June 25, 2025

Submitted Electronically: https://www.regulations.gov
Environmental Protection Agency
Existing Chemicals Risk Mgmt. Div., Office of Pollution Prevention & Toxics

RE: CSHEMA Comment on Docket EPA-HQ-OPPT-2020-0465: EPA Methylene Chloride Rule

To Whom It May Concern:

The Campus Safety Health and Environmental Management Association (CSHEMA) is the premier association for health, safety, and environmental management in the College and University Sector. CSHEMA has represented this sector for more than 70 years and presently serves over 400 higher education institutions.

We are writing in response to the request for information in the proposed rule to extend the timeline for implementation of the Methylene Chloride Rule (40 CFR 751 subpart B) for non-federal laboratories by 18 months. CSHEMA supports this proposed change.

EPA specifically requests information about risk and efficacy of controls from current laboratory uses, evidence for the efficacy of alternative approaches to meeting the established exposure limits, and the cost of implementing the rule. CSHEMA member institutions have been working together since the initial proposed rule for methylene chloride was released to develop compliance resources, benchmark member institutions' implementation programs, and share information.

Effectiveness of Current Laboratory Controls and Information on Risk

As part of CSHEMA's efforts, we have pooled initial quantitative exposure monitoring data required by the standard from 9 institutions (see Tables 1 and 2) and qualitative data from 98 institutions (see attached Supplementary Information). This aggregated data consistently and clearly demonstrates that when laboratory use of methylene chloride occurs inside a chemical fume hood, regardless of the specific process, exposure values are well below the regulatory limits. Likewise, fully enclosed systems like glove boxes and solvent dispensing systems provide minimal exposure potential. The data confirms that there is very little risk of approaching exposure limits when following the OSHA Laboratory Standard (29 CFR 1910.1450) and best practices common among academic research and teaching laboratories. Note that methylene chloride is classified as a Particularly Hazardous Substance under the OSHA Lab Standard,

requiring designated areas and other controls in alignment with the TSCA requirements for managing the chemical hazards (see Supplementary Information for details).

Table 1. Summary of 15-min Short-Term Exposure Measurements by Ventilation Type, Methylene Chloride

Ventilation Type	Number of samples	Samples > LOD (% total samples)	15-min TWA ‡ Mean (± 95% CI)
Limited Engineering Controls*	42	29 (31.9%)	6.4 ppm (± 2.8)
Engineering Controls	49	13 (14.3%)	1.23 ppm (± 0.43)
Total 15-min Short-Term Samples	91	42 (46.2%)	3.6 ppm (± 1.4)
Exceedance of STEL (>16 ppm)		6† (6.6%)	26 ppm (± 7.1)

* Samples where some or all of the work was performed outside of engineering controls.

‡ Means and 95% Confidence Intervals were calculated using censored data. For non-detects (values below the Limit of Detection, LOD), values were substituted with LOD/2 in accordance with U.S. EPA guidance for handling data near detection limits in risk assessments.

† Measurements that exceeded the STEL occurred exclusively in scenarios characterized by Limited Engineering Controls.

Table 2. Summary of 8-hr Full-Shift Exposure Measurements by Ventilation Type, Methylene Chloride

Ventilation Type	Number of samples	Samples > LOD (% total samples)	8-hr TWA ‡ Mean (95% CI)
Limited Engineering Controls*	41	36 (45.0%)	0.48 ppm (± 0.18)
Engineering Controls	39	19 (23.8 %)	0.28 ppm (± 0.21)
Total 8-hr Full-Shift Samples	80	55 (68.8%)	0.38 ppm (± 0.14)
Exceedance of AL (>1 ppm)		7† (8.8 %)	2.0 ppm (± 0.89)
Exceedance of ECEL (>2 ppm)		1† (1.3 %)	4.2 ppm**

* Samples where some or all of the work was performed outside of engineering controls.

‡ Means and 95% Confidence Intervals were calculated using censored data. For non-detects (values below the Limit of Detection, LOD), values were substituted with LOD/2 in accordance with U.S. EPA guidance for handling data near detection limits in risk assessments.

† Measurements that exceeded the AL or ECEL occurred exclusively in scenarios characterized by Limited Engineering Controls.

** Elevated exposure was due to multiple rotary evaporation systems being used on the benchtop without adequate engineering controls.

