

Frequently Asked Questions

Taken from the session chat during the Methylene Chloride Webinar on July 19, 2024 titled, "Managing Requirements of the TSCA Final Rule (Elimination)"

1. **What can I replace methylene chloride with?**
 - a. Join us for our webinar, "[Use This Not That: Safer Substitutions for Methylene Chloride](#)" on Sept 27th at 11:00 EST

2. **What is needed to still acquire methylene chloride if needed?**
 - a. To date I haven't seen any requirements articulated. Labs can likely expect to procure this material through the same vendors as before.

3. **How do we conduct exposure monitoring, and does the monitoring need to involve 8-hour and 15-minute TWA sampling?**
 - a. Exposure monitoring should be performed by a qualified individual, such as an industrial hygienist. Certification is not required, although Certified Industrial Hygienists are accredited by the American Board of Industrial Hygiene/Board for Global EHS Credentialing. Individuals handling methylene chloride may be categorized into Similar Exposure Groups or exposures assessed on a worst case scenario basis. Both a 8-hour TWA and 15-minute STEL exposures must be assessed.
 - b. For information about who and how to conduct personal exposure monitoring, join us for our 4-hour short course "[Assessing and Updating Institutional Safety protocols for Methylene Chloride Compliance](#)" on Oct 10th 11:00am - 3:00 pm EDT.

4. **What is the timeline for enforcement, and how will this regulation be enforced by the EPA?**
 - a. The timeline for implementation appears below. Depending on your state, this may be enforced by the EPA or state authority.

Initial Exposure Monitoring	May 5, 2025	Nov. 9, 2026
Control below ECEL and STEL	Aug. 1, 2025	Feb. 8, 2027
Provide respiratory and dermal protection, if needed	Aug. 1, 2025 (or within 3 months of results)	Feb. 8, 2027 (or within 3 months of results)
Exposure Control Plan	Oct. 30, 2025	May 10, 2027

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5. What does the Worker Protection Plan mean for our university?

- a. This is the term applied to the overall plan for ensuring worker protection. It consists of: the extension of OSHA protections to all potentially exposed persons, the establishment of exposure limits (Action Level, ECEL and STEL), initial exposure monitoring, development of a written Exposure Control Plan to prescribe and direct exposure controls (e.g., engineering controls, administrative controls, PPE), and periodic exposure monitoring to provide ongoing assessment of personnel exposures. It may also include the establishment of regulated areas and use of respiratory protection if exposures are not maintained below the occupational exposure limits.

6. What evidence does the government have that occasional exposure to DCM is hazardous enough to require strict procedures?

- a. There are both acute and chronic hazards associated with exposure to DCM. Acute hazards are associated with occasional exposures. These are detailed extensively in the EPA [Risk Evaluation for Methylene Chloride, June 2020](#) and the [Final Revised Risk Determination for Methylene Chloride, November 2022](#). Depending on the dose received, a single exposure event may result in death. This [NIOSH Hazard Alert](#) documents fatalities involving such exposures. The EPA considers the type of controls commonly used in labs (e.g., fume hoods, PPE, etc.) appropriate to mitigate such acute exposure risks, and so has continued to permit laboratory handling as one of the 13 conditions of use for which DCM still allowed.

7. Are these rulings coming from EPA-TSCA instead of OSHA, and does TSCA now supersede OSHA standards for methylene chloride?

- a. Yes, the recent rulings on methylene chloride are coming from the EPA under the Toxic Substances Control Act (TSCA). While OSHA still maintains its standards, the TSCA regulations are more stringent and are designed to address the unreasonable risks associated with methylene chloride. For example, the EPA's proposed exposure limit for methylene chloride is significantly lower than OSHA's permissible exposure limit. This means that in cases where the TSCA standards are stricter, they will take precedence over OSHA standards.

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8. Will the EPA OELs be legally enforceable like OSHA's PELs?

- a. Yes. The EPA's OELs are specific standards under TSCA, which will be enforced by the EPA rather than OSHA. However, OSHA can still enforce its own standards for methylene chloride, and employers must comply with both EPA and OSHA regulations where applicable.

9. Will students need to be monitored, and how should monitoring be managed for both occupational users and non-users?

- a. Yes, monitoring will be necessary for both occupational users and non-users of methylene chloride, including students in educational settings. The EPA's regulations under the Toxic Substances Control Act (TSCA) require comprehensive monitoring to ensure safety and compliance.
- b. Join us for our workshop, "[Leveraging PPE, Engineering Controls and Monitoring](#)" on Sept 18th to learn more about this topic.
- c. Join us for our 4-hour short course "[Assessing and Updating Institutional Safety protocols for Methylene Chloride Compliance](#)" on Oct 10th 11:00am - 3:00 pm EDT to learn more about exposure control groups and monitoring.

10. Will monitoring be required for DCM as part of a mixture, such as in Boron Trichloride in 1.0M DCM?

- a. Yes, if the DCM is greater than 1% of the mixture.
- b. Join us for our 4-hour short course "[Assessing and Updating Institutional Safety protocols for Methylene Chloride Compliance](#)" on Oct 10th 11:00am - 3:00 pm EDT to learn more about exposure control groups and monitoring.
- c. Join us for our workshop, "[Leveraging PPE, Engineering Controls and Monitoring](#)" on Sept 18th to learn more about this topic.

