

Industry Impact of the EPA Proposed Rule Regulating Methylene Chloride and Trichloroethylene

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TRICHLOROETHYLENE RULEMAKING UPDATE UNDER THE TOXIC SUBSTANCES CONTROL ACT (TSCA)

- ☐ Trichloroethylene (TCE) Regulation Under the Toxic Substances Control Act (TSCA)
- ☐ Scheduled to take 90 days but could take longer currently going through interagency review
- Key points about the proposed TCE exposure limit:**
- ☐ The proposed exposure limit for Trichloroethylene (TCE) is significantly lower than the current OSHA permissible exposure limit (PEL).
- ☐ EPA suggesting a much stricter level, often around 0.0011 parts per million (ppm) averaged over an 8-hour workday, signifying a strong focus on minimizing exposure due to TCE's
- ☐ Workplaces would need to implement stricter controls to maintain exposure levels well below the current OSHA standard of 100 ppm.
- ☐ This proposed limit could lead to new regulations requiring industries to implement more stringent controls to reduce worker exposure to TCE.

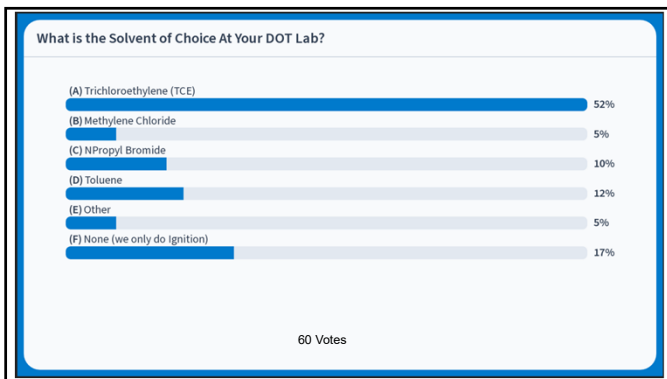
AGENDA

- Upcoming EPA Ban Proposal for TCE
- EPA Finalized Ban On Methylene Chloride Use
- New Rule Highlights
- Implications for HMA Industry
- Questions

The Final Regulation Methylene Chloride

EPA's final rule will:

- Prohibit manufacture, processing, and distribution of methylene chloride for all consumer uses
- Prohibit most industrial and commercial uses
- **Require a Workplace Chemical Protection Program (WCPP) for 13 specified conditions of use**
- **Include a critical use exemption under TSCA section 6(g)**
- Establish recordkeeping and downstream notification requirements
- Provide *de minimis* threshold for regulation



THE FOLLOWING USES WILL CONTINUE WITH STRICT CONTROLS UNDER THE WCPP IN THE FINAL RULE:

Final Regulation:

Exempt Uses with Workplace Chemical Protection Program (WCPP)

- Manufacturing (domestic manufacture)
- Manufacturing (import)
- Processing: processing as a reactant (AIM Act refrigerants)
- Processing: incorporation into a formulation, mixture, or reaction products
- Processing: recycling
- Processing: repackaging
- **Industrial and commercial use as a laboratory chemical** ✓
- Industrial and commercial use as a paint and coating remover from safety critical, corrosion-sensitive components of aircraft and spacecraft
- Industrial or commercial use as a bonding agent for solvent welding
- Industrial and Commercial use as a processing aid
- Industrial and Commercial use for plastic and rubber products manufacturing
- Industrial and Commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed ✓
- **Disposal** ✓

EPA United States Environmental Protection Agency

WORKPLACE CHEMICAL PROTECTION PROGRAM (WCPP) PROTECTS PEOPLE FROM UNREASONABLE RISK POSED BY OCCUPATIONAL EXPOSURES FROM CERTAIN CONDITIONS OF USE

Final Regulation:

Workplace Chemical Protection Program (WCPP)

- Workers are one of the potentially exposed or susceptible subpopulations (PESS) under TSCA (toxic substance control act)
- EPA's WCPP applies to owners or operators "employers" and "employees" and potentially exposed persons, which in some cases is broader definition than
- EPA consulted with OSHA and NIOSH and coordinated on WCPP development and finalization, and aligned requirements where possible
- Includes **exposure limits and ancillary requirements** in support of those limits

EPA United States Environmental Protection Agency

WCPP REDUCES COMPLIANCE BURDENS BY FOLLOWING A FAMILIAR FRAMEWORK:

Final Regulation:

NIOSH (National Institute of Occupational Safety & Health Hierarchy of Controls

- Requirements to reduce exposures based on the NIOSH hierarchy of controls
- Respirator selection criteria to protect workers from any remaining risks