Alternative Approaches for Worker Protection

As noted previously in the comments on the original proposed rule, the OSHA Laboratory Standard does not require exposure monitoring for laboratory use of chemicals unless there is reason to believe that exposure limits are routinely exceeded. The data collected by CSHEMA member institutions clearly demonstrates that even the lower exposure limits proposed in this ruling are rarely exceeded in laboratories. In situations where the newly established exposure limits have been exceeded, application of protective laboratory practices and equipment already in common use in laboratories is adequate to meet EPA's exposure limits.

The data (see attached Supplementary Information) also shows that alternative engineering controls can be employed to achieve exposures that are below the limits when used in combination with appropriate work practices, like closing containers promptly after transfers. Alternative strategies are important as large equipment, like rotary evaporators, can take up valuable space inside fume hoods. Controls, such as rerouting rotary evaporator pump exhaust to external exhaust, are common-sense solutions to limit exposure. As such, it is clear that a properly designed and implemented Chemical Hygiene Plan required by the OSHA Laboratory Standard is more than sufficient to eliminate unreasonable risk from laboratory use of methylene chloride. **We therefore respectfully request that EPA reconsider the need for the application of the TSCA rule to laboratories that are following the OSHA Laboratory Standard, incorporating methylene chloride use under the Chemical Hygiene Plan.**

Costs of Compliance and Difference with OSHA Standard

OSHA does not require monitoring for all laboratory users of methylene chloride. As a result, most laboratories do not have existing monitoring data and must initiate new programs and recordkeeping methods to demonstrate compliance. The financial burden placed on laboratories to comply with the Methylene Chloride Final Rule is significant. Costs of initial monitoring (excluding staff resources) range from a few hundred to tens of thousands of dollars per institution, with anticipated periodic monitoring rounds ranging from under $1,000 for institutions

with minimal use to over $10,000 for some institutions with a higher number of groups using methylene chloride (see Supplementary Information).

Staff time for recordkeeping and other requirements is an additional financial and operational burden imposed by the rule. It is common for institutions with a larger volume of use to have already exceeded 100 staff hours to date (see Supplementary Information). This time does not include future compliance tasks, such as development of written chemical-specific Workplace Chemical Protection Programs (WCPPs) and Exposure Control Plans (ECPs), chemical-specific training, record management, routine outreach to labs to identify new uses, and periodic monitoring.

The ongoing institutional oversight and recordkeeping required for methylene chloride use, such as assigning highly trained personnel to track new acquisitions through often decentralized procurement systems, identifying new uses in dynamic lab settings, monitoring all individuals entering methylene chloride use spaces, providing additional training specific to this single chemical, and conducting periodic monitoring present unforeseen long-term administrative and financial burdens. For a typical Carnegie Class R1 (doctoral universities with very high research activity) institution, with upwards of 100 lab units that use the solvent, the cost and staff time required to comply with the rule has significant budgetary and operational impacts. For smaller institutions that may need to hire an industrial hygienist to consult or perform exposure monitoring and analysis, the impact is proportionally greater.

Most institutions will also see an increased cost to manage spill response for methylene chloride releases due to the need for outside support because of the specific (supplied-air) respiratory protection not usually available in these settings. Incidental spills from laboratory-scale use of methylene chloride would generally be small quantities unlikely to pose significant health risks and would normally be cleaned up by the user.

Conclusion

We request that EPA consider whether value is added by requiring laboratories to develop and implement a costly and time-consuming WCPP for laboratory scale use of a single chemical. The data submitted here demonstrates clearly that, provided appropriate controls are in place following the OSHA Laboratory Standard and Chemical Hygiene Plans, exposure monitoring yields results below the EPA ECEL action level. Having multiple regulations that cover the same topics and with differing requirements places a huge burden on the regulated laboratory community by introducing both confusion and added cost.

If EPA feels that a more prescriptive approach is warranted, the 18-month timeline extension or the approach laid out in the EPA Perchloroethylene Final Rule, which addresses laboratory exposures to perchloroethylene by requiring fume hoods or other enclosures and dermal protection, is far preferable and more feasible for academic institutions.

Finally, we recommend that EPA consider applying this same strategy, namely, prioritizing engineering controls and robust chemical hygiene practices as required under the OSHA Laboratory Standard over mandatory periodic monitoring and chemical-specific programs to other chemicals currently undergoing TSCA risk evaluation and rulemaking for laboratory settings. A harmonized, risk-based approach for all applicable TSCA-regulated laboratory chemicals would reduce confusion, lower compliance costs, and maintain a high level of health protection grounded in actual laboratory risk and experience.

We appreciate the opportunity to submit these comments and are happy to provide additional data or participate in further discussion at EPA's request.

Sincerely,

James Crandall
President