Section Break

Comments in opposition:

1. Comment on attainment status for Southeast Michigan nonattainment area
   October 26, 2022
   Southeast Michigan Council of Governments

Vaerten, Marissa (EGLE)

From: Karll, Kelly C <[redacted]@semcog.org>
Sent: Wednesday, October 26, 2022 4:43 PM
To: McDonald, Tracey (EGLE); Vaerten, Marissa (EGLE)
Cc: Karll, Kelly C
Subject: SEMCOG Comment on Proposed Part 6 Rules
Attachments: SEMCOG_PublicComment_Part6APCRules26Oct2022.pdf

Categories: 2022-018EQ COMMENTS

Trace,

Attached please find SEMCOG comments on the proposed RACT rules.

Please let me know if you have any questions.

Have a great day!

Thanks,
Kelly

Kelly Karll, PE
Manager, Environment & Infrastructure
[redacted] (cell)
[redacted]@semcog.org

1001 Woodward Avenue, Suite 1400
Detroit, MI 48226
Main: 313-961-4266
Visit: www.semcog.org

October 26, 2022

Trace McDonald
Environmental Engineer
Air Quality Division
SIP Development Unit
Michigan Department of Environment, Great Lakes, and Energy

RE: Proposed Revisions to Part 6 of Michigan's Air Pollution Control Rules

Dear Mr. McDonald:

Thank you for the opportunity to provide comment on the proposed revisions to Part 6 of Michigan's Air Pollution Control Rules.

The Part 6 revisions, as currently drafted, will impact many sources in Michigan's current ozone nonattainment areas, which includes SEMCOG's entire seven-county region.

As we continue to encourage a favorable response by EPA to redesignate the SEMCOG region to attainment for ozone, we recognize the State's need to move forward with the proposed Part 6 revisions that require Reasonable Available Control Technology (RACT) at specific sources. We understand that the proposed RACT rules are required if EPA issues an unfavorable decision and bumps the region up to moderate ozone nonattainment.

Because the RACT rules are specific to moderate ozone nonattainment areas, we request that if EPA redesignates the area to attainment, that these proposed rules would not go into effect. Please consider rescinding these proposed rules following a favorable ozone attainment decision by EPA.

Please feel free to contact me with any questions.

Sincerely,

Kelly C. Karll

Kelly Karll, PE
Manager, Environment and Infrastructure

Section Break

Other Comments:

Mixed comments in support and opposition

3. October 25, 2022
   Household & Commercial Products Association
   Nicholas Georges

Comments requesting partial revisions

4. October 12, 2022
   Fishbeck
   Lillian Woolley
5. October 19, 2022
   American Coatings Association
   Rhett Cash
6. October 19, 2022
   O'Leary Paint
   David O'Leary
7. October 26, 2022
   Michigan Oil and Gas Association
   Jason Geer
8. October 26, 2022
   Michigan Manufacturers Association
   Caroline Liethen
9. October 26, 2022
   Consumers Energy
   Kathryn Ross
10. October 26, 2022
    Willert Home Products, Inc.
    Troy Cummings
11. October 26, 2022
    RadTech International
    Rita Loof
12. October 26, 2022
    Saint Clair Systems
    Michael Bonner
13. October 25, 2022
    PRINTING United Alliance
    Gary Jones
14. October 11, 2022
    PRINTING United Alliance
    Gary Jones

Vaerten, Marissa (EGLE)

From: Nicholas Georges <[redacted]@thehcpa.org>
Sent: Tuesday, October 25, 2022 6:02 PM
To: McDonald, Tracey (EGLE)
Cc: Vaerten, Marissa (EGLE); Carrie Brown
Subject: 2022-18 EQ
Attachments: Outlook-cidimage00; HCPA Comments on Part 6 VOC RACT Proposal.pdf

Categories: 2022-018EQ COMMENTS

Dear Mr. McDonald,

The Household & Commercial Products Association appreciates the opportunity to provide the attached comments. Please do not hesitate to contact us if you have any questions or would like to discuss our letter. We look forward to participating in tomorrow's hearing.

Respectfully submitted,

Nicholas Georges
Senior Vice President, Scientific & International Affairs
Household & Commercial Products Association
1667 K Street NW, Suite 300 | Washington, DC 20006
Direct: 202-833-7304 - Office: 202-872-8110

October 25, 2022 *via* electronic transmission

Trace McDonald
Environmental Engineer
Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division
SIP Development Unit
525 West Allegan Street
Lansing, MI 48933

Subject: Part 6 VOC RACT Public Comment - 2022

Dear Mr. McDonald,

The Household & Commercial Products Association[1] (HCPA) appreciates the opportunity to offer comments to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) on their proposed rules for the implementation of reasonably available control technology (RACT) for sources of volatile organic compounds (VOCs). Among the RACT controls for VOCs are rules[2] for consumer products. HCPA's comments will be focused on the consumer products regulations.

HCPA supports the long-standing commitment by EGLE to adopt regulatory provisions that are consistent with other states that have adopted more stringent volatile organic compound (VOC) limits for consumer products than the U.S. Environmental Protection Agency's (U.S. EPA) National Volatile Organic Compound Emission Standards for Consumer and Commercial Products.[3] The proposed amendments are based on the Ozone Transport Commission (OTC) 2012 Model Rule for Consumer Products[4] (hereinafter referred to as "Phase IV OTC Model Rule"), updating from the OTC 2006 Model Rule for Consumer Products[5] (hereinafter referred to as "Phase II OTC Model Rule"), and includes the 2013 technical update. The comments that HCPA provides are intended to identify revisions that will enhance consistency with the OTC Model Rule and the final consumer

[1] The Household & Commercial Products Association (HCPA) is the premier trade association representing companies that manufacture and sell $180 billion annually of trusted and familiar products used for cleaning, protecting, maintaining, and disinfecting homes and commercial environments. HCPA member companies employ 200,000 people in the U.S. whose work helps consumers and workers to create cleaner, healthier and more productive lives.
[2] Mich. Ann. Code R. 336.1660 and 336.1661
[3] 40 CFR Part 59 Subpart C
[4] The text of the fourth OTC Model Rule for Consumer Products can be found at https://otcair.org/upload/Documents/Model%20Rules/OTC%20CP%20Model%20Rule%202012%20CLEAN_vs2010.2012%2005%2010.pdf
[5] The text of the second OTC Model Rule for Consumer Products can be found at https://otcair.org/upload/Documents/Model%20Rules/OTC%20Consumer%20Products%20Final%20MR1.doc

products regulations promulgated by Colorado,[6] Connecticut,[7] Delaware,[8] Maryland,[9] New Hampshire,[10] New York,[11] Ohio,[12] Rhode Island,[13] and Utah.[14]

Statement of Interest

HCPA member companies manufacture and market more than two-thirds of the broad product categories governed by both EGLE's current regulation and the potential amendments.

Comments

A. HCPA supports adoption of regionally consistent consumer products regulations based on the OTC Model Rule.

For over 20 years, HCPA has supported – and continues to support – the efforts by the OTC to develop a workable regional regulatory framework for states to achieve technologically and commercially feasible reductions that are necessary to demonstrate compliance with State Implementation Plan (SIP) commitments.

HCPA participated as an active stakeholder in the previous rulemaking proceedings conducted by the EGLE, provided comments to EGLE in April 2022 on the draft rules and related guidance, and is on record as supporting the current Michigan consumer products regulation and the other final state regulations that are based on the Phase IV OTC Model Rule or the Phase II OTC Model Rule.[15] HCPA supports these regulations because consistent regional regulatory standards achieve significant improvements in air quality without impeding interstate commerce.

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[6] 5 CCR 1001-25 (took effect on May 1, 2020). https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8227&fileName=5%20CCR%201001-25

[7] Conn. Agencies Regs. § 22a-174-40 (took effect May 1, 2018). https://eregulations.ct.gov/eRegsPortal/Browse/RCSA/Title_22aSubtitle_22a-174Section_22a-174-40/

[8] 7 DE Admin. Code 1141 § 2 (took effect January 1, 2017). https://regulations.delaware.gov/AdminCode/title7/1000/1100/1141.pdf

[9] COMAR § 26.11.32 (took effect January 1, 2018). http://mdrules.elaws.us/comar/26.11.32

[10] N.H. Code Admin. Env-A 4100 (took effect January 1, 2017). https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/Env-A%204100.pdf

[11] N.Y. Comp. Codes R & Regs. Title 6, Ch. III Subpt. 235 (took effect January 1, 2022). https://www.dec.ny.gov/docs/air_pdf/adopted235.pdf

[12] Ohio Admin. Code Chapter 3745-112 *et seq.* (took effect June 22, 2022). https://codes.ohio.gov/ohio-administrative-code/chapter-3745-112

[13] 250-RICR-120-05-31 (took effect Jan. 1, 2020). https://rules.sos.ri.gov/regulations/part/250-120-05-31

[14] Utah Admin. Code R307-357 (took effect September 1, 2014). https://adminrules.utah.gov/public/search/R307-357/Current%20Rules

[15] Other states with VOC regulations for consumer products based on the Phase II OTC Model Rule include Illinois, Indiana, Maine, Massachusetts, New Jersey, Pennsylvania, and Virginia, as well as the District of Columbia

B. HCPA supports rescinding Rule 661.

The draft proposal is to rescind Rule 661, definitions for consumer products. HCPA supports this action so that the definitions for the Consumer Products Rules are within the same section as the other provisions.

C. HCPA requests that the proposed rules become effective one year after the date of publication of the final rules.

As currently written, it is unclear when the EGLE would transition from the OTC Phase II Model Rule to the OTC Phase IV Model Rule. It would appear as though EGLE would stop using the OTC Phase II Model Rule on January 1, 2023, then have a period of a few months for which the U.S. EPA's regulation would apply, and on May 1, 2023, EGLE would utilize the OTC Phase IV Model Rule. HCPA requests that these dates be updated such that it is clear to the regulated community when EGLE would seamlessly transition from the OTC Phase II Model Rule to the OTC Phase IV Model Rule. Further, HCPA requests a compliance date be one year after the date of publication of the final regulation to ensure sufficient time.

Many HCPA member companies manufacture and market products on a nationwide basis and thus, these products already comply with the comparable VOC limits mandated by the current California regulation. However, other HCPA member companies that manufacture and/or distribute products on a regional basis need a reasonable amount of time to:

- Reformulate products to comply with the new VOC limits, conduct stability testing, efficacy testing and make the necessary changes to product labels and other documents such as Safety Data Sheets (SDSs) and Technical Data Sheets (TDSs); and/or,
- Make necessary changes in product distribution channels to ensure compliant products are supplied to retailers and distributors.

Reformulating products and changing distribution systems is an expensive process. Moreover, there are instances in which proposed federal and state regulations (impacting other issues not related to VOC regulations) have been withdrawn, postponed and altered unexpectedly – sometimes at the last minute. Consequently, companies do not expend time and money to reformulate products or to restructure distribution networks to comply with new regulations until these requirements have binding legal effect.

For the reasons stated above, the proposed compliance date of May 1, 2023, would ***not*** provide sufficient time for many regional and small product manufacturers and marketers to formulate (or reformulate) products or to make necessary changes in distribution channels to comply with the new/revised VOC limits and other provisions of the amended regulation. Therefore, HCPA requests a compliance date be at least one year after the date of publication of the final regulation to ensure sufficient time.

D. HCPA supports EGLE's decision to use the federal definition of a "Volatile Organic Compound".

HCPA appreciates EGLE's use of the federal definition[16] for "Volatile Organic Compound". By using the federal definition, EGLE automatically ensures that the definition of a VOC is consistent with the EPA and other states that use the federal definition whenever a new compound is exempted from the definition.

E. HCPA requests an exclusion for "Solid Air Fresheners" which use PDCB.

HCPA thanks EGLE for providing an exclusion for which "Toilet/Urinal Care Products" containing not less than 98% para-dichlorobenzene (PDCB). This proposed exclusion is similar to the exclusion granted by several other states,[17] either explicitly as is the case with this proposal or by excluding the standards for "Toilet/Urinal Care Products".

For similar reasons, HCPA also requests an exclusion for "Solid Air Fresheners" which contain at least 98% PDCB. PDCB is a non-agricultural, non-food use pesticide with primary uses related to: (1) controlling moths and carpet beetles; and (2) to deodorize restrooms and waste containers. PDCB does not contribute significantly to ozone formation, yet the California Air Resources Board (CARB) prohibited[18] its use in "Solid Air Fresheners" due to its potential of being a carcinogen. This prohibition carried into the OTC Model Rules, yet after the publication of the Phase II OTC Model Rule, EPA found[19] that:

> In accordance with the EPA's Final Guidelines for Carcinogen Risk Assessment (March 2007), the CARC classified para-dichlorobenzene as "Not Likely to be Carcinogenic to Humans" based on evidence that a non-mutagenic mode of action (MOA) involving mitogenesis was established for para-dichlorobenzene induced liver tumors in mice and that the carcinogenic effects are not likely below a defined dose that does not perturb normal liver homeostasis (e.g., increased liver cell proliferation).

While the Phase IV OTC Model Rule was not updated to reflect EPA's more recent determination regarding the hazardous nature of PDCB, HCPA asks that EGLE provides an exemption for "Solid Air Fresheners" containing at least 98% PDCB.