EPA United States Environmental Protection Agency

Final Regulation:

Workplace Chemical Protection Program (WCPP)

THE WCPP FINALIZES INHALATION EXPOSURE LIMITS:

Permissible exposure limit (PEL):
8-hour time-weighted average (TWA): 2 ppm
 VS. Current OSHA is 25 ppm

Short-term Exposure Limit (STEL):
15-minute TWA: 16 ppm
 VS. Current OSHA is 125 ppm

Existing Chemical Exposure Limit (ECEL) Action Level:
NEW Limit - 1 ppm
 VS. Current OSHA is 12.5 ppm

ENGINEERING CONTROLS: EXAMPLES

Snorkel Vent

Full Walk-In Hood

Countertop Hood

EPA United States Environmental Protection Agency

Workplace Chemical Protection Program Components:

Final Regulation:

NEW RULE TO DO CHECKLIST

- Initial Monitoring – Report
- Periodic Monitoring Based on Existing Chemical Exposure Limit (ECEL); ECLE Action Level, and EPA STEL (short-term exposure limit)
- PPE Stock Revision based on monitoring report
- Establish Regulated Areas
- Exposure Control Plan

ENGINEERING CONTROLS: EXAMPLES

SAFE CHEM

SAFETAINER Compatible – Solvent Handling System
 Filling & Waste Solution with Vacuum Pump

- RECYCLE SOLVENT
- SAFE FILLING & DISPOSAL SYSTEM

CLEAN SOLVENT DRUM


COUPLING TO TAP DRUM

COUPLING FOR WASTE DRUM


PPE Limitations – Training is Key!

Respirators Must Fit Properly


- ❑ Respirators must fit properly to prevent solvent vapor leaks around the edges.
- ❑ Fit-testing must be done before first wearing a respirator.
- ❑ Beards are **not allowed** when wearing most respirators because they will leak.
- ❑ Paper masks do not protect against solvents – the vapors go right through them.



- ❑ "Organic vapor" cartridges are the only type that capture solvent vapors.
- ❑ Cartridges for solvents will absorb only so much solvent until breakthrough occurs.
- ❑ Cartridges are not suitable for some solvents since they are not trapped inside the cartridge. (includes methanol and **methylene chloride**)



These are only good for dust.



Final Regulation:


Recordkeeping and Downstream Notification Changes

- SDS updates are required for downstream notification of the prohibitions
 - For conditions of use that would not be prohibited under the final regulation, the Safety Data Sheets (SDSs) must be updated by adding information on prohibitions and relevant dates
- Recordkeeping requirements include maintenance of normal business records and records related to WCPP monitoring and compliance

PPE Limitations – Training is Key!


Gloves for Solvent Skin Protection

- ❑ Only "chemical resistant" gloves will provide adequate protection for the hands.
- ❑ Leather or cloth gloves will simply soak up solvents and hold them against the skin.
- ❑ Latex gloves will be softened or dissolved by some solvents.



IMPACT ON HMA INDUSTRY

- ❑ Need to identify a replacement solvent for TCE alleviated
- ❑ DCM is a Suitable Replacement for TCE on several AASHTO Standards
- ❑ Acceptable for use per applicable standards:
 - ✓ AASHTO T 164
 - ✓ AASHTO T 319
 - ✓ ASTM D 8159
 - ✓ ASTM D 2172
- ❑ Additional Resources allocated for compliance with WCPP including: monitoring/ training /equipment upgrades – fume hoods, better PPE, closed solvent handling systems
- ❑ Depending on results of TCE Ban Rule standards may need to be updated to include DCM




Final Regulation:


Timeframe for Workplace Chemical Protection Program Implementation

WCPP IMPLEMENTATION TIMEFRAME

WCPP Compliance Phase	Final Compliance Dates & Working Timeframes from Publication of Final Rule	
	General Industry	Federal Agencies and Federal Contractors
Initial Monitoring	May 5, 2025 / 12 months	November 9, 2026 / 30 months
ECELEPA STEL	August 1, 2025 / 15 months	February 8, 2027 / 33 months
PPE/Respirators	August 1, 2025 / 15 months	February 8, 2027 / 33 months
Establish Regulated Area	August 1, 2025 / 15 months	February 8, 2027 / 33 months
Exposure Control Plan	October 30, 2025 / 18 months	May 10, 2027 / 36.5 months



The Process of Making Decaf Tea Using Methylene Chloride:
Through this method, the tea leaves are soaked in methylene chloride. The molecules of caffeine will actually bond with the methylene chloride and leave the tea leaves strong in flavor and with their natural oils.



Thank You!

Questions?