



Proposed Amended Rule 1171 Solvent Cleaning Operations

Working Group Meeting 2
May 29, 2024

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[HTTPS://SCAQMD.ZOOM.US/J/96856429612](https://scaqmd.zoom.us/j/96856429612)
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Agenda

Summary of Working Group #1

Information Gathering

PCBTF and TBAC Use

Solvent Use in Automotive Industry

Electricity and Water Distribution Concerns

Rule Concepts

Next Steps

Summary of Working Group Meeting 1

- Presented background on Rule 1171
- Presented rule objectives
 - Prohibiting use of Parachlorobenzotrifluoride (PCBTF) and Tert-Butyl-Acetate (TBAC) used for solvent cleaning
 - Gather information about use of PCBTF and TBAC
 - Explore alternative cleaners
 - Reducing emissions from auto body facilities
 - Prohibiting PCBTF and TBAC use
 - Reviewing solvent cleaning operations and consider implementing best management practices
 - Reviewed concerns from water and electricity distribution facilities
 - Request to use liquid denatured alcohol and/or ethanol to clean certain equipment



Industry Use of PCBTF and TBAC

- Staff requested information from stakeholders about the use of PCBTF and TBAC for cleaning
- Identified operations using PCBTF for cleaning
 - Offset printing – blanket and roller washing
 - Auto body spray gun cleaning
- No TBAC use identified
- Staff identified PCBTF-free cleaners that can be used for these operations



PCBTF Use in Printing Industry

- Reported PCBTF use for offset printing
 - Roller and blanket washing
- PCBTF-free cleaners currently used in printing operations located in South Coast AQMD
 - 50% of Title V facilities using PCBTF-free cleaners
- Identified four PCBTF-free formulas
 - Soy/surfactant blends (<100 g/l)
 - Oil/surfactant blend (<100 g/l)
 - Dodecylbenzene sulfonic acid/nonylphenol blends (<100 g/l)
 - Dipropylene glycol monomethyl ether/surfactant blend (~110 g/l)
- Businesses transitioning to PCBTF-free cleaners for their operations

Alternative cleaners available that do not contain
PCBTF and meet rule limits



PCBTF Use in Automotive Industry

- Paint gun cleaning
 - Businesses using either a reducer containing PCBTF, acetone or acetone-based cleaner
 - Acetone use widespread in the industry
 - Exempt compound - 0 g/L VOC
- Some products sold containing PCBTF for bumper cleaning and repair
 - Staff did not identify these products being used in auto body and auto repair
 - PCBTF-free alternatives available < 25 g/l
 - One supplier currently reformulating PCBTF product



Alternative cleaners currently or soon to be available that do not contain PCBTF and meet rule limits

Solvent Use at Auto Body Facilities

- Paint gun cleaning solvents
 - Acetone (0 g/L VOC)
 - Thinner (contains PCBTF)
- Bumper preparation solvents
 - Liquid compliant cleaners (< 25 g/l)
 - Aerosol cleaners (> 25 g/l)
 - Rule exemption 160 fl oz per day of non-compliant aerosol product
- Staff identified non-aerosol compliant cleaners to perform paint gun cleaning and bumper preparation
 - Acetone feasible alternative for paint gun cleaning
 - Non-aerosol alternatives available for bumper preparation that meet 25 g/l



Staff to consider removing exemption for non-compliant aerosol use at auto body facilities - 25 g/l limit for all solvents use in auto body operations

Solvent Use at Auto Repair Facilities

- Parts washing solvents
 - Compliant brake wash (25 g/l)
 - Majority of solvent used for parts washing is aqueous product (25 g/L)
- Small cleaning operations solvents (i.e., adhesive removal, battery terminals)
 - Aerosol cleaners (> 25 g/l)
 - Low usage (~5 cans/year- 75 oz)
- Intake system/throttle body cleaning solvents
 - Aerosol cleaners (> 25 g/l)
 - High volume dealership needs ~4,500 ounces/month
- Current rule exemption allows 4,800 ounces/month of non-compliant aerosol use
- Staff has not identified low VOC alternatives for intake system/throttle body cleaning and certain small cleaning operations



Staff to consider revising exemption allowance based on need for auto repair facilities

