please provide any data you have on quantitative surface contamination measurements in your work environment.
- (55) Have you evaluated lead surface contamination to investigate elevated employee BLLs in areas where airborne lead exposure was below the PEL? If yes, what were your findings?
- (56) Have you taken wipe samples of skin or clothing to identify lead contamination? If yes, what were your findings?
- (57) Have you found any correlation between BLLs and lead surface contamination, particularly when airborne exposures are below the PEL?

END