Conclusion

HCPA appreciates the opportunity to provide this letter to EGLE on the proposed rules for the implementation of RACT for sources of VOCs. HCPA is on record in Michigan and 16 other states (and the District of Columbia) as supporting regulations that are consistent with the OTC Model

[16] 40 CFR § 51.100(s)
[17] Colorado, Illinois, Indiana, New Hampshire, Ohio, and Utah
[18] CARB's Final Statement of Reasons on PDCB can be found at https://ww2.arb.ca.gov/sites/default/files/barcu/regact/conprod/fsor.pdf
[19] EPA. Reregistration Eligibility Decision for Para-dichlorobenzene. Sept. 2007. Found at https://www3.epa.gov/pesticides/chem_search/reg_actions/reregistration/red_PC-061501_28-Sep-07.pdf

Rule. By developing consistent regulations, states can achieve improvements in air quality without imposing impediments to interstate commerce.

As explained in detail in these comments, HCPA respectfully recommends that EGLE should:

- Modify the effective date to be one year after the date of publication of the final rule
- Exclude products composed of at least 98% paradichlorobenzene from the "Solid Air Freshener" category

If you have any questions about issues presented in these comments, please contact me at [redacted]@thehcpa.org.

Respectfully submitted,

Nicholas Georges

Nicholas B. Georges
Senior Vice President, Scientific & International Affairs

Carrie Brown
Manager, Regulatory Affairs

Vaerten, Marissa (EGLE)

From: Woolley, Lillian [redacted]@fishbeck.com>
Sent: Friday, October 14, 2022 3:55 PM
To: Vaerten, Marissa (EGLE); McDonald, Tracey (EGLE)
Subject: VOC Rules?

Follow Up Flag: Follow up
Flag Status: Completed

Categories: 2022-018EQ COMMENTS

Hi,
We are putting some comments together and I noticed a reference to " (3) Subrule (2) of this rule notwithstanding, and as an alternative to the allowable emission rate established by table 63, the existing paper coating lines at Fletcher ~~p~~**P**aper ~~c~~**C**ompany of Alpena may comply with subrule (2) of this rule by not exceeding a volatile organic compound emission rate of 180 tons per calendar year and 30 tons per calendar month. " in Rule 610. Can it be eliminated? I do not believe this facility exists anymore. It was abandoned several years ago. I think it was located at 318 Fletcher Street in Alpena if you want to look it up.

Lillian L. Woolley, PE | Senior Chemical Engineer
Fishbeck | w: 248.324.4785 | c: [redacted] | Fishbeck.com

Vaerten, Marissa (EGLE)

From: Rhett Cash <[redacted]@paint.org>
Sent: Wednesday, October 19, 2022 4:13 PM
To: Vaerten, Marissa (EGLE)
Cc: McDonald, Tracey (EGLE)
Subject: Part 6 VOC RACT Public Comment - 2022 (ACA Comments)
Attachments: ACA Comments - MI EGLE VOC Rule Package.pdf

Categories: 2022-018EQ COMMENTS

Hi Marissa –

Please see attached for ACA's comments on Michigan EGLE's proposed VOC RACT Rule (Part 6). Thank you for your consideration of our comments and let me know if you have any questions or require additional clarification. Have a great rest of the week!

All the best,
Rhett

Rhett Cash ▪ American Coatings Association ▪ Counsel, Government Affairs
202.719.3680 (o) | [redacted] (c) | [redacted]@paint.org | www.paint.org
901 New York Avenue NW ▪ Suite 300 West ▪ Washington, DC 20001
Coatings protect. Coatings preserve. Coatings provide.

American Coatings ASSOCIATION℠

October 26, 2022

Ms. Marissa Vaerten
Environmental Quality Analyst
Air Quality Division, SIP Development Unit
Michigan Department of Environment, Great Lakes, and Energy
525 W Allegan St.
Lansing, MI 48933

RE: Michigan Department of Environment, Great Lakes, and Energy Proposed VOC RACT Rule (Part 6); ACA Comments

Dear Ms. Vaerten:

The American Coatings Association (ACA) submits the following comments to the Michigan Department of Environment, Great Lakes, and Energy (MI EGLE) regarding its proposed VOC RACT Rule (Part 6). ACA is a voluntary, nonprofit trade association working to advance the needs of the paint and coatings industry and the professionals who work in it. The organization represents paint and coatings manufacturers, raw materials suppliers, distributors, and technical professionals. ACA serves as an advocate and ally for members on legislative, regulatory, and judicial issues, and provides forums for the advancement and promotion of the industry through educational and professional development services. ACA appreciates the opportunity to comment on the proposal and looks forward to working with MI EGLE throughout the rulemaking process.

Compliance Date

ACA requests that MI EGLE adopt a compliance date of one year from the date of adoption of a final rule for the various coatings rules included in the proposed VOC RACT Rule (Part 6). The proposed compliance date of 1/1/2023 is unreasonable and impractical. As a general matter, ACA members require sufficient lead time to adjust formulations and supply chain processes in order to ensure compliance with new VOC limits, labeling, and reporting requirements. The proposed 1/1/2023 compliance date will not allow the coatings industry sufficient time to adjust production, labeling, and distribution networks to efficiently and effectively implement the new rule's requirements.

Manufacturers, distributors, and retail stores employ extensive computer systems that require upgrades to incorporate new formulations and ensure non-compliant products are not sold into jurisdictions with new VOC limits. Furthermore, manufacturing and labeling costs are generally expensive, and coatings manufacturers tend to manage formulation changes to their products to minimize costs stemming from obsolete products and labels. Additionally, manufacturers will need sufficient time to properly communicate these changes to their distributors and retail customers to ensure compliance with new VOC limits. Finally, most companies wait until a rule is finalized and its requirements are certain before implementing changes to ensure compliance because it helps minimize costs. This means that companies will not implement changes during the early parts of a rulemaking and will need adequate time after finalization of a new rule to make appropriate changes. As such, industry typically needs at least a year to properly implement the necessary changes to comply with the new rule's requirements.

Given MI EGLE's proposed compliance dates of 1/1/2023 and the need for industry to have adequate lead time for implementation and compliance, ACA respectfully requests that the Department change the compliance dates in the proposal to one year after the date of adoption of a final rule.

Thank you for your consideration of our comments. Please do not hesitate to contact me if you have any questions or require additional clarification.

Sincerely,

Rhett Cash
Counsel, Government Affairs

Submitted via email

Vaerten, Marissa (EGLE)

From: David O'Leary <[redacted]@olearypaint.com>
Sent: Wednesday, October 19, 2022 12:02 PM
To: Vaerten, Marissa (EGLE); McDonald, Tracey (EGLE)
Subject: OTC Phase II concerns

Categories: 2022-018EQ COMMENTS

Marissa Stegman,
Trace McDonald,

I'd like to weigh in on the challenges that a move to OTC Phase II at this particular point in time raises which it makes it basically impossible for our company to comply with in the timeframe suggested.

- Passanno Paint (a 96 year old family business) in New York State actually was forced to stop manufacturing altogether when they couldn't formulate fast enough to meet the new regulations, and we'd like to avoid that scenario ourselves.
- We currently have over 700 active formulas which have been developed over decades, a sudden reformulation isn't feasible with the size of our staff and effort that would be involved.
- We have a significant monetary investment in current inventory of labels that would become worthless with a sudden change, which would also be true for some raw materials.
- Timing. Because of the Texas Deep Freeze/Covid/Supply Chain Issues, our primary Resin suppliers have called "Forced Majeure" and canceled supply contracts and put customers on allocation, with just a fraction of last years volume available, and no new customers or new products.
- Many products will require new technology resin to achieve a workable product at this new VOC limit, we don't have access to this new resin until supply comes back and Force Majeure is lifted.
- The logical step from the current AIM standard would be to go to OTC Phase I, we have been assuming that would be the next step and our preparation has been with that in mind, we obviously misjudged but isn't that a logical progression.

Our specific request in order of preference would be:

- Make OTC Phase I the first step, followed up with OTC Phase II at a future date.
- Carve out an exclusion for O'Leary Paint because of our very unique circumstances.
- Carve out an exclusion for O'Leary Paint based on OTC Phase I rather than Phase II.
- Carve out an exclusion to OTC Phase I, for a Michigan Manufacturer.
- Carve out an exclusion for small producer (under 2,000,000 gallons)

We appreciate your mission and the difficult position you are in trying to reasonably balance goals and results that could have significant impact on people and companies.
Please don't hesitate to reach out to me if I can clarify anything, or if you need additional information.

David O'Leary

President O'Leary Paint
[redacted]@olearypaint.com
[redacted]
300 E. Oakland Ave.
Lansing, MI 48906

Vaerten, Marissa (EGLE)

From: Jason Geer [redacted]@michiganoilandgas.org>
Sent: Wednesday, October 26, 2022 4:13 PM
To: Vaerten, Marissa (EGLE); McDonald, Tracey (EGLE)
Cc: Kownacki, Alec (EGLE); Eric Johnson; 'J. Scott Huber'; Tim Baker
Subject: MOGA's Part 6 Public Comments
Attachments: MOGA Public Comment on Part 6 - CTG Proposed Regulations 10-26-2022.pdf

Categories: 2022-018EQ COMMENTS

Marissa and Trace:

Please find attached the Michigan Oil and Gas Association's comments on EGLE's part 6 draft rules.

These comments were prepared by Eric Johnson and Scott Huber, so please feel free to reach out to them or myself if you have any questions.

Please confirm receipt.

Thanks,

Jason Geer
Michigan Oil and Gas Association
C: [redacted]

October 26, 2022

Alec Kownacki
Meteorologist
Air Quality Division
Michigan Department of Environment, Great Lakes and Energy
kownackiA@michigan.gov

Re: Crude Oil and Natural Gas Industry's Input to Part 6
Emission Limitation and Prohibition
Existing Sources of Volatile Organic Compound Emissions

Dear Mr. Kownacki:

The Michigan Oil and Gas Association (MOGA) is providing this document as a 2nd public comment response to the proposed Part 6 rules. MOGA had provided a public response on June 16, 2022 and wishes to provide additional discussion and clarity related to the current Part 6 proposal.

MOGA is primarily concerned with the potential impact to marginal wells and the producers managing these wells. By definition, marginal wells produce 15 Barrels of Oil Equivalent per day (BOED) or less. The term "marginal" relates to the reduced income margins that impact the longevity and potential recovery of remaining resources. In many cases, these marginal wells receive a special exemption from the Internal Revenue Service (IRS) to reduce tax burdens to allow for continued production and prevent wasteful actions. Per section MCL 324.61504 of Michigan's Natural Resources and Environmental Protection Act, Act 451 of 1994, the State of Michigan prohibits "waste". "Waste" represents the would be plugging and abandonment of otherwise sustainable marginal production wells prematurely and before all viable production can be extracted. MOGA is concerned that additional regulations placed on existing marginal wells will exacerbate early plugging and abandonment. Early plugging and abandonment of producing wells not only affects the price of energy, but also impact beneficial government and social programs within the State of Michigan.

Early plugging and abandonment of marginal wells would impact the Michigan Natural Resources Trust Fund's (MNRTF) ability to purchase recreational lands, build facilities, create bike paths and trails and maintain current and future public land assets. On November 6, 1984, Michigan residents voted on Proposal B which amended our State Constitution to direct "oil, gas, and other mineral lease and royalty payments" to be placed into the MNRTF. The vast majority of Michigan's oil and gas wells are considered marginal wells and as residents of the State of Michigan, MOGA is concerned that response to #13 of the required and completed Regulatory Impact Statement (RIS) for "Changes to R336.1601 – R336.1662" does not address the potential impacts to "revenue to other state or local governmental units".

Regarding the required and completed RIS "Changes to R336.1601 – R336.1662", MOGA believes that the State of Michigan has not adequately addressed RIS questions #18 through #27 relating to the potential impacts to Small Businesses. The Environmental Protection Agency

(EPA) indicates that 98-99% of all US oil and gas production companies meet the definition of a small business. This percentage aligns with Michigan's producers and operators. MOGA is providing a brief synopsis to illustrate our concerns with statements made in the RIS through the following examples: Question #19A indicates small businesses "will need to increase recordkeeping". This statement does not align with costly proposed Optical Gas Imaging (OGI) survey and stack-testing requirements listed in Part 6 proposed Sections R336.1640 through R336.1644. The response to Question #20 of the RIS indicated "There is no known disproportionate impact on small businesses due to these rules" is completely false. Part 6 proposed rules will adversely impact 98-99% of Michigan's oil and gas producers. The response to Question #24 of the RIS states; "The rules revision are required by the USEPA and therefore must be met by all affected sources at whatever cost is necessary". MOGA does not agree with this statement as all governmental agencies are required to provide a cost-benefit analysis to justify regulatory endeavors, especially when regulations will disproportionately impact small businesses.