11. Has the EPA published specific guidelines for compliance yet?

- a. Yes, you can find the EPA's compliance guide here: <https://www.epa.gov/system/files/documents/2024-07/mecl-compliance-guide.pdf>

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12. What are the current ACGIH recommendations, and do they differ from EPA or OSHA guidelines?

- a. The EPA's limits are the most stringent, reflecting a more conservative approach to managing the risks associated with methylene chloride exposure.

13. Based on limitations to manufacturing, will this affect the supply of methylene chloride for labs?

- a. The priority now should be to identify and validate alternative solvents that can be used in place of methylene chloride where possible. This rule will likely cause reduced availability and increased costs.
- b. Join us for our webinar, "[Use This Not That: Safer Substitutions for Methylene Chloride](#)" on Sept 27th at 11:00 EST

14. Could a fume hood be deemed a regulated area if DCM use is restricted to a dedicated hood, and what are the guidelines for regulated areas?

- a. Yes, it can be. However, you should carefully consider how it should be designated and labeled.
- b. Join us for our workshop, "[Leveraging PPE, Engineering Controls and Monitoring](#)" on Sept 18th to learn more about this topic.

15. What are the special requirements for exhaust systems of fume hoods when using DCM?

- a. You should verify that the fume hood is working and has undergone containment testing and routine verification that the exhaust is still working properly. It is recommended that there is some sort of continuous monitoring to alert the user if the hood is not working.
- b. Join us for our workshop, "[Leveraging PPE, Engineering Controls and Monitoring](#)" on Sept 18th to learn more about this topic.

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16. How do we track who is using methylene chloride, and are there privacy concerns with this tracking?

- a. When tracking individuals, make sure to not include any personally identifiable information (PII). You can identify exposure groups based on their interactions with methylene chloride as well.
- b. Join us for our 4-hour short course "[Assessing and Updating Institutional Safety protocols for Methylene Chloride Compliance](#)" on Oct 10th 11:00am - 3:00 pm EDT to learn more about exposure control groups and monitoring.

17. What are the considerations for hazmat response scenarios involving methylene chloride?

- a. The EPA's recent ban on most uses of methylene chloride does introduce new considerations for hazmat response scenarios involving spills. One key point to consider is use of continuous air monitoring to detect methylene chloride levels and ensure they remain below the new, stricter limits.
- b. If you don't know the concentration in a spill, then you have to assume the worst case scenario. The minimum requirement from the EPA is a respirator or self-contained breathing apparatus.

18. How will this rule be enforced at the state level, for example, in Texas for state institutions?

- a. The Texas Commission on Environmental Quality (TCEQ) will likely play a significant role in enforcing the EPA's methylene chloride regulations within the state.
- b. The ban, finalized under the Toxic Substances Control Act (TSCA), applies to all "potentially exposed persons," which includes university students, volunteers, and state and local government workers. This means that Texas state institutions must comply with the EPA's regulations regarding methylene chloride.

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19. Are there alternatives to methylene chloride, especially for chromatography?

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20. What are the options for making measurements of DCM exposure, and what are the typical costs and methods?

- a. The costs are going to vary depending on the method that is chosen. Methods could be a personal sampler that is sent to a laboratory for analysis or a direct reading instrument.
- b. Join us for our 4-hour short course "[Assessing and Updating Institutional Safety protocols for Methylene Chloride Compliance](#)" on Oct 10th 11:00am - 3:00 pm EDT to learn more about exposure control groups and monitoring.

21. Have there been measurements done in fume hoods for DCM, and what are the typical results?

- a. Yes, there have been studies done. See this article for more information: <https://pubs.acs.org/doi/10.1016/S1074-9098%2801%2900215-5>
- b. Join us for our workshop, "[Leveraging PPE, Engineering Controls and Monitoring](#)" on Sept 18th to learn more about this topic.

22. Is the Workplace Chemical Protection Program (WCPP) finalized, or is it still in draft?

- a. The Workplace Chemical Protection Program (WCPP) has been finalized. This program is part of the broader risk management rule finalized in April 2024.

23. How do others prepare their documentation for an audit? (e.g., keeping everything organized in a folder, printouts in a binder, or in an ongoing document)

- a. Join us for our 4-hour short course "[Assessing and Updating Institutional Safety protocols for Methylene Chloride Compliance](#)" on Oct 10th 11:00am - 3:00 pm EDT to learn more about documentation.

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24. What will happen with EPA Method 625.1 (Semivolatiles) if DCM is banned?

- a. If DCM is banned, it will impact EPA Method 625.1. DCM is commonly used as a solvent in this method, so its ban would necessitate finding alternative solvents or modifying the method to comply with the new regulations. The EPA may update Method 625.1 to incorporate these changes, ensuring that it remains effective for compliance monitoring under the Clean Water Act. This could involve validating new solvents or extraction techniques that do not rely on DCM. Sounds like a great research project.

25. Would a metal-oxide-semiconductor (MOS) sensor work for detecting DCM?

- a. This will be best addressed by the manufacturer of the detectors.
- b. Here is an article you can refer to as well: <https://www.mdpi.com/2204376>

26. How does the new rule impact hazmat response, particularly for lab staff and EHS department responders?

- a. The EPA's recent ban on most uses of methylene chloride does introduce new considerations for hazmat response scenarios involving spills. One key point to consider is use of continuous air monitoring to detect methylene chloride levels and ensure they remain below the new, stricter limits.