Auto Body Shops Best Management Practices

- Reviewed best management practices established by U.S. EPA and other agencies
 - Practices for automated paint gun washers
 - Close unit, preclean gun, ensure hoses are intact, ensure lid seats properly, enclosed cleaning system that reuses solvent
 - Practices for manual solvent cleaning
 - Reuse solvent, preclean, enclosed cleaning, clean indoors, inspect sinks for leaks, clean in batches
- Some practices already required by rule (i.e., enclosed cleaning)

Staff to consider additional best management practices with potential to further reduce emissions from autobody shops



Alcohols Use at Electricity Distribution Facilities

- Electricity utilities requested the use of non-compliant liquid alcohols to clean specific equipment:
 - Circuit breaker components (driving mechanisms, interrupters)
- Staff identified other cleaning methods for equipment (acetone, dry ice)
 - Manufacturers will not recommend cleaners they have not tested
 - Risk for safety issues when using non-specified cleaners
 - Facilities found issues with residue and insufficient cleaning with acetone and dry ice
- Staff has not identified feasible alternatives for cleaning equipment
- Estimated use of alcohols is about 70 gallons per year for large utilities (across all facilities under common ownership)
 - Currently allowed 456 gallons of alcohols contained in aerosol products per year per facility



Circuit
Breakers

Staff to consider revising aerosol exemption to allow limited use of liquid or aerosol alcohols for specific equipment based on need

Alcohols Use at Water Distribution Facilities

- Water utilities requested the use of non-compliant liquid alcohols to clean specific equipment:
 - Ozone generator
 - UV sterilization system
 - Chlorine systems
 - Electrical components
- Manufacturers specify use of alcohols in cleaning specifications for ozone generators, UV sterilization systems, electrical components
- Manufacturer identified zero VOC alternative for some chlorine system cleaning operations
- Estimated amount of alcohol usage from facilities for equipment that requires alcohol
 - Ozone generators ~15 gallons per generator (every 10 years)
 - UV sterilization ~5 oz per reactor – total 29 reactors (every month)
 - Chlorine systems ~ 5 gallons per facility per year (up to 6 facilities)
 - Electrical components ~5 gallons/year per utility
- Currently allowed 456 gallons of non-complaint aerosol product per year per facility
 - Estimated annual usage up to 185 gallons/year per utility for years ozone generator cleaning is conducted (~35 gallons/year per utility for years ozone generators are not cleaned)



Staff to consider revising aerosol exemption to allow limited use of liquid or aerosol alcohols at water utilities based on need

Exemption for Aerosol Products

- Exemption for aerosol product use introduced in 1996 Rule 1171 amendment
 - Exempts 160 fluid ounces per day per facility of non-compliant aerosol product from VOC limits
 - Purpose to streamline recordkeeping and avoid double-counting emission reductions
- Staff to consider removing aerosol exemption and providing exemptions where still needed to avoid circumvention of rule limits
- Aware of electricity distribution, water distribution, and automotive facilities relying on exemption
 - Example of potential exemptions based on information received
 - Electricity distribution (limit ~70 gallons per year for all electric facilities under common ownership)
 - Water distribution (limit based on amount of equipment and frequency of cleaning)
 - ~15 gallons per operating ozone generator on cleaning event basis
 - ~5 ounce per reactor on monthly basis
 - ~5 gallons electrical components
 - Automotive repair (limit ~4,500 ounces per day of non-compliant aerosol product)
- Seeking information from other businesses relying on exemption for solvent cleaning operations

Rule Concepts

Phase Out PCBTF and TBAC

- Similar rule language to Rule 1168
 - Prohibit sale and use
 - Develop phase out periods

Auto Body Shops

- Prohibit use of PCBTF and TBAC
- Limit use of aerosol products > 25 g/l (based on necessity)
- Best management practices

Aerosol Product Exemption

- Allow limited use of non-compliant solvents based on necessity
 - Specific operations and equipment
 - Averaging periods

Reporting, Recordkeeping and Additional Prohibitions

- Requirements for compliance with new limitations
 - Recordkeeping
 - On-site limits

Next Steps

Rule Development

- Develop phase out schedule for PCBTF and TBAC
- Develop usage limits for non-compliant solvent usage and averaging periods

Rule Timelines

- Next Working Group Meeting: Early 3rd Quarter
- Release Preliminary Draft Rule Language and Preliminary Draft Staff Report
- Public Workshop: 3rd Quarter 2024
- Public Hearing: 4th Quarter 2024

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