MOGA staff has been working with State of Michigan staff since the EPA's publication of *"Control Technique Guideline for the Oil and Natural Gas Industry"* in October of 2016 and the subsequent "*Reasonable Available Control Technology Analysis for Volatile Organic Compounds*" prepared by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in January of 2020. The EGLE document summarized the State of Michigan's analysis to determine "what changes would potentially need to be made to Michigan's Air Pollution Control Rules Part 6". Table 1 listed "Oil and Natural Gas Industry – Compound Leaks from Petroleum Refinery Equipment" as a Top 10 Control Technique Guidelines (CTGs) based on VOC Emissions in Michigan. For clarification, upstream oil and gas production is not a petroleum refinery and is a completely different industry segment. On pages 7 and 8 of EGLE's analysis report under the "Potential Negative Declarations" title heading, the State of Michigan indicated that "Further Analysis" was needed for industry segments listed under Table 5 titled "CTG Categories requiring further analysis". Under Table 5, "Oil and Natural Gas Industry – Dependent on specific equipment, please see CTG" was listed as requiring further analysis. Per the report, categories listed under Table 5 had the potential to receive a "negative declaration" indicating that "CTG would not have any meaningful reductions to VOC emissions at facilities in the NAA". Prior to the covid-19 crisis, MOGA staff had many discussions with EGLE staff via phone calls and email communication indicating a likelihood of a "negative declaration" on source categories, beginning with oil storage tanks. Unfortunately, covid-19 disrupted discussions and progress working towards a "deeper analysis" of oil and natural gas emissions sources outlined in the EGLE's report. As covid-19 fears subsided, MOGA staff resumed discussions with a different group of EGLE staff members. MOGA is concerned that "further analysis" has not been properly conducted and will likely request evidence to substantiate EGLE's "deeper analysis" of individually proposed Part 6 regulations based on statements made in the RIS, previous work endeavors and communications with EGLE staff and the required analysis proposed in the EGLE's January 2020 document.

The following information was initially submitted in MOGA's June 16, 2022 public comment statement and is being re-submitted because of the validity and pertinence to the proposed Part 6 regulations.

MOGA collected the following information and provided the following discussion to help define and outline the scope and applicability of the proposed Part 6 rules and to further explain MOGA's concerns. Responses #1 through #4 pertain to marginal wells and the necessity to have a marginal well exemption. The Responses #5 through #40 pertain directly to specific proposed Part 6 Rules and Subrules.

1) *MOGA felt that beginning with a stepwise explanation of the importance of marginal well exemption was beneficial to our discussion. Below is a list of the following nonattainment counties and a count of the oil and natural gas producing wells located in each county:*

County	*Producing wells*
Allegan	*70 (est.)*
Berrien	*0*
Livingston	*13*
Macomb	*2*
Monroe	*0*
Muskegon	*10*
Oakland	*13*
St. Clair	*35*
Washtenaw	*40*
Wayne	*7*
TOTAL	***190***

Michigan has roughly 14,000 oil and gas wells. Of the 14,000 oil and gas wells, roughly 90% of the wells meet the definition of a marginal well. Of the approximately 14,000 oil and gas wells in Michigan, roughly 190 producing wells are located in the nonattainment counites. Of the roughly 190 wells in the nonattainment areas, approximately 75% or more meet the definition of a "marginal well".

A "marginal well" is defined as a well that operates with small economic return or profit margin based on this formula; Production Revenue ***minus*** *Fixed & Variable Operating Expenditures = Small or "Marginal" Returns.*

For this reason, a "Marginal Well" is defined by the Internal Revenue Service (IRS) as a well that produces 15 barrels of oil equivalent (BOE) or less per day.

2) *To determine whether a well meets the IRS definition of "marginal well", the BOE can be calculated using the following constants and illustrated by the two production examples:*

Barrel of Oil (Bbl) = *1 BOE*
6000 standard cubic feet (scf) of Natural Gas = *1 BOE*

Production Example #1: 9 Bbls of Oil + 36000 scf Natural Gas = 15 BOE/day

To scale the amount of natural gas produced, 36,000 scf = 36 mscf. "mscf" is Thousand Standard Cubic Feet and is the volume typically used in equipment operation and the commodities market for sale. At an average natural gas rate of $4.00 per mscf, the above well would generate $144.00 dollars per day from natural gas production.

Most of Michigan's marginal wells make far less than the above example. The typical marginal well in Michigan is calculated below:

Production Example #2: 2.3 Bbls of Oil + 1700 scf of Natural Gas = 2.58 BOE/day

To scale the amount of natural gas produced by a typical marginal well in Michigan, 1700 scf = 1.7 mscf. At an average natural gas rate of $4.00 per mscf, the above well would generate $6.80 dollars per day from natural gas production.

The two production examples above highlight MOGA's concern over the cost of implementation of regulations versus the derived benefit. The amount of potential emissions from marginal wells is minute compared to the cost of implementation, derived environmental benefit and potential long-term impact to energy prices.

3) *MOGA applauds the EGLE's recognition of MOGA's concerns regarding marginal wells and the proposed exemption from fugitive emissions monitoring outlined in R336.1644(a)(2) & (a)(3) of the proposed Part 6 Rules, but has additional operational concerns related to lack of marginal well exemption in the remaining proposed segments listed in R336.1640 through R336.1643.*

Proposed Part 6 Rules, R336.1640 through R336.1643 do not provide exemption for marginal wells with 15 BOE/day or less production or as stated in R336.1644(a)(3), "Have gas to oil ratios of less than 300 standard cubic feet of gas per barrel of oil produced". These exemptions must be extended to proposed Part 6 Rules, R336.1640 through R336.1643 for the following reasons:

a) *Existing marginal wells often do not produce enough gas to maintain a continuous pilot on an enclosed combustor, combustion device or process units. This means that a marginal well site or facility located in the nonattainment area would be required to purchase propane to maintain a pilot on a control device because the well site or facility does not produce enough natural gas on its own to maintain a continuous pilot light. This would cause more VOC hydrocarbon emissions than the well site alone would produce. In effect, the proposed control of emissions from sources at a marginal well site would* ***increase*** *the amount of VOC emissions rather than reduce emissions.*

b) *All Conventional Wells (non-marginal wells) decline rapidly over a short period of time. Contrary to popular belief, you cannot "turn the pumps on" or "increase production" from a depleting resource. Initially, conventional wells have the profit margins and oil/natural gas volumes to meet the standards in the proposed Part 6 Rules. MOGA does not dispute the attempt to control emissions from conventional wells with higher production and higher correlated emission potential. However, once a well reaches the operational threshold of 15 BOE/day, potential emissions drop to a point where proposed Part 6 regulations shown in R336.1640 through R336.1643 cannot be met.*

Below is real-life scenario from a Michigan producing company related to implementation of Subpart OOOOa regulations (very similar to proposed CTG regulations) and the absolute need for an off-ramp and exemption once a well reaches 15 BOE/day status:

> *A small entity oil and gas producer in Michigan was subject to Subpart OOOOa regulations for tank emissions. The well and production facility utilized a flare to reduce tank emissions by 95%. The well experienced a rapid production decline and ultimately reached "dead oil" status in a couple years. The well no longer produced enough gas to keep a constant pilot on the flare burning to meet the Subpart OOOOa regulations for the tank battery with minimal working, standing and breathing losses. In order to continue producing the now marginal well while meeting the required Subpart OOOOa regulations, the small entity purchased and installed a propane tank to keep the pilot light burning. Over time, the cost of conducting semi-annual LDAR surveys, purchasing propane to keep a flare pilot lit and reporting costs for minimal to no tank emissions led the small entity producer to plug the well even though the well would likely produce at a marginal status for many more years at a constant rate below 15 BOE/day.*

The above scenarios illustrate the importance of a regulation "off-ramp" for marginal wells through exemption. It is worth pointing out that like reason #1 above, this real-life scenario also emitted more hydrocarbons during its production life via purchasing and burning propane to keep a pilot light lit than the facility would have emitted on its own.

Unfortunately, the well mentioned above and many more like it have been plugged with the correlated lack of production contributing to the higher energy and gasoline prices.

4) To further illustrate the importance of a marginal well exemptions, MOGA is providing a cost breakdown of a marginal wells recently submitted to the EPA during a public comment period. The data shows how razor-thin the operating margins are for marginal wells. The table also conveys the impact of OOOOa regulatory impacts to the operational viability of marginal oil and gas wells in Michigan.

Estimated Gross Revenue Projection for a Typical Marginal/Low Production Well in Michigan	
Factors & Constants	
Remaining Reserves (Bbls)	1,200
Annual Decline Rate (%)	5.0%
Production Life (Years)	15
Initial Production Rate (Bbls/day)	10
Final Production Rate (Bbls/day)	2
Commodity Price per Barrel (Average)	$60.00
Royalites (%)	12.5%
Severance Tax ($/Bbl)	$3.00
Deduction for Quality of Crude ($/Bbls)	$3.00
Transportation Charges ($/Bbl)	$4.00
Fixed Operational Costs ($/Bbl)	$4.00
*Variable Operational Costs ($/Bbl)	$4.00
Months in Year	12
2016 EPA Estimated One-Time Initial Costs per well	$1,366.00
2016 EPA Estimated On-going Annual Costs per well	$2,804.00
*Estimated One-time Cost for Professional Engineering Certification	$3,500

Potential Gross Revenue over Remaining Well Life	$ 72,000.00
Royalities	($9,000)
Severance Taxes	($9,000)
Deduction for Quality of Crude	($3,600)
Transportation Charges	($4,800)
Fixed Operational Costs	($4,800)
*Variable Operational Costs	($4,800)

Potential Gross Revenue before Regulations	$ 36,000.00
2016 EPA Estimated On-going Annual Costs per well	($1,366)
2016 EPA Estimated Ongoing Annual Costs over remaining life	($33,648)
*Estimated One-time Cost for Professional Engineering Certification	($3,500)

Potential Gross Revenue after Regulations	($2,514)

The well scenario depicted above would result in a plugged well unless a regulatory exemption is allowed. MOGA cannot overstate how important marginal well exemption is to the economic viability and continued operation of marginal wells in the Michigan Basin. Without these exemptions, many of 190 producing wells in the nonattainment areas will likely be plugged and further exacerbate the escalating energy prices.

5) *Part 6 title should include in the description "Located in Non-Attainment Areas" because throughout the rules the non-attainment counties are referred to and nothing is addressed in the attainment counties.*

MOGA is presenting the following individual analysis of applicable proposed Part 6 rules and regulations.

General Comments:

1) Rule 601(e)&(f)&(h) – The petroleum industry is segregated into three (3) segments. They are referred to Upstream (for the production of commodities within the formations found below ground level), Mid-stream (for the processing, separation and conditioning of crude oil and natural gas) and Downstream (for the distribution of the final conditioned resources for manufacturing and utility distribution). The definitions for Rule 601(e)&(f)&(h) should reflect the designations for clarity throughout the Rule.

2) Rule 601(i) – There are only three (3) segments in the industry. Comment #2 reflects the segregation.

3) Rule 602(2) – In the subsections pertaining to the upstream production and refining (1622, 1623, 1629 and 1640), reference within these sections calls upon 1602 for clarity, but Rule 602(2) refers back to the rule mentioned, thus there is a "closed loop" allowing some reference but no conclusions.

4) Rule 602(4)(ii) – As written this subsection is unclear.

5) Rule 622 & 623 – Upstream production engineers and operators do not have a comprehensive understanding of the refinery trains and the control schemes for operating fractionation, along with product storage within the plant area (floating roof tanks). MOGA will contact a company which operates refineries for comments on this section.

6) Rule 629 – MOGA will contact straddle plant operators and/or gas storage companies for comments on this rule.

7) From Rule 629 to 639; none of these proposed regulations have applications for crude oil and natural gas production.

8) Within any of the remaining rules for crude oil and natural gas production (640, 641, 642, 643 and 644) there are references to "2015 ozone nonattainment areas." Is there any current (2020-2021) information highlighting the implementation of current federal regulations standards beginning in 2012? Current information about VOC and ozone emissions will support efforts by our industry to reduce environmental impacts. Eight years of no reporting or changes appears to be unreasonable.

R336.1640 - Emission of volatile organic compounds from existing storage vessels in the oil and natural gas industry located in the 2015 ozone nonattainment areas.

1) 336.1640(3)(a) – How is this calculated? Each storage vessel evaluated separately? Production from multiple wells entering a facility through a header system with tank batteries having equilibrium piping and vapor collection system. The practice would be to divide PTE for production to a tank battery by the number of tanks connected to the shared vapor headspace and equilibrium piping. Note: These questions and comments were provided to AQD in the June 16, 2022 letter.

2) 336.1640(3)(b) – "Storage vessels with uncontrolled actual organic compound emissions of less than 4 tons per 12-month rolling average." Note: any further explanation makes this subpart confusing. The shortness of the explanation will allow an off-ramp status should the facility reach a marginal well classification for the remainder of the productive life. Note: This subpart was addressed in the June 16, 2022 letter.

3) 336.1640(3)(f) – Does this allow for the combination of standard oil tanks with equilibrium piping and shared vapor headspace to be considered as 1 tank to meet the exemption?

4) 336.1640(3)(g) - VOC emission control requirements for storage vessels are subject to requirements for storage vessels in "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which constructed, reconstruction or modification commenced after July 23, 1984" 40 CFR part 60. Note: the remaining references do NOT reflect upstream production for this Subpart an should be removed.

5) 336.1640(4) - What if the amount of natural gas coming from the "stripper/marginal" well is so small that propane needs to be supplemented to keep a pilot flame burning? Wouldn't that be emitting more emissions than the well's production alone? These are questions that were posed in the June 16, 2022 letter.

