



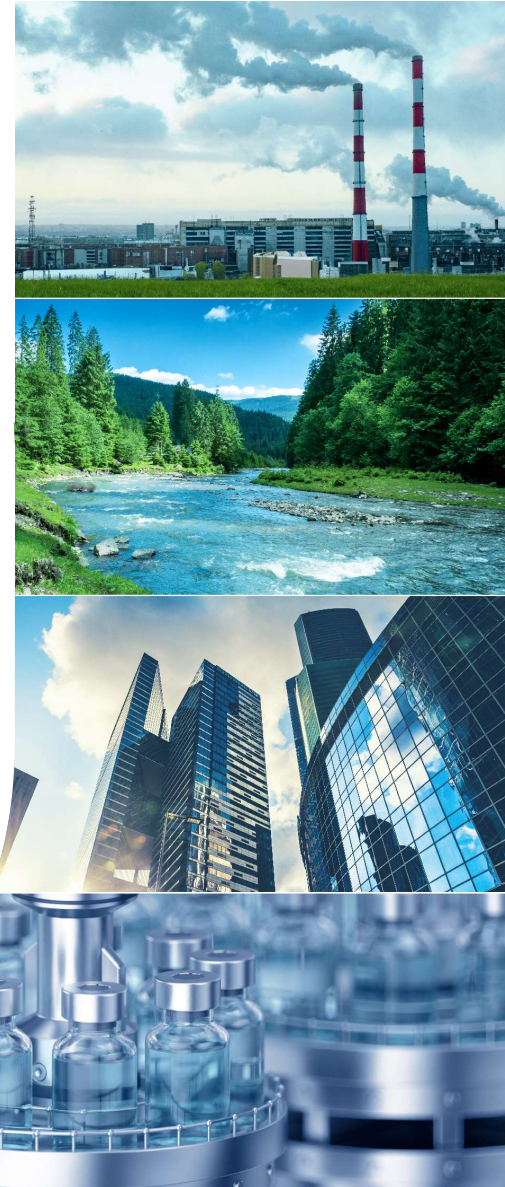
Compliance 101:

Effects of MCAQD Rule 330 and 331 Revisions on Solvent Cleaning Operations

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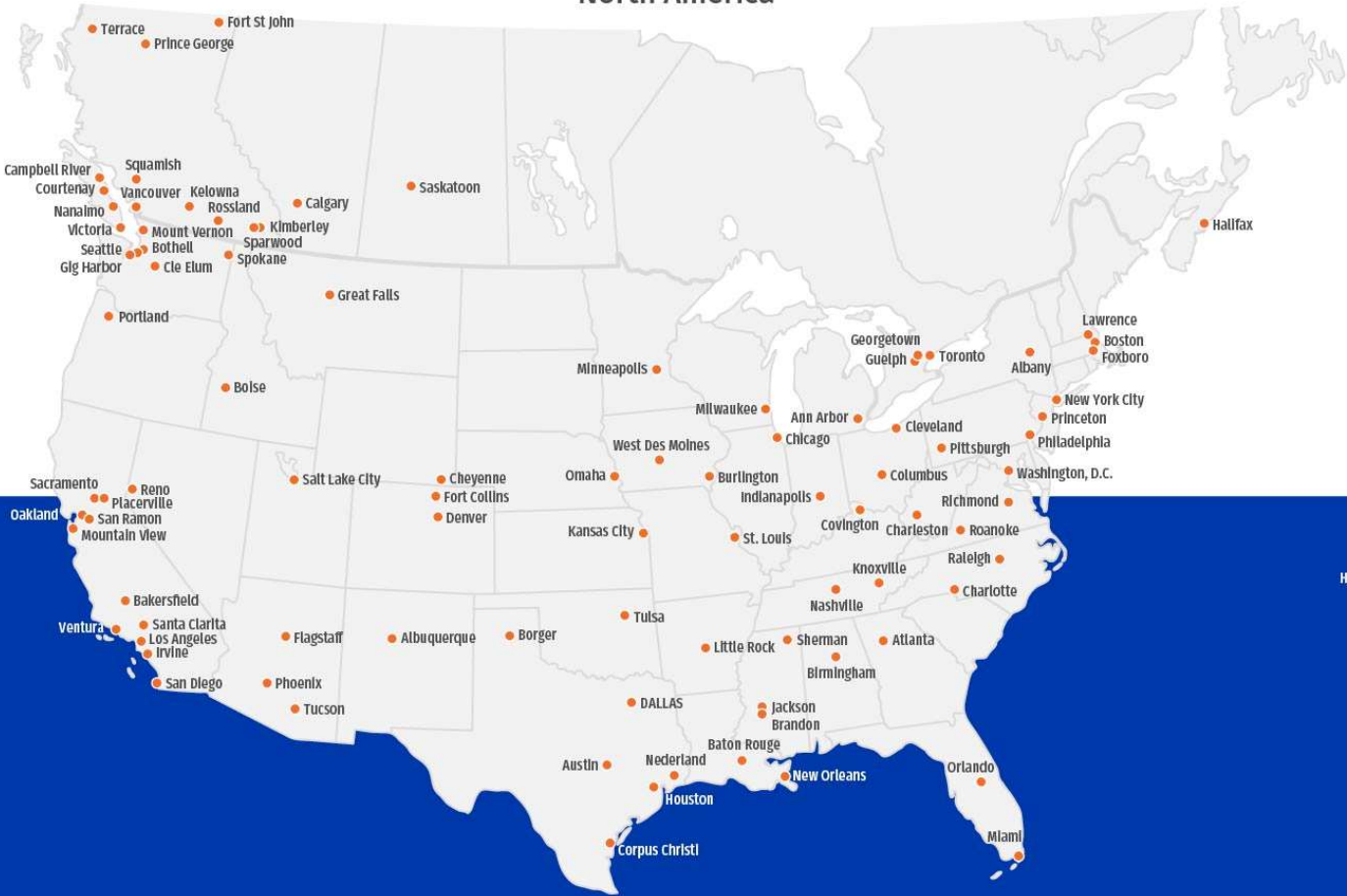
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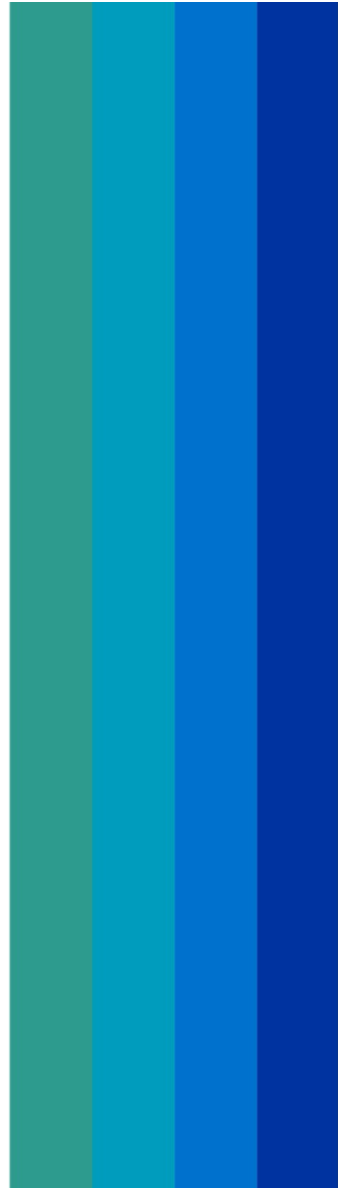
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01

Regulatory Background





What are VOC Emissions?

And why are they regulated?

Volatile organic compounds (VOC) means any compound of carbon, excluding CO, CO₂, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions (40 CFR 51.100(s)).

- ▶ The Clean Air Act (CAA) set a National Ambient Air Quality Standard (NAAQS) for ozone
 - VOCs are precursors to ozone and are regulated as such in air permits and in federal/local air regulations.
 - EPA has published a list of federal exempt compounds → “[non-precursor VOCs](#)”
- ▶ **Note:** In our experience, MCAQD requires that any organic chemical use that is open to the atmosphere and is not in the EPA federal exemption list be classified as a VOC.
 - Can request a case-by-case determination by MCAQD

Common VOC Sources





MCAQD VOC Rules – Why Are They Updated?