6) 336.1640(4)(a)(i) - Reference should be made to the method(s) for calculating the actual sample size then corrected to 3% oxygen.

7) 336.1640(4)(b)(ii)(A)(B) – These sentences are contradictory. A control device is considered a process unless otherwise defined. This separation and distinguishment is not specifically defined.

8) 336.1640(4)(b)(ii)(D) - How often should the inspections be conducted?

9) 336.1640(4)(c) - This section should be removed because floating roofs are not designed or utilized in upstream production.

10) 336.1640(5)(a) - What are initial performance and compliance testing requirements? Where are they stated? In OOOO and OOOOa, no performance or compliance testing is necessary when meeting standards under 40CFR Part 60 60.18(b).

11) 336.1640(5)(b)(ii) – What type of inspection? OOOO(a) requires monthly Method 22 inspections consisting of flare observations lasting 15 minutes.

12) 336.1640(5)(c) - Note: The following comment was submitted in the June 16, 2022 letter, but never answered or addressed in the latest draft of the rules. "This is completed during initial facility design to handle maximum throughput, pressure and volumes. As a reminder, each oil and gas well is a depleting asset with initial production rates dropping quickly within the first year of production. There is not an option to "open up the tap" to produce more hydrocarbons. Does the analysis for existing facilities that have been in

operation for more than 10-20 years now have to validate the original design parameters even though production has declined by as much as 90%?"

13) 336.1640(5)(d) - What inspection? OOOO(a) requires monthly AVO (Auditory, Visual and Olfactory) inspections separated by 14 days for closed vent systems. Or is EGLE suggesting a "once-only" annual visual inspection?

14) 336.1640(6)(a) - How often? Just initial or annual? Needs more definition. Has EGLE done a cost benefit analysis for any of this work?

Rule 336.1641 - Emission of volatile organic compounds from existing pneumatic controllers in the oil and natural gas industry located in the 2015 ozone nonattainment areas.

1) 336.1641(2)(a)(b) – These subparts are unclear and do not address exemptions. The federal standard under Subpart OOOO and OOOOa stipulates bleed rates greater than 6 standard cubic feet per hour. This should be explicitly stated.

2) 336.1641(6)(a)(b) – Low Bleed Pneumatic Devices – are less than 6 scfh as described by the manufacturers' specifications. For clarity, Intermittent Bleed Devices are not continuous bleed thus not subject to these rules as proposed? These devices also bleed less than 6 scfh as specified by the manufacturers. High bleed pneumatic devices have been removed from operation and they are not available from equipment supply vendors following implementation of Subpart OOOO in 2012.

Rule 336.1642 – Emissions of volatile organic compounds from existing pneumatic pumps in the oil and natural gas industry located in the 2015 ozone nonattainment areas.

1) 336.1642(1)(a) – Delete the following: "of for freeze protection glycol circulation." The energy to activate a pneumatic pump for glycol dehydration comes from high pressure rich glycol discharged from the dehydration tower. There will be most likely electricity available to operate these pumps because of close approximation to residential utilities in nonattainment counties.

2) 336.1642(2)(b) – MOGA could not find a stated definition of "well site" in the proposed Part 6 regulations or Part 1, General Provisions. Please define the term "well site".

3) 336.1642(3)(i) & (ii) – MOGA has advocated to the EPA for the allowance of an "in-house" engineer with technical expertise and experience to certify closed-loop system and technical infeasibility. To avoid conflicting regulations between the State of

Michigan and Federal regulations, MOGA recommends the Federal allowance of an "in-house" engineer as stated in 40 CFR 60.5393a.

4) 336.1642(5)(b) – Stack testing a pneumatic pump is impractical and very costly. Pneumatic pumps have a fixed canister size to facilitate the operation of the pump. This would be specified in the manufacturer's specifications sheet. Initial compliance and testing using the injection rate (actuations per minute) multiplied by the fixed cannister size or using a calibrated bag sampler. This would be more practical and cost effective.

5) 336.1642(5)(c)(ii) – What type of inspection? AVO? For many wells and facilities, AVO inspection to ensure proper operation and to reduce leaks is already taking place per Subpart OOOO and Subpart OOOOa regulations.

6) 336.1642(6)(a) – A stack test is costly and impracticable. If routed to a combustion device meeting 40CFR Part 60 60.18(b), OOOO(a) does not require testing. Stack tests range from $10K - $15K and are usually completed on compressors greater than 1,300 horsepower. Any kind of elaborate testing equipment to capture a low volume sample and accurately report the level of emissions becomes nearly impossible. A technique that merits sampling such small samples would use a calibrated sample bag or engineering calculations.

7) 336.1642(6)(d) – Like other proposed regulations in R 336.1640 through R 336.1644, MOGA recommends changing submission of initial reporting to "made available upon request by department". This would follow the trend for other emission sources and reduce the burden on small producers with limited staff.

Rule 336.1643 – Emissions of volatile organic compounds from existing compressors in the oil and natural gas industry located in the 2015 ozone nonattainment areas.

1) 336.1643(1) thru (6) – MOGA has discussed the definition of "wet seal" and "wet seal fluid degassing system" with compressor vendors and service firms in the State of Michigan. Vendors and service personnel were not aware of this type of centrifugal compressor located within the State of Michigan.

2) 336.1643(4)(b)(iii) – a "continuous parameter monitoring system" would be very costly to install and operate for both new and marginal wells and facilities. MOGA would like clarification whether a flare with an auto ignition and/or a continuous burning pilot qualify as a "continuous parameter monitoring system"?

3) 336.1643(5)(a) & (b) – MOGA spoke with compressor vendors and service company representatives regarding replacing rod packing every 36 months. The vendors and service company representatives indicated that rod packing is inspected during every inspection, oil change and service. Representatives indicated that rod packing venting is

monitored very closely as an indicator for service since bad rod packing would result in costly consumption of lubricating oil and possible engine failure. Representatives explicitly stated a 36-month replacement is not practical as rod packing typically lasts longer than 36 months. Representatives indicated this would be very costly for small businesses and wasteful of resources since a rod packing replacement typical take 2-3 days of work with 6 technician charging $100 to $150 dollars per hour. This would be an unnecessary cost considering R336.1643(b) also requires rod packing venting to be routed to a process. MOGA recommends making this an either/or statement. Either change the rod packing every 36 months or route rod packing emissions to a process.

Rule 336.1644 – Emissions of volatile organic compounds from existing compressors in the oil and natural gas industry located in the 2015 ozone nonattainment areas.

1) 336.1644(1)(b)(ii) – This request is not an upstream function but is handled by mid-stream operations.

2) 336.1644(4) – This program should not be developed if the facility and/or the well(s) are at marginal status, which would be 15 boe/day or less per well.

3) 336.1644(4)(a)(i&ii) – This is very expensive to complete. This would potentially be around $2,600 to check a single leak. AVO or a soap bubble test is acceptable for these evaluations. Has EGLE provided any financial cost benefits analyses to validate the testing suggested? OOOO(a) allows for leak repair verification using AVO or by implementing soap and water under Method 21, Section 8.3.3.

4) 336.1644(4)(b) - "Booster stations in the production segment" do not exist. This statement needs to be removed.

5) 336.1644(4)(b)(ii) replace with the following statement; "Each fugitive emission component repair or replacement equipment will be resurveyed to ensure there is no leak after the repair or replacement by the use of 40 CFR, part 60, Appendix A, Method 21 at the earliest convenience possible or 30 days after the repair.

6) 336.1644(4)(c) – The department should either simplify this statement by removing "with a repair threshold of 500 ppm" or further clarify to include all resurveying options listed under Method 21, including alternatives.

7) 336.1644(5)(a)(i&ii&iii) – MOGA proposes additional discussion with EGLE staff to justify the merits of the frequency, the impact and the reporting if there are no fugitive emission components.

Conclusion:

MOGA would like to meet with EGLE-AQD after their review of suggested rule changes to discuss manpower implementation and cost benefit analysis. Some proposed Part 6 regulations could impair the field operations of many small business producers leading to increased costs above the sustainability threshold for existing wells. As mentioned in the opening paragraphs, over regulation without justification could result in the early plugging and abandonment of producing wells resulting in waste, loss of revenue, increased energy costs, impacts to rural and underserved communities and disproportionate impacts to small businesses.

MOGA would also like to further discuss how the 2015 ozone nonattainment review data can be misleading and not relevant to emissions in 2023. There are nearly 8 years between gathering county information and the current review of the contribution the producing wells have in each county. A similar type of review in the attainment areas has shown the producing industry has made major efforts to reduce VOC & ozone impacts. That same reduction has likely occurred in the nonattainment counties also. MOGA would like to review data generated under the "further analysis" tenant required in EGLE's January 2020 "*Reasonable Available Control Technology Analysis for Volatile Organic Compounds*" to assist EGLE staff in reducing unnecessary impacts to small businesses through "negative declarations" on source categories without substantial impacts to the NAA.

MOGA looks forward to our continued collaborative relationship with EGLE staff to ensure proposed regulations are practical, functional and allow small businesses to complete within the oil and natural gas market. Working together is an effort in cooperation and should make understanding the industry better for the regulators, while helping producers better communication with regulators to minimize confusion and streamline implementation of proposed regulations.

Thank you for your time.

Sincerely,

Jason Geer
President & CEO
Michigan Oil and Gas Association

Vaerten, Marissa (EGLE)

From: Caroline Liethen <[redacted]@mimfg.org>
Sent: Wednesday, October 26, 2022 4:49 PM
To: McDonald, Tracey (EGLE); Vaerten, Marissa (EGLE)
Cc: Kownacki, Alec (EGLE); Lillian Woolley; Eleanor Surtman
Subject: MMA Part 6 Rule Comment
Attachments: cl_air_voc-ract-letter-signed_221026.pdf

Categories: 2022-018EQ COMMENTS

Good afternoon,

I am writing on behalf of MMA to submit the attached comments regarding proposed changes to the Part 6: Emissions Limitations and Prohibitions – Existing Sources of VOC Emissions draft rule set.

I appreciate your consideration of our comments. Please contact me if you have questions.

Sincerely,

Caroline

Caroline Liethen | **Director of Environmental and Regulatory Policy** | **Michigan Manufacturers Association**
620 S. Capitol Ave ● Lansing Michigan ● 48933
Tel: 517.487.8543 | **Fax:** 517.853.3343 | **Email:** [redacted]@mimfg.org

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Michigan Manufacturers Association

October 26, 2022

Mr. Trace McDonald
Michigan Department of Environment, Great Lakes, and Energy – Air Quality Division
5225 West Allegan Street
Lansing, MI 48909

RE: MMA Comments on the VOC RACT Rules Dated September 7, 2022

Dear Mr. McDonald:

I am writing on behalf of the Michigan Manufacturers Association to provide comments on the draft Volatile Organic Compound (VOC) Reasonably Available Control Technology (RACT) Rules in Part 6. I appreciate your work on these rules and the consideration of member feedback. Your monthly attendance of our Air Policy Committee meetings provided a welcomed opportunity for dialogue and the comments herein largely reflect those discussions. We appreciate your and Marissa Vaerten's efforts to write fair rules**.** However, we believe that the Department of Environment, Great Lakes, and Energy (EGLE) has devoted a very small amount of resources to developing RACT rules considering other prioritized programs that are not Clean Air Act requirements.

Limited Time to Plan for Compliance. First, the time allotted for VOC RACT Rule development and implementation was insufficient. The Lake Michigan Air Directors Consortium (LADCO) "White Paper: NOx Emission Controls for Stationary Sources in the LADCO Region (February 2022)" referenced in our meetings suggests that additional time is needed for implementation of new rules, especially those that require add-on control equipment. In several sections of this document, it explains that facilities are typically given time to comply with new rules to allow for planning, analysis, and infrastructure changes. The timeline to comply with Maximum Achievable Control Technology (MACT) standards is typically three years, though in most cases between one and four years are allowed depending on work required to achieve compliance. In addition, the document also suggests that two years should be adopted to allow for emission reductions before 2026. Michigan's rules will go into effect almost immediately once they are approved, leaving facilities with no option than to enter a consent agreement for an alternative schedule, if that is to be allowed. This would create an unnecessary burden on EGLE permitting and enforcement staff. The Ohio Rule (see Attachment 1) should be adopted allowing for additional time beyond the date of rule promulgation for sources having to do site-specific studies. Additional time is also allotted for facilities that need to install control equipment.

Adopting a rule that includes additional time as outlined in the attachment will avoid the use of additional resources in permitting and enforcement that would be required if site-specific plans and permits are needed for each facility that needs additional time. It should be noted that these rules will likely go into compliance almost immediately after promulgation and EGLE has done

no outreach, suggesting there are facilities that do not know these rules will soon be in effect and that they must comply immediately.

The compliance schedule for the various stages of the RACT analysis required by Rule 602(4) should be lengthened as follows:

- The requirement to submit the VOC Potential to Emit (PTE) information to EGLE in Rule 602(4)(a) within one month of promulgation should be increased to at least three months
- The requirement to provide a RACT analysis for each VOC source to EGLE in Rule 602(4)(b) within three months of promulgation should be increased to at least 12 months
    - The Ohio EPA 3745-21-11 VOC RACT regulations allow 12 months to submit a RACT study.
- The requirement to implement each RACT proposal within six months of department approval should be increased to at least two years and to at least three years if add-on controls are required.
- The 15 pound per calendar day exemption criteria found in Rule 610a(3)(a)(iii) should be changed from a daily limit to a monthly limit or a twelve-month rolling average limit.
- The VOC testing requirements in Rule 610a(4)(e)(vii) should allow for alternate test methods to be used, especially previously approved alternate test methods, if a different or modified method would more accurately represent equipment operating conditions.
- Rule 602 should include an exemption from these RACT requirements for any VOC source that has been subject to a Rule 702 VOC Best Available Control Technology (BACT) analysis, PSD BACT analysis, or Nonattainment NSR VOC LAER analysis within the past ten years.

Adding to our request for additional time to implement control strategies, the country continues to recover from the pandemic and supply chain issues. Pollution control equipment and electronic components needed to run it are in short supply and come with extensive delivery delays, some as much as 12 to 18 months. The immediate implementation and retroactive nature of the requirements are not reasonable and will be overly burdensome, placing currently compliant industrial sources into non-compliance status.

Changes to RACT Criteria. Many of the Control Technology Guideline (CTG) documents developed by the U.S. EPA for use in establishing RACT rules include references to Michigan's early VOC rules. Therefore, it is confusing to affected sources that the criteria for inclusion in Rules 610a, 621a, 632a and 633 is now 15 pounds per day instead of 2.7 tons per 12 month rolling time period. These rules are based on CTG documents that have not changed since the original Rules 610, 621 and 632 were established and when these rules were incorporated into the State Implementation Plan (SIP). While the U.S. EPA has suggested that these rules need to be updated, we cannot identify any quantifiable VOC emission reductions from changing these rules. It will only create an administrative burden for sources now having to review daily emissions instead of monthly emissions. The CTG document "Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings" (CTG), is quite complimentary of Michigan's Rule 632 and in several instances recognized its limits as representing VOC RACT. As such, it is unnecessary to update this rule to Rule 632a.

In addition, in the May 18, 2006 U.S. EPA document "RACT Qs and Qs," the U.S. EPA explained that states can rely on past EPA guidance like CTGs but would expect states to have considerable interaction with affected facilities who might have additional information available for review. This has not been the case in developing these rules. This document also suggests that states can rely on other Federal rules to show compliance with RACT requirements but must reference these rules in their SIPs. It also says that PTIs can be relied on – as long as they are referenced in the SIP submittal. The Federal Surface Coating of Plastic Parts and Products: National Emission Standards for Hazardous Air Pollutants (NESHAP) and the Federal Surface Coating of Miscellaneous Metal Parts and Products: National Emission Standards for Hazardous Air Pollutants (NESHAP) are largely equivalent in these rules and if EGLE will not state this in the rule, affected sources should be allowed to petition to have them recognized in their Permits to Install/Renewable Operating Permit (PTI/ROP) and allowed to simply comply with the applicable NESHAP.

Further, the rules are written such that existing sources in attainment areas will now retroactively be subject to existing Part 6 Rules, such as Rule 632, for coatings like adhesives that accepted de minimis air permit restrictions or general permit provisions necessary to manufacture parts. The immediate and retroactive nature of the rules is not in keeping with the Administrative Procedures Act, which would otherwise require the source to be "modified, constructed or reconstructed" as defined in the rules.

Rule 602(3)(a) and (b). EGLE has proposed changes to the existing Rule 602 that now appear as Rule 602(3)(a) and (b) which eliminate the ability for EGLE to incorporate RACT derivatives during a permit to operate or Renewable Operating Permit. This language should be retained with the reference to permit to operate changed to Renewable Operating Permit. The ability to incorporate the revised RACT limits or requirements in the ROP program instead of the PTI program would allow flexibility to EGLE and could streamline the process. Currently changes to a PTI would take 240 days if the regulatory requirements are met, which is not always the case. Making changes through the ROP program would eliminate the load on the PTI engineers while streamlining the approval process as any changes need to be incorporated into ROPs anyway.

Rule 633. Currently, the boating industry is trending away from pigmented gelcoat (colored fiberglass) and towards polyester automotive painting topcoats. This affords the use of compliant gelcoat formulations (for example white gelcoat) combined with robust outer coatings capable of withstanding marine and freshwater environments. This also improves serviceability and repair advantages associated with bumps and scratches. Product (boat) life expansion may be the result of this change away from colored gelcoats. The rules will force these manufacturers back into pigmented (form in color) gelcoat to avoid Rule 633 controls.

Bottom paints, also known as ablative coatings, are specially formulated to prevent marine buildup on the undersides (running surfaces) of boats. These coatings and their formulations are not part of any CTG or NESHAP evaluation, and yet they would be lumped into the same compliance category as all other pleasure craft coatings for the marine industry. Simply stated, Rule 633 will cause manufacturers to stop the application of "bottom paints" in the manufacturing plants. Further, currently low volume exemptions for such coatings will no longer

be applicable, causing manufacturers to "transfer" the bottom coating application to dealer and distributor locations. Such transfers do not have a net environmental benefit and EGLE has not demonstrated that the cessation (or control) of these low volume, specialty extreme performance coatings will result in improvements in the non-attainment areas targeted by the rules. It should also be noted that there are only two sources in Michigan potentially subject to the fiberglass boat manufacturing rules. It is questionable to promulgate rules that would affect only two sources.

Control Equipment Effectiveness. It should be noted that changes were made to control effectiveness requirements. For Rules 610a, 620, 621, 633 and 634, the overall control and capture efficiency has been updated to the language below:

> *Collect and vent the emissions from equipment cleaning to a volatile organic compound emission control system that has an overall capture and control efficiency of not less than 85%, by weight, for the volatile organic compound emissions. If such a reduction is achieved by incineration, not less than 90% of the organic carbon must be oxidized to carbon dioxide.*

When applying for a new permit, Michigan Rule 702(a) VOC BACT is often not as high as what is described above. We discussed this at one meeting, and it was our belief that this requirement is based on painting in a booth, which is not often the case. Typically, a spray booth with a non-fugitive enclosure or a PTE would get more than 90% control, and combined VOC BACT for spray booths is currently 95% control. As we briefly discussed, plants with flow coat lines and dip spin lines may have difficulty meeting 90% capture and control. This RACT requirement is more restrictive than BACT in many cases.

Control equipment for VOC abatement largely or most commonly consists of oxidizing units. While oxidation to carbon dioxide is the target, the combustion process also produces nitrogen oxides (NOx, an ozone precursor) and incomplete products of combustion such as formaldehyde. These products are unfavorable, and the regulations would appear to replace one bad actor (or air pollutant) for another. We know of several companies whose thermal oxidizer is the largest contributor to their carbon footprint.

Operations that are currently permitted to use solvent rags, etc., may use these wipe agents in the open manufacturing floor, which is not equipped with collection and ventilation systems that will be required as currently written. Neither this approach nor its impacts have been properly evaluated either for the practical or economic feasibility which should be a component of the rule impact and implementation process. Further and as noted above, even if such capture and control retrofit components can be practically implemented, the supply chain delays currently being experienced for equipment and electronic component delays have not been properly considered.

Daily Emission Calculations. We are especially concerned over Rules 620a, 621a, 633a in which applicability is based on emissions in terms of pounds per day. These rules also require daily record keeping which is extremely burdensome to manufacturing facilities.

In our meetings we had suggested that the methodology described the U.S. EPA's *Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations* be allowed to calculate daily emissions not only for Rule 610a but also for other rules that require daily record keeping. It allows daily emissions to be calculated as the following:

> *The volume of each coating used each day can be calculated by prorating the volume of that coating used in a month to each day in the month. The prorating factor is the ratio of the total square footage coated with that coating on the day to the total square footage coated with that coating in the month.*

It appears that this methodology can be used for sources subject to Rule 610a. This or a similar methodology should be allowed for use in these other rules.

In nearby states, it is common practice that the compliance requirement of pounds per hour can be based on and summarized monthly. This affords both the applicable requirement to be stated on a pounds of VOC per hour basis, while allowing the source to accumulate usage data and operational data on a monthly time period. This improves the quality of the data while reducing the data burden associated with short-term usage limitations. Similar to the RACT approach EGLE is proposing for the fiber-reinforced plastic industry, monthly data coupled with 12-month rolling sum compliance, provides useful and yet reasonable data collection, and processing with monthly compliance demonstrations.

General Permit Changes. Rules 610a and 621a affect sources using the General Permit. It appears that these sources have not been notified of their need to obtain a new PTI. Permitting will take at least six months and if these rules go into effect in early 2022, these sources are already behind. Fishbeck has identified 38 sources using the General Permit (see Attachment 2) in southeast Michigan. The general permit is used to exempt coating lines from the content limits of Rules 621 and 632 by limiting each coating line to 2,000 lb/mo, 10 tons per year (tpy); and there is a combined coating line limit of 30 tpy. If all 38 facilities had at least three coating lines; the most VOC emissions that could be emitted would be 38 X 30 tpy VOC = 1,140 tons of VOC emissions. Of course, emissions from these 38 sources are likely much less, and some of these sources will have only one or two lines, and their limit would be 20 tpy not 30 tpy. The Michigan Air Emissions Reporting System data should be reviewed to see what these facilities actually emit.

As the overall goal is to reduce VOC emissions; the General Permit should be amended rather than eliminated. For example, if you made the following changes use of General Permits would still be allowed with the following changes:

- If the source can meet already meet the annual three tpy proposed emissions, advise transition to this exemption (though no reductions will be achieved).
- If the source is meeting or is close to meeting the coating content limits on their lines, some adjustments could be made in switching some coatings, and limited to no reductions may be achieved. If these sources must go in for a site-specific permit, they

may also target an increase in emissions up to a point where controls are not cost effective.

- If a source must spend money to install controls to meet the new rules; most likely the source would go in for a permit to request as high of VOC limits as possible. As long as the source is meeting the 90% reduction, they would be compliant with the proposed rules. The source could then market and take on more work that they may not have been able to take before to meet current limits. For these sources, we would see an increase in emissions or at least PTE until they can obtain more work.
    - In addition, RTOs for these sources will require natural gas to keep the combustion chamber temperature at the level needed for control. This will add NOx emissions to the ozone nonattainment area.
    - Existing coatings require performance testing and approvals that can take years to complete. Shorter-term control approaches and long lead times for control equipment will conflict with immediate applicability and compliance requirement, which is unreasonable.

If the target reduction is 15% controls, the General Permit should be amended to allow only 8.5 tpy per line or a total of 25.5 tons VOCs for a General Permit holder. Keeping the exemption from RACT Rules for these General Permit sources but ratcheting down the limits to 8.5 tpy/ line and a total of 25.5 tpy makes more sense.

De Minimis Emission Levels: A *de minimis* emissions threshold should be included in Rule 602(4) below which the RACT requirements do not apply. Otherwise, every RACT review will include many wasteful analyses for low emitting sources that will have no technically or economically feasible control options. Rule 602(4) should include categorical exemptions for types of equipment with inherently low VOC emissions such as natural gas fired equipment and other combustion sources.

- The compliance schedule for the various stages of the RACT analysis required by Rule 602(4) should be lengthened as follows and as suggested in Attachment 1:
    - The requirement to submit the VOC PTE information to EGLE in Rule 602(4)(a) within one month of promulgation should be increased to at least three months
    - The requirement to provide a RACT analysis for each VOC source to EGLE in Rule 602(4)(b) within three months of promulgation should be increased to at least 12 months
        - The Ohio EPA 3745-21-11 VOC RACT regulations allow 12 months to submit a RACT study.
    - The requirement to implement each RACT proposal within six months of department approval should be increased to at least two years and to at least three years if add-on controls are required.
- The 15 pound per calendar day exemption criteria found in Rule 610a(3)(a)(iii) should be changed from a daily limit to a monthly limit or a 12-month rolling average limit.
- The VOC testing requirements in Rule 610a(4)(e)(vii) should allow for alternate test methods to be used, especially previously approved alternate test methods, if a different or modified method would more accurately represent equipment operating conditions.

- Rule 602 should include an exemption from these RACT requirements for any VOC source that has been subject to a Rule 702 VOC BACT analysis, PSD BACT analysis, or Nonattainment NSR VOC LAER analysis within the past 10 years.

Thank you for your consideration of our comments and the extensive economic impact these rules would have on the largest sector of Michigan's economy. MMA is aware of one representative example company that would incur a cost of at least $1 million for each piece of equipment required per site. An additional $100,000 per year would be necessary for operational costs including natural gas, which will only further increase in cost and emissions. This would reduce the profit/loss margin and force the company to consider relocating, and certainly establishing any future expansions, in other states. These regulatory changes have significant economic implications for Michigan, and we will continue to provide information to assist the department in its decision making.

Sincerely,

Caroline Liethen
Director of Environmental and Regulatory Policy

Attachments:
Attachment 1: NOx Compliance Deadlines
Attachment 2: 38 Sources

Vaerten, Marissa (EGLE)

From: Kathryn R. Ross [redacted]@cmsenergy.com>
Sent: Wednesday, October 26, 2022 12:03 PM
To: McDonald, Tracey (EGLE); Vaerten, Marissa (EGLE)
Cc: Amy D. Kapuga; JAMES M. WALKER
Subject: Consumers Energy's Comments on Part 6 Rules - Proposed Revisions
Attachments: Part_6_VOC_RACT_ Proposed_Rule_CE_Comments Letter 10_26_2022 (final).pdf

Categories: 2022-018EQ COMMENTS

Consumers Energy Company (Consumers Energy) appreciates the opportunity to comment on the Michigan Department of Environment, Great Lakes, and Energy – Air Quality Division's (AQD) Proposed Revisions to the Part 6 Volatile Organic Compound
(VOC) rules. Please find our comments attached.