Ozone nonattainment (NA) : Regions that fail to meet ozone NAAQS

- ▶ The CAA requires ozone nonattainment areas in “moderate” or higher status to implement **Reasonable Available Control Technology (RACT)**:
 - VOC RACT is based on EPA’s **Control Technique Guidelines (CTGs)**
 - MCAQD implements VOC RACT into MCAQD Adopted Rules

- ▶ To comply with the moderate NA CTGs, MCAQD has updated the VOC RACT present in rules such as:
 - Rule 330
 - Rule 331

} Amendments became **effective 9/25/2024**



MCAQD Rules 330 and 331 – What has Changed?

Rule 330 –

Volatile Organic Compounds (VOCs)

VOC Limits for Sources Not Covered in Source Specific Series 300 Rules

- ▶ Standards:
 - Applicability criteria for requiring **emissions control systems (ECS)** have changed
 - Emission control methods
 - ECS requirements
- ▶ Administrative Requirements
- ▶ Monitoring and Records Requirements
- ▶ Rule organization/numbering

Rule 331 –

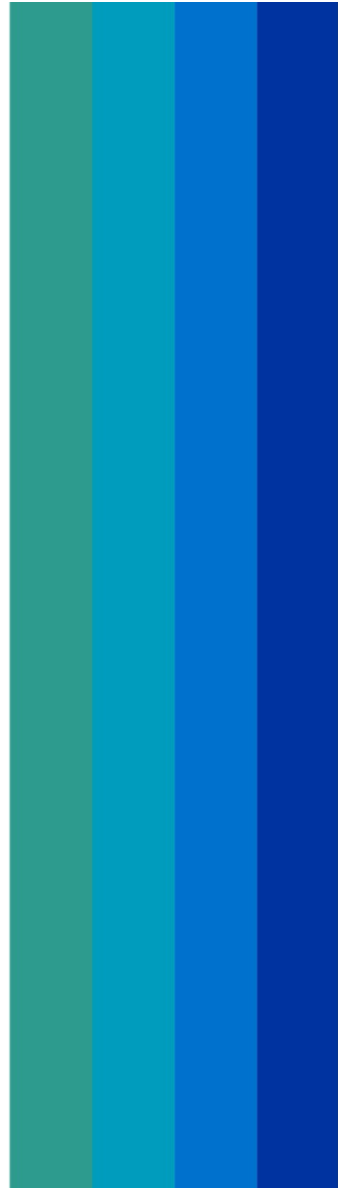
Solvent Cleaning

VOC Limits for Solvent Cleaning Operations

- ▶ Exemptions
- ▶ Definitions:
 - Including “Low-VOC cleaner”
- ▶ Rule organization/numbering

02

MCAQD Rule 330 & 331 Updates



MCAQD Rule 330 Updates

	Old Rule	New Rule
Solvent Cleaning Overlap with Other Rules	Contains solvent cleaning language and definitions (§101, 202, 204, 304...)	Solvent cleaning language/definitions removed, Replaced with Rule 331 reference (§103.2)
VOC Discharge Limitation	Daily VOC discharge limit for any one piece of equipment/machinery: <ul style="list-style-type: none"> • 15 lb/day for heated solvents (§301) • 40 lb/day for non-complying solvents (§302) • Note: A production line containing a machine. subject to the Rule could also be subject (§303) 	<25 tons per year (tpy) of uncontrolled potential to emit (PTE) for VOCs (§301) <ul style="list-style-type: none"> • Note: VOC emissions subject to source specific VOC rules (331, 336...) do not count towards the 25 tpy threshold
Emission Control System (ECS) Compliance Schedule	Not present	Compliance document submission timeline for ECS install at existing sources: <ul style="list-style-type: none"> • Deadlines for compliance schedules, permit applications or notifications, and submissions of source test reports indicating ECS compliance (§402.2) • Standardized O&M Plan recordkeeping requirements (§502)



MCAQD Rule 330 Update: Solvent Cleaning

Solvent cleaning VOC emissions are now solely regulated under Rule 331

Clarification means that solvent cleaning activities should not have Rule 330 language associated with them in your permit:

- ▶ Track down the solvent cleaning conditions in your permit
- ▶ Solvent cleaning activities should not have Rule 330 citations or restrictions associated with them anymore.
 - Flag the Rule 330 language associated with the solvent cleaning activity for removal the next time your permit is open – appropriate Rule 331 conditions may need to be added
- ▶ Opportunity to remove “fluff” from your permit



MCAQD Rule 330 Update: VOC Discharge Limit

Rule 330 now has a <25 tpy VOC limit

How do I know if I am above or below the new limit?