Should you wish to discuss any of our comments, please feel free to contact Amy Kapuga or myself.
Thanks,

Kathryn Ross, Sr. Environmental Planner
1945 W. Parnall Rd. | Jackson, MI 49201 | P22-231
Office: 517-788-0648| Fax: 517-788-1064 | [redacted]@cmsenergy.com
www.ConsumersEnergy.com

October 26, 2022

Attn: Mr. Trace McDonald, Ms. Marissa Vaerten
Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division, SIP Development Unit
P.O. Box 30260
Lansing, MI 48909-7760

Electronic Submittal: McDonaldT@Michigan.gov; VaertenM@michigan.gov

RE: Consumers Energy Company's Comments on EGLE – AQD's Proposed Revisions to the Part 6. Emission Limitations and Prohibitions – Existing Sources of Volatile Organic Compound Emissions Rules (Rule Set 2022-18 EQ)

Consumers Energy Company (Consumers Energy) appreciates the opportunity to comment on the Michigan Department of Environment, Great Lakes, and Energy – Air Quality Division's (AQD) Proposed Revisions to the Part 6 Volatile Organic Compound (VOC) rules, as posted on the Department of Licensing and Regulatory Affairs' Administrative Rulemaking System under the Request For Rulemaking 2022-18 EQ.

Consumers Energy, Michigan's largest utility, provides electric and natural gas service to more than 6 million of the state's 10 million residents in all 68 counties in the Lower Peninsula. We provide natural gas service for heating and other uses to more than 1.7 million customers. Natural gas sources used by Consumers Energy include major pipeline companies and producers in Michigan, Gulf Coast states and Canada. As a local distribution company (LDC), we distribute natural gas using compressor stations and thousands of miles of intrastate pipeline. Fifteen underground natural gas storage fields in Michigan allow our Company to economically purchase and store gas during warm months, for eventual use in the winter heating season.

Consumers Energy understands that AQD has proposed these regulatory revisions in connection with the federal Clean Air Act (CAA) requirements for the 2015 Ozone National Ambient Air Quality Standards (NAAQS) non-attainment areas. The proposed Part 6 rules are one component of the State's strategy to develop and submit a State Implementation Plan (SIP) to the U.S. Environmental Protection Agency (EPA). These proposed rules are to address VOC emission reductions via Reasonably Achievable Control Technologies (RACT). Consumers Energy also plans to review and comment on

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Environmental Quality & Sustainability

the anticipated Part 8 NOx RACT proposed rules, which are the complimentary component of the SIP rules process, during the public comment period.

Consumers Energy currently operates one natural gas compressor station in an area designated by the EPA as moderate non-attainment for the 2015 Ozone NAAQS. Consumers Energy also operates four (4) other compressor stations within the seven-county Southeast Michigan area which is currently designated as a marginal non-attainment area for the 2015 Ozone NAAQS, however this area is awaiting a redesignation determination from the EPA and could either be bumped up to moderate non-attainment for the 2015 Ozone NAAQS or determined to be in attainment with the 2015 Ozone NAAQS.

Consumers Energy strives to be compliant with all federal and state environmental regulations. In the development of these newly proposed rules, Consumers Energy requests EGLE-AQD to align the proposed regulatory definitions with other existing federal program definitions. This provides clarity to industry in understanding the applicability of similar, yet separate, regulations. This also aligns the efforts and minimizes impacts (both cost and schedule) to industries that must undertake equipment retrofits, replacements and/or operational changes to ensure compliance with all regulations. As such, Consumers Energy requests that the specific language for the following three definitions be incorporated into the proposed Part 6 rules (within R 336.1601, as appropriate), and provides cite to the federal regulations for reference:

Local Distribution Company custody transfer station *means a metering station where a Local Distribution Company (LDC) receives a natural gas supply from an upstream supplier, which may be an interstate transmission pipeline or a local natural gas producer, for delivery to customers through the LDC's intrastate transmission or distribution lines.* (40 CFR Part 60, Subparts OOOO and OOOOa)

Natural gas distribution *means the collection of all distribution pipelines and metering-regulating stations that are operated by a Local Distribution Company (LDC) within a single state that is regulated as a separate operating company by a public utility commission or that are operated as an independent municipally-owned distribution system.* (40 CFR Part 98, Subpart W)

Natural gas transmission and storage segment *means the transport or storage of natural gas prior to delivery to a "local distribution company custody transfer station" or to a final end user (if there is no local distribution company custody transfer station). For the purposes of this subpart, natural gas enters the natural gas transmission and storage segment after the natural gas processing plant, when present.* (40 CFR Part 60, Subparts OOOO and OOOOa)

Additionally, Consumers Energy urges EGLE-AQD to allow more time under the proposed provisions of R336.1602. Specifically, the timeframes identified in subparagraphs (4)(b) and (4)(b)(vi) should be extended to allow industry adequate time to develop a proposal for compliance as well as implement the plan. The RACT analysis required under subparagraphs 602(4)(b)(v) and (c) require not only a technical feasibility of the available control options but also economic impacts amongst other items. Given that industry may not even be aware that they are subject to these proposed rules, due to the uncertainty of the Southeast Michigan redesignation request, or for other reasons, or may have multiple emission sources that it has to evaluate, these timeframes are too restrictive to be able to provide all the necessary information required by the proposed rule. Should industry be required to retrofit equipment, securing this information and vetting the changes within the business can take substantially longer than the proposed 3 months.

We would suggest that the timeframe for provision (4)(b) be extended to 6 months after the final promulgation of the rule. In addition, we request that the language for (4)(b)(vi) be revised to allow for department approval of the timeframe in the RACT proposal.

Please find attached a mark-up version (applicable pages only) showing our comments on for the proposed Part 6 regulations.

Consumers Energy thanks you for your time and consideration of our request. Should you have any questions or concerns, please do not hesitate to contact Amy Kapuga (amy.kapuga@cmsenergy.com) or myself (kate.ross@cmsenergy.com).

Respectfully Submitted,

Kathryn (Kate) Ross
Sr. Environmental Analyst
Consumers Energy Company
1945 West Parnall Road, P22-330
Jackson, MI 49201
[redacted]@cmsenergy.com

Attachment 1

Consumers Energy's Mark-up Version of the Part 6 Rules

Applicable Pages only
Changes shown in green italic and red strike-through

R 336.1601 Definitions (pages 3 & 4)
R 336.1602 Existing sources of volatile organic compound emissions generally (page 7)

~~which an application for a permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before July 1, 1987.~~

~~(vi) Any process or process equipment which is subject to the provisions of R 336.1632 and which either has been placed into operation before the effective date of R 336.1632 or for which an application for a permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before the effective date of R 336.1632.~~

~~(vii) Any process or process equipment which is not subject to the provisions of any rule in this part and which either has been placed into operation before July 1, 1979, or for which an application for a permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before July 1, 1979. The term does not include a process or process equipment operated for research, development, or pilot studies, if the operation is not for the purpose of producing saleable products or goods.~~

(d) "Heavier vehicles" means a self-propelled vehicle designed for transporting persons or property on a street or highway that has a gross vehicle weight rating over 8,500 pounds.

(e) "Local Distribution Company custody transfer station" means a metering station where a Local Distribution Company (LDC) receives a natural gas supply from an upstream supplier, which may be an interstate transmission pipeline or a local natural gas producer, for delivery to customers through the LDC's intrastate transmission or distribution lines.

(~~e~~*f*) "Natural gas distribution" means ***the collection of all distribution pipelines and metering-regulating stations that are operated by a Local Distribution Company (LDC) within a single state that is regulated as a separate operating company by a public utility commission or that are operated as an independent municipally-owned distribution system.*** ~~**activities in which the natural gas is provided for the end user by a distribution facility after that facility receives the natural gas from the natural gas transmission and storage segment.**~~

(~~f~~*g*) "Natural gas processing" means the process of separating and recovering certain hydrocarbons and fluids from the raw gas to produce pipeline quality natural gas and natural gas products.

(~~g~~*h*) "Natural gas processing plant" means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products or both. Natural gas processing plant does not include a Joule-Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid.

(~~h~~*i*) "Natural gas transmission and storage" means the transport ***or storage*** **of natural gas** ***prior to delivery to a Local Distribution Company custody transfer station or to a final end user (if there is no Local Distribution Company custody transfer station). For the purposes of this subpart, natural gas enters the natural gas transmission and storage segment after the natural gas processing plant, when present.*** ~~**, excluding processing, sometimes long distances, and the temporary storage of that gas. Specific equipment used in natural gas transmission includes the land, mains, valves, meters, boosters, regulators, storage vessels, dehydrators, compressors, and their driving units and appurtenances, and equipment used for transporting gas from a production facility, delivery point of purchased gas,**~~

Commented [KRR1]: Re-itemize definitions following the addition of LDC.

Commented [ADK2R1]: *Natural gas transmission and storage segment* means the transport or storage of natural gas prior to delivery to a "local distribution company custody transfer station" (as defined in this section) or to a final end user (if there is no local distribution company custody transfer station). For the purposes of this subpart, natural gas enters the natural gas transmission and storage segment after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage segment after the point of "custody transfer" (as defined in this section). A compressor station that transports natural gas prior to the point of "custody transfer" or to a natural gas processing plant (if present) is not considered a part of the natural gas transmission and storage segment

~~gathering system, storage area, or other wholesale source of gas to 1 or more distribution areas.~~

(~~i~~*j*) "Oil and natural gas industry" means the operations involved in the extraction and production of crude oil and natural gas, as well as the processing, transmission, storage, and distribution of natural gas. For the purposes of the rules in this part, oil and natural gas industry operations will be referred to in the following 4 segments:
(i) Oil and natural gas production.
(ii) Natural gas processing.
(iii) Natural gas transmission and storage.
(iv) Natural gas distribution.

(~~j~~*k*) "Oil and natural gas production" means operations including the wells and all related processes used in the extraction, production, recovery, lifting, stabilization, and separation or treating of oil or natural gas, or both, including condensate.

(~~k~~*l*) "Person responsible" means a person that owns, leases, controls, operates, or supervises a source of air contaminants.

(~~lb~~*m*) "Western portion of Allegan County" means the areas in Allegan County described as Casco Township, Cheshire Township, city of Douglas, city of Holland, city of Saugatuck, Clyde Township, Fillmore Township, Ganges Township, Heath Township, Laketown Township, Lee Township, Manlius Township, Overisel Township, Saugatuck Township, and Valley Township. ~~"Person responsible" means a person who owns, leases, controls, operates, or supervises a source of air contaminants.~~

(~~m~~*n*) "Western portion of Muskegon County" means the areas located in Muskegon County described as Blue Lake Township, city of Montague, city of Muskegon, city of Muskegon Heights, city of North Muskegon, city of Roosevelt Park, city of Whitehall, Dalton Township, including the village of Lakewood Club, Fruitland Township, Fruitport Township, including the village of Fruitport, Laketon Township, Montague Township, Muskegon Township, city of Norton Shores, White River Township, and Whitehall Township.

R 336.1602 Existing sources of volatile organic compound emissions generally.

Rule 602. (1) A person shall not cause or allow the emission of volatile organic compounds from any existing source in excess of the provisions of any rule of this part or the maximum allowable emission rate specified in any of the following, whichever results in the lowest maximum allowable emission rate:

(a) A permit to install.

~~(b) A permit to operate.~~

(**b~~e~~**) A renewable operating permit issued under R 336.1210.

(**c~~d~~**) A voluntary agreement.

(**d~~e~~**) A performance contract.

(**e~~f~~**) A stipulation.

(**f~~g~~**) An order of the department.

(2) Department approvals for the equivalent emission rates, alternate emission rates, or compliance methods that are authorized pursuant to any of the provisions listed in subdivision (a) of this subrule **must comply** ~~shall be in compliance~~ with all of the following provisions:

~~subdivision (a) of this subrule shall be in compliance with both of the following provisions:~~

(**a**~~i~~) The department approval ~~shall~~ become**s** part of a legally enforceable order of the department~~,~~ **or** permit to install~~, or permit to operate~~.

(**b**~~ii~~) A copy of the legally enforceable document that is identified in ~~paragraph (i) of this~~ subdivision **(a) of this subrule** ~~shall~~ **is** sent to the United States Environmental Protection Agency.

~~(4) In R 336.1610, R 336.1621, and R 336.1632, where emission limits are expressed in pounds of volatile organic compounds per gallon of coating, minus water, as applied, the phrase "minus water" shall also include compounds which are used as organic solvents and which are excluded from the definition of volatile organic compound.~~

(4) A person responsible for a facility with allowed or potential volatile organic compound emissions equal or greater than 100 tons per year in the 2015 ozone nonattainment area for which no reasonably available control technology (RACT) requirement has been established in R 336.1604 to R336.1644, shall meet all of the following requirements:

(a) Provide the department and United States Environmental Protection Agency with the following information within 1 month after final promulgation of this rule revision:

(i) Identification of each facility, including individual emission sources, to which this rule applies.

(ii) Determination of the total potential to emit and the actual emissions of volatile organic compounds for the most recent calendar year from each source at the facility using emission testing, mass balance, or a calculation method acceptable by the department.

(b) Within ~~3~~*4* months after final promulgation of this rule revision, provide to the department and United States Environmental Protection Agency, a proposal for RACT for each source of volatile organic compounds at the facility. The RACT proposal must include, at a minimum, the following information:

(i) A list of each source subject to the RACT requirements.

(ii) The size or capacity of each affected source and the types and quantities of materials processed or produced in each source.

(iii) A physical description of each source and its operating characteristics.

(iv) Estimates of the potential and actual volatile organic compound emissions from each affected source and associated supporting documentation.

(v) A RACT analysis which meets the requirements of subdivision (c) of this subrule, including technical and economic support documentation for each affected source.

(vi) A schedule for completing implementation of the RACT proposal as expeditiously as practicable ~~but not later than 6 months after department approval of the proposal,~~ including interim dates for the issuance of purchase orders, start and completion of process, technology and control technology changes, and the completion of compliance testing. ***The schedule will be subject to Department approval.***

Vaerten, Marissa (EGLE)

From: McDonald, Tracey (EGLE)
Sent: Wednesday, October 26, 2022 11:54 AM
To: Vaerten, Marissa (EGLE)
Subject: FW: Comments to Rule Set 2022-18 EQ
Attachments: Comments to R. Set 2022-18(27343345.3).pdf

Categories: 2022-018EQ COMMENTS

FYI

From: Cumings, Troy <[redacted]@wnj.com>
Sent: Wednesday, October 26, 2022 11:52 AM
To: McDonald, Tracey (EGLE) <MCDONALDT@michigan.gov>
Subject: Comments to Rule Set 2022-18 EQ

Trace,

Attached are comments to Rule Set 2022-18 EQ submitted on behalf of Willert Home Products, Inc. I look forward to working with you on finalizing the rule set. Thanks.

Troy M. Cumings | Partner
Warner Norcross + Judd LLP
One Michigan Avenue Building, 120 North Washington Square, Suite 410, Lansing, MI 48933
d 517.679.7411 [redacted]@wnj.com | profile | V-Card

Warner Norcross + Judd LLP

October 26, 2022

Via Email

Mr. Trace McDonald
EGLE
Air Quality Division
525 West Allegan Street
Lansing, Michigan 48933

Re: **Comments to Rule Set 2022-18 EQ – Rule 660**

Dear Mr. McDonald:

We represent Willert Home Products, Inc. On behalf of Willert, I submit the following comments to Rule Set 2022-18 EQ. My comments relate to the proposed amendments to Rule 660, which adopt by reference certain versions of the OTC Model Rule for Consumer Products. My comments focus specifically on the regulation of para-dichlorobenzene ("PDCB") in air fresheners and toilet/urinal care products.

Proposed Rule 660 attempts to exempt products containing 98% PDCB. As drafted, however, the proposed changes to Rule 660 would not fully exempt those products. As explained in more detail below, there are three issues with the current draft language. First, the draft rule applies the exemption only to one version of the OTC Consumer Product Rules that Rule 660 adopts. Second, the draft rule exempts only certain PDCB-containing "solid toilet/urinal care" products—it does not exempt air fresheners that contain PDCB. Finally, both versions of the OTC Consumer Product Rule that Rule 660 adopts contain a freestanding prohibition for PDCB-containing products, which the current draft rule does not account for.

1. **The exemption applies to only one version of the OTC Consumer Products Rules and therefore will not be effective until April 30, 2023.**

The draft Rule 600 incorporates two separate versions of the OTC Model Rule for Consumer Products: The 2006 version (referred to in the draft rule as "ver2006") and the 2012 version (referred to in the draft rule as "ver2012"). The draft Rule 660 incorporates ver2006 before January 1, 2023; it incorporates ver2012 after April 30, 2023. This would create a roughly four-month gap where neither ver2006 nor ver2012 applies. In section (2)(f), the draft Rule 660 contains the following exemption for products containing not less than 98% PDCB:

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Grand Rapids, MI 49503

> In ver2012, the volatile organic compound limit in section (3) table of standards for solid toilet/urinal care as it applies to products containing not less than 98% para-dichlorobenzene.

Because this language exempts toilet/urinal care products containing not less than 98% PDCB only from ver2012, the exemption would not apply until after April 30, 2023. An effective exemption must apply to *both* ver2006 *and* ver2012.

2. The exemption exempts only "solid toilet/urinal care" products, leaving the prohibition on solid air fresheners containing not less than 98% PDCB in place.

Both ver2006 and ver2012 of the OTC Consumer Products Rules regulate toilet/urinal care products and solid air fresheners containing PDCB. However, the exemption found in section (2)(f) of the draft Rule 660 refers only to toilet/urinal care products. The omission of "solid air fresheners" from that section means the manufacture and sale of those products would be prohibited in Michigan. The logic behind the exemption of toilet/urinal care products containing not less than 98% PDCB, however, applies with equal force to solid air fresheners containing not less than 98% PDCB. Indeed, since ver2006 was released, EPA has determined that PDCB is "not likely to be carcinogenic to humans."[1] Accordingly, solid air fresheners should be included in section (2)(f).

3. The exemption in draft Rule 660 does not account for a freestanding prohibition on PDCB-containing products found in the OTC Consumer Product Rules.

Both ver2006 and ver2012 of the OTC Consumer Product Rules regulate PDCB-containing solid air fresheners and toilet/urinal care products through the section 3 table of standards. However, both ver2006 and ver2012 contain a separate, freestanding prohibition on PDCB-containing products in section (3)(n): *Requirements for Solid Air Fresheners and Toilet/Urinal Care Products.* That section prohibits outright the sale, supply, offer for sale, or manufacture of any solid air fresheners or toilet/urinal care products that contain PDCB. Section (3)(n) is noted as an optional provision, which each state should decide whether to incorporate on a case-by-case basis.[2] As written, Michigan's incorporation of ver2006 and ver2012 is silent as to whether that provision is incorporated.

Unless the final Rule 660 expressly disclaims the adoption or application of the freestanding prohibition on PDCB-containing solid air fresheners and toilet/urinal care products

[1] *Revised Reregistration Eligibility Decision (RED) Para-dichlorobenzene*, EPA 738-R-07-010; U.S. Environmental Protection Agency, Office of Prevention, Pesticides, and Toxic Substances, Office of Pesticide Programs, U.S. Government Printing Office: Washington, DC, 2008.

[2] The ver2012 rules explain that provisions noted with a double asterisk, as section (3)(n) is, are left "up to each state to decide whether it wishes to include regulation of said compounds in its state-specific rulemaking. OTC takes no position on whether to include these compounds in such a rulemaking." (Ver2012, at 1.) The same note is made in the ver2006 rules (Ver2006, at 1.)

found in section 3(n) of ver2006 and ver2012, the existing exemption found in section (2)(f) of the draft rule will be ineffective.

4. All of these issues can be resolved by minor changes to sections (1)(b) and (2)(f) of the draft Rule 660.

The three issues I note above can be resolved with minor changes to sections (1)(b) and (2)(f) of the draft Rule 660. I propose the following changes to the current draft Rule 660 language:

(1) Except as provided in subrule (2) of this rule, the following provisions are adopted by reference in R 336.1902:

. . .

(b) After **December 31, 2022** ~~**April 30, 2023**~~, the ozone transport commission's "OTC Model Rule for Consumer Products, " Dated May 10, 2012, (ver2012).

. . .

(2) In **ver2006 and** ver2012, **as they apply to products containing not less than 98% para-dichlorobenzene**, the volatile organic compound limit in section (3) table of standards for **air fresheners** and ~~**solid**~~ toilet/urinal care~~**, and the prohibitions in Section 3(n) requirements for solid air fresheners and toilet/urinal care products, as it applies to products containing not less than 98% para-dichlorobenzene**~~**.**

Please do not hesitate to reach out to me with any questions you have.

Very truly yours,

Troy M. Cumings

27343345-3

Vaerten, Marissa (EGLE)

From: McDonald, Tracey (EGLE)
Sent: Wednesday, October 26, 2022 2:30 PM
To: Vaerten, Marissa (EGLE)
Subject: FW: Public Comments EGLE changes to R 336.1601-R 336.1662 & RACT
Attachments: Letter Public Comments EGLE 102622.pdf

Categories: 2022-018EQ COMMENTS

From: Rita Loof <rml93@verizon.net>
Sent: Wednesday, October 26, 2022 2:23 PM
To: McDonald, Tracey (EGLE) <MCDONALDT@michigan.gov>
Cc: Dolehanty, Mary Ann (EGLE) <DOLEHANTYM@michigan.gov>
Subject: Public Comments EGLE changes to R 336.1601-R 336.1662 & RACT

Dear Mr. McDonald, please see attached. Regards,
Rita

Rita M. Loof
Director, Environmental Affairs
RadTech International
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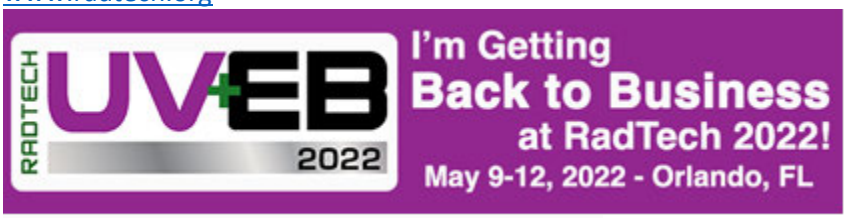

October 26th, 2022

Mr. Trace McDonald
Department of Environment, Great Lakes and Energy
Air Quality Division
McdonaldT@Michigan.gov

Re: Public Comments on the Michigan's Department of Environment, Great Lakes and Energy (EGLE)Changes to R 336.1601 – R 336.1662 and "Reasonably Available Control Technologies" (RACT).

Dear Mr. McDonald:

RadTech International is the trade association for the Ultraviolet/ Electron Beam/Light Emitting Diode (UV/EB/LED) industry. The organization represents over 800 members nationwide involved in a myriad of markets ranging from solar panel manufacturing to finger nail polish. We are pleased to comment on EGLE's proposed changes to Rules 336.1601 – R 336.1662 which, according to your agency, are necessary to satisfy requirements of the federal Clean Air Act (CAA) 42 USC 7401 et seq., requirements referred to as "Reasonably Available Control Technologies" (RACT).

Unlike conventional inks and coatings, UV/EB/LED products do not evaporate. Instead, they are specifically formulated to react to an energy source. The nature of the process is such that virtually no Volatile Organic Compounds (VOCs) are generated. Additionally, UV/EB/LED processes are electric and thus do not produce combustion contaminants such as Nitrogen Oxides (NOx), Sulfur Oxides (Sox) and Greenhouse Gases. With UV/EB/LED technology, facilities can achieve emission reductions above and beyond those required by even the most stringent of regulations. Thus, our technology can help EGLE achieve requirements of the "Reasonable Available Control Technology" (RACT) provisions in the Clean Air Act.

The South Coast Air Quality Management District (SCAQMD) has some of the most stringent air quality regulations in the nation. In many of its rulemakings, the agency has recognized the sustainability advantages, including energy efficiency, of energy curable technology. SCAQMD provides incentives to companies who convert to UV/EB/LED through exemptions from permitting and recordkeeping. The agency recognized UV/EB/LED as Best Available Control

Technology (BACT) for many industry sectors and the technology has recently been included in the Statewide BACT Clearinghouse for the California Air Resources Board.

UV/EB/LED technology is considered "super-compliant" in the SCAQMD which applies to coatings with a Volatile Organic Compound (VOC) content of less than 50 grams per liter. RadTech holds a seat on the South Coast Air Quality Management Plan Advisory Committee. Our Association provides input to the agency on how to achieve clean air goals and implementation of UV/EB/LED is one strategy which has been included in the most recent documents of the Air Quality Management Plan (AQMP). According to SCAQMD findings:

> *"These programs may also provide manufacturers with incentives to accelerate the deployment of cleaner technologies. Such an example is the use of energy-curing technologies which includes ultraviolet light (UV), electron beam (EB), heat and light emitting diode (LED) cured coatings".*

The California State Senate has adopted a resolution recognizing the many benefits of ultraviolet (UV) and electron beam (EB) technologies and the contributions of RadTech. The proclamation acknowledges the "invaluable" contributions made by RadTech to the State of California and beyond, and cites the Association's ideals of community service. It commends RadTech for its "outstanding commitment to improving the environment and economy through its programs."

The Environmental Protection Agency (EPA) has classified UV/EB technology as Lowest Achievable Emission Rate. The EPA Control Techniques Guidelines documents state: "This technology is gaining greater acceptance and, where applicable, achieves a near 100 percent reduction of VOC emissions".

According to the public notice, the state must revise existing RACT rules to align with the most recent recommendations contained in the United States Environmental Protection Agency's (USEPA) Control Technique Guidelines (CTGs) and promulgate new more stringent rules setting or revising emission standards and operational requirements for certain types of existing emission sources.