Develop PTE calculations for facility VOC emissions:

- ▶ Based on the annual throughput of Rule 330 regulated VOC containing materials, and the VOC content of those materials.
- ▶ Compare the resulting Rule 330 regulated VOC emissions sum against the 25 tpy limit
 - Note: existing PTE calculations need to be updated to the new 25 tpy limit



MCAQD Rule 330 Update: VOC Discharge Limit

≥ 25 tpy of uncontrolled VOC PTE for emissions subject to Rule 330?

If yes, demonstrate VOC control using one or more of the §302 methods:

- ▶ Operate a §305-compliant ECS (§302.1);
- ▶ Use a VOC material with ≤20% VOC by weight (§302.2);
 - EPA Method 24 test is required to determine VOC weight % (§504.1(f))
- ▶ Use a material with a VOC vapor pressure ≤1 mmHg @ 68°F (§302.3);
 - Vendor SDS or letter typically adequate for making this determination
- ▶ Using methods, measures, or control technologies determined to meet Reasonably Available Control Technology (RACT) as approved by the Control Officer (§302.4).
 - Case-by-case analysis or reference to a RACT approved for the same type of source in another jurisdiction



MCAQD Rule 330 Update: ECS Compliance Schedule

ECS Installation at New Sources

For sources that commence construction after 9/25/2025, subject to Rule 330 §301 and elect to comply via §302.1:

- ▶ Ensure that ECS requirements are achieved upon startup. Rule 330 §305:
 - 85% overall VOC capture and control efficiency
 - §503: Demonstrated via performance testing – EPA Method 18 or 25
 - O&M Plans for ECS and all ECS monitoring devices
 - ECS equipment manufacturer
 - ECS equipment model
 - ECS equipment ID
 - ECS recordkeeping (Rule 330 §502) – requirements for daily logging and periodic maintenance

ECS Installation at Existing Sources

For existing sources that must comply with the 9/25/2024 version of the rule:

- ▶ Within 6 months of becoming subject to Rule 330 §301 and electing to comply via §302.1 (3/25/2025), Submit:
 - Compliance schedule
 - Permit application or notification (if already permitted as future abatement)
- ▶ Within 24 months of permit issuance or notification:
 - Be fully compliant with ECS requirements described in Rule 330 §305 per Rule 330 §302.1
 - Submit a source test report indicating ECS compliance with Rule 330 §305

MCAQD Rule 331 Updates

	Old Rule	New Rule
Low-VOC Cleaner Definition	Cleaner must contain <0.42 lb VOC/gal (<50 g VOC/l) (§219)	Cleaner must contain <0.21 lb VOC/gal (<25 g VOC/l) (§221)
T-Halogenated Solvent Exemption	Exemption for solvent cleaning regulated under <i>NESHAP Subpart T – Halogenated Solvent Cleaning</i> ¹ (§308.1(b))	Subpart T regulated solvent cleaning no longer exempt from Rule 331 regulation
ECS Compliance Schedule	No present	New sources must achieve compliance with ECS requirements upon startup (§401.1)

¹ “...any solvent containing methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent.” 40 CFR §63.430(a)



MCAQD Rule 331 Update: “Low-VOC Cleaner”

Rule 331 Update Halved the VOC Content Threshold Requirement

Your “low-VOC Cleaner” may no longer be a “low-VOC Cleaner”:

- ▶ Compare the VOC content of your solvent cleaners against the new <25 g VOC/l (<0.21 lb VOC/gal) content requirement.
 - Note: the VOC content requirement is based on the at-use concentration!
- ▶ Solvent cleaner doesn’t make the cut? Options:
 - Reduce VOC concentration in solvent cleaner (document in lb/gal in your Technical Support Document (TSD))
 - Use a new solvent cleaner (replace old cleaner in permit)
 - Look for applicability criteria to meet other exemptions:
 - Small solvent cleaning machine partial exemption
 - Wipe cleaning and handheld solvent application partial exemptions
 - Janitorial total categorical exemption



“Low-VOC Cleaner” Exemption Advantages

Take advantage of the regulatory relief

Per Rule 331 §103.7, “Low-VOC Cleaners” are only subject to §301.1, §301.2, §302.5(a), §501.5(a), and §501.6 of the Rule. Removes:

- ▶ Operating requirements for cleaning machines (§301.3)
- ▶ Signage requirements (§301.4)
- ▶ Vapor cleaning machine requirements (§303)
- ▶ ECS requirements (§304)
- ▶ Administrative requirements (§400)
- ▶ Most monitoring and record requirements (§500)
- ▶ And more!

MCAQD Rule 331 Update: ECS Compliance Schedule

ECS Installation at New Sources

For non-vapor solvent machines (except those using low-VOC cleaner) that commence construction after **9/25/2024** and elect to comply with Rule 331 §304.1(a) via ECS:

- ▶ Ensure that ECS requirements are achieved upon startup. Rule 331 §304:
 - 85% overall VOC capture and control efficiency
 - §503.1(c): Demonstrated via performance testing – EPA Method 18 or 25
 - O&M Plans for ECS and all ECS monitoring devices:
 - ECS equipment manufacturer
 - ECS equipment model
 - ECS equipment ID
 - ECS recordkeeping (Rule 3310 §502) – requirements for daily logging and periodic maintenance

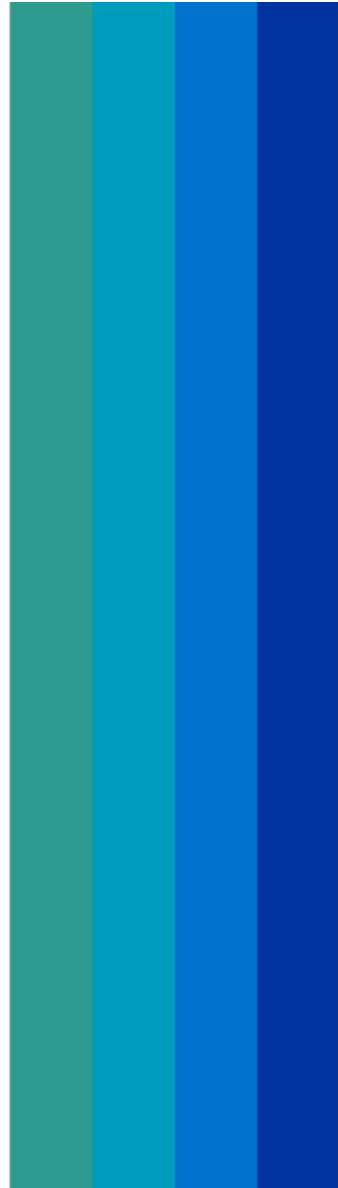
New “Low-VOC Cleaner” Limit

For existing non-vapor solvent machines (except those using low-VOC cleaner) that must comply with the 9/25/2024 version of the rule:

- ▶ Facilities using a “low-VOC cleaner” to comply with Rule 331 must, upon the adoption of the rule (9/25/2024), discontinue purchase of materials that are non-compliant with the new definition of “low-VOC cleaner”
 - Facilities may continue to use leftover supplies of non-compliant “low-VOC cleaner” purchased prior to 9/25/2025 until **3/25/2025**.

03

Conclusion





Final Thoughts

9/25/2024 MCAQD Rule 330 and 331 Updates

Points to remember:

- ▶ MCAQD Rule 330 and 331 (especially the latter) have become more stringent.
 - Be ready to stretch farther to comply with the same exemptions.
- ▶ Be alert. Don't assume your MCAQD air permit is up-to-date.
 - Review applicability of your operations against updated Rule requirements
 - Check your permit and flag inconsistencies with current regulations to address in the coming months.
- ▶ Set aside time and resources for compliance.



Thank you!