UV/EB/LED can play a role in the following EGLE rules:

- Rule 336.1610-- Emission of volatile organic compounds from existing automobile, light-duty truck, and other product and material coating lines.

- Rule 336.1620-- Emission of volatile organic compounds from existing flat wood paneling coating lines.

- Rule 336.1621-- Emission of volatile organic compounds from existing metallic surface
- coating lines.

- Rule 336.1632-- Emission of volatile organic compounds from existing automobile, truck, and business machine plastic part coating lines.

We are concerned that some of the Environmental Protection Agency's (EPA) Control Technique Guidelines (CTG) have not been updated since 1978 and thus the information is not accurate by current application methods and standards in 2020. Basing the RACT demonstration on the EPA CTGs may not capture the current state of our technology which has greatly advanced since the promulgation of the CTGs. As an example, the CTG for Wood Furniture Manufacturing Operations, promulgated in 1996, assumes that energy curable materials have a Volatile Organic Compound (VOC) content of 458 grams per liter but, currently our materials are typically less than 50 grams per liter in VOC content and in many cases exceed current EGLE rule limits. Throughout the years, ink and coating makers have continued work to formulate alternative materials which, may not have been readily available when the CTGs were promulgated. In many cases, there is no consideration of energy curable inks which can be equivalent to control devices and analogous to other low VOC ink systems.

We note that competing technologies such as conventional solvent systems with add-on controls and waterborne coating processes, have been included in most of the relevant EPA CTGs. One of EPA's recommendations is that "inks which contain 60 percent or more non-volatile material be exempt from emission limitations in order to encourage development of high solids inks." We very much support this incentive type approach and urge EGLE to implement it.

We request that UV/EB/LED processes be considered as an alternative equivalent option in the RACT Demonstration. UV/EB/LED technology is available in the following CTG categories:

- Offset Lithographic Printing and Letterpress Printing
- Graphic Arts-Rotogravure and Flexography
- Flexible Package Printing
- Wood Furniture Manufacturing Operations
- Factory Surface Coating of Flat Wood Paneling
- Flat Wood Paneling Coatings
- Flat Wood, Interior Paneling
- Large Appliance Coatings
- Metal Furniture Coatings
- Surface Coating of Miscellaneous Metal Parts and Plastics Products
- Paper, Film and Coil Coatings
- Miscellaneous Industrial Adhesives
- Automobile and Light-Duty Truck Assembly Coatings
- Surface Coating of Cans

The following are examples (not an exhaustive list) of permitted operations in the SCAQMD using UV/EB/LED technology:

Spray Booth, Wood

Company Name	Application #	Date Issued
Excel Cabinets, Inc.	450588	11/26/05
Head West Inc.	F80114	01/12/06

Lithographic Printing

Company Name	AQMD Permit #	Date Issued
Holiday Printing & Lithograph Inc.	F32751	07/25/00
Westminster Press	F15320	08/11/98
K & D Graphics, A California Corp.	F24307	02/09/00
Jaco Printing Corp, Business Forms Press	D53533	05/21/92
Jaco Printing Corp, Business Forms Press	F15651	11/24/98
Jaco Printing Corp, Business Forms Press	F15651	11/24/98
Royal Paper Box Co.	D92649	08/10/95
Creative Mailings Inc.	F31957	06/21/00

Request to Include Incentives in Rulemaking

Our materials are typically well below 50 grams/liter in VOC content which is minimal compared to existing and proposed limits. We respectfully request that UV/EB/LED materials be exempted from the rule requirements. An exemption would be an incentive for businesses to voluntarily choose UV/EB/LED technology resulting in additional emission reductions for the South Coast Basin.

Recordkeeping requirements are burdensome on businesses and in the case of UV/EB/LED operations, are not crucial because the materials are well below the rule limits. Exempting energy curable materials from overly prescriptive recordkeeping requirements will alleviate regulatory burdens on EGLE's business community and benefit air quality.

Definition

We would very much appreciate the inclusion of a definition for energy curable materials in the rule. We propose a definition like the one in other SCAQMD rules (R1130, R1168):

ENERGY CURABLE MATERIALS are single component reactive products that cure upon exposure to visible-light, ultraviolet light, or to an electron beam.

Test Method

The Environmental Protection Agency and the SCAQMD have long recognized that EPA Method 24 is not suitable for thin film UV/EB/LED Materials. RadTech urges the inclusion of

ASTM D7767-11 as suitable test method for thin film UV/EB/LED products. We propose the following language:

The VOC content of thin film Energy Curable Adhesives and Sealants may be determined by manufacturers using ASTM Test Method 7767 Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them.

Request for Additional Time to Submit Comments

As requested via the Q & A box in the meeting today, we request a one week extension to the public comment period to allow our members to submit comments on this rulemaking.

We look forward to a continued collaboration with EGLE. Please let me know of any additional assistance our association can provide.

Sincerely,

Rita M. Loof
Director, Environmental Affairs

Vaerten, Marissa (EGLE)

From: McDonald, Tracey (EGLE)
Sent: Thursday, October 27, 2022 7:53 AM
To: Vaerten, Marissa (EGLE)
Subject: FW: Public Comments on the Michigan's Department of Environment, Great Lakes and Energy (EGLE) Changes to R 336.1601 – R 336.1662 and "Reasonably Available Control Technologies" (RACT)
Attachments: 10-26-22 EGLE Public Comments Letter.pdf

Categories: 2022-018EQ COMMENTS

FYI. I've replied and a copy has already been added to the comment folder

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From: Mike Bonner <[redacted]@viscosity.com>
Sent: Wednesday, October 26, 2022 4:00 PM
To: McDonald, Tracey (EGLE) <MCDONALDT@michigan.gov>
Subject: Public Comments on the Michigan's Department of Environment, Great Lakes and Energy (EGLE) Changes to R 336.1601 – R 336.1662 and "Reasonably Available Control Technologies" (RACT)

Dear Mr. McDonald,

Attached please find our comments on the abovementioned rule changes being contemplated by EGLE.

Please feel free to reach out to me if I can be of any assistance whatsoever.

Best Regards,

Michael R. Bonner | Vice President – Engineering & Technology
[redacted]@viscosity.com
www.viscosity.com
12427 31 Mile Road | Washington, MI 48095 USA
Visit our Blog @ The Business of Viscosity

saint clair SYSTEMS
norcross Temperature & Viscosity Control

October 26th, 2022

Mr. Trace McDonald
Department of Environment, Great Lakes and Energy
Air Quality Division
McdonaldT@Michigan.gov

Re: Public Comments on the Michigan's Department of Environment, Great Lakes and Energy (EGLE) Changes to R 336.1601 – R 336.1662 and "Reasonably Available Control Technologies" (RACT).

Dear Mr. McDonald:

Saint Clair Systems, Inc. is a Michigan based company, involved in the design manufacture of temperature and viscosity control equipment for fluid dispensing systems. This includes both solvent based and UV/EB cure applications for various customers, many of whom are located in Michigan. We are involved in industrial/automotive finishing, adhesives and sealants, coil coatings, food packaging, and printing sectors. Our company is a member of the RadTech International association.

We echo RadTech's requests to provide incentives for facilities in Michigan who have converted or are considering conversion to UV/EB/LED. The technology can help EGLE achieve requirements of the "Reasonable Available Control Technology" (RACT) provisions in the Clean Air Act. UV/EB/LED can play a role in the following EGLE rules:

- Rule 336.1610-- Emission of volatile organic compounds from existing automobile, light-duty truck, and other product and material coating lines.
- Rule 336.1620-- Emission of volatile organic compounds from existing flat wood paneling coating lines.
- Rule 336.1621-- Emission of volatile organic compounds from existing metallic surface coating lines.
- Rule 336.1632-- Emission of volatile organic compounds from existing automobile, truck, and business machine plastic part coating lines.

We are concerned that some of the Environmental Protection Agency's (EPA) Control Technique Guidelines (CTG) have not been updated since 1978 and thus the information is not accurate by current application methods and standards in 2020. Basing the RACT demonstration on the EPA CTGs may not capture the current state of our technology which has greatly advanced since the promulgation of the CTGs. As an example, the CTG for Wood Furniture

Manufacturing Operations, promulgated in 1996, assumes that energy curable materials have a Volatile Organic Compound (VOC) content of 458 grams per liter but, currently UV/EB/LED materials are typically less than 50 grams per liter in VOC content and in many cases exceed current EGLE rule limits. Throughout the years, ink and coating makers have continued work to formulate alternative materials which may not have been readily available when the CTGs were promulgated. In many cases, there is no consideration of energy curable inks which can be equivalent to control devices and analogous to other low VOC ink systems.

We request that UV/EB/LED processes be considered as an alternative equivalent option in the RACT Demonstration. UV/EB/LED technology is available in the following CTG categories:

- Offset Lithographic Printing and Letterpress Printing
- Graphic Arts-Rotogravure and Flexography
- Flexible Package Printing
- Wood Furniture Manufacturing Operations
- Factory Surface Coating of Flat Wood Paneling
- Flat Wood Paneling Coatings
- Flat Wood, Interior Paneling
- Large Appliance Coatings
- Metal Furniture Coatings
- Surface Coating of Miscellaneous Metal Parts and Plastics Products
- Paper, Film and Coil Coatings
- Miscellaneous Industrial Adhesives
- Automobile and Light-Duty Truck Assembly Coatings
- Surface Coating of Cans

We wholeheartedly support RadTech's requests for regulatory flexibility in the form of permit exemptions in EGLE's rules. Energy curable materials are typically well below 50 grams/liter in VOC content which is minimal compared to existing and proposed limits. We respectfully request that UV/EB/LED materials be exempted from the rule requirements. An exemption would be an incentive for businesses to voluntarily choose UV/EB/LED technology resulting in additional emission reductions for Michigan.

Recordkeeping requirements are burdensome on businesses and in the case of UV/EB/LED operations, are not crucial because the materials are well below the rule limits. Exempting energy curable materials from overly prescriptive recordkeeping requirements will alleviate regulatory burdens on EGLE's business community and benefit air quality.

We would very much appreciate the inclusion of a definition for energy curable materials in the rule. We propose a definition like the one in SCAQMD rules (R1130, R1168):

ENERGY CURABLE MATERIALS are single component reactive products that cure upon exposure to visible-light, ultraviolet light, or to an electron beam.

saint clair SYSTEMS
norcross Temperature & Viscosity Control

The Environmental Protection Agency and the SCAQMD have long recognized that EPA Method 24 is not suitable for thin film UV/EB/LED Materials. We urge the inclusion of ASTM D7767-11 as suitable test method for thin film UV/EB/LED products. We support RadTech's proposed language as follows:

The VOC content of thin film Energy Curable Adhesives and Sealants may be determined by manufacturers using ASTM Test Method 7767 Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them.

We look forward to a continued collaboration with EGLE. Please let me know of any additional assistance we can provide.

Sincerely,

Michael R. Bonner
Vice President Engineering & Technology

12427 31 Mile Road • Washington Township, Michigan • 48095
586.336.0700 • www.saintclairsystems.com

Vaerten, Marissa (EGLE)

From: Gary Jones [redacted]@printing.org>
Sent: Tuesday, October 25, 2022 2:58 PM
To: Vaerten, Marissa (EGLE)
Cc: McDonald, Tracey (EGLE)
Subject: RE: Info From Joshua Flood at Kay Automotive Graphics
Attachments: AdhesivesRACTRuleApplicabilityScreenPrinting.docx

Categories: 2022-018EQ COMMENTS

Hi Marissa,

Thanks for the feedback on the information from Kay Automotive Graphics.

As I went back and looked at the CTG that EPA issued on adhesives, it became apparent that screen printing was also not to be included as it was not specifically identified as a covered source category, so I am submitting the attached memo that includes the reasoning as a supplement to my previous comments.

Please let me know if you have any question or need additional information.

Gary Jones
Director, Environmental, Health, and Safety Affairs
PRINTING United Alliance
10015 Main St., Fairfax, VA 22031
[redacted] | [redacted]@printing.org

~~MICHIGAN~~ DEPARTMENT OF **ENVIRONMENT, GREAT LAKES, AND ENERGY** ~~ENVIRONMENTAL QUALITY~~

AIR QUALITY DIVISION

AIR POLLUTION CONTROL

Filed with the secretary of state on

These rules take effect immediately upon filing with the secretary of state unless adopted under section 33, 44, or 45a(9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the director of the department of **environment, Great Lakes, and energy** ~~environmental quality~~ by sections 5503 and 5512 of the **natural resources and environmental protection act**, 1994 PA 451, MCL 324.5503 and 324.5512, and Executive Reorganization Order N**os.**~~umbers~~ 1995-16, 2009-31, and 2011-1, MCL 324.99903, 324.99919, and 324. 99921)

R 336.1601, R 336.1602, R 336.1606, R 336.1607, R 336.1608, R 336.1609, R 336.1610, R 336.1611, R 336.1618, R 336.1620, R 336.1621, R 336.1622, R 336.1623, R 336.1624, R 336.1625, R 336.1627, R 336.1628, R 336.1629, R 336.1630, R 336.1631, R 336.1632, and R 336.1660 of the Michigan Administrative Code are ~~is~~ amended, R 336.1610a, R 336.1620a, R 336.1621a, R 336.1624a, R 336.1633, R 336.1634, R 336.1635, R 336.1636, R 336.1637, R 336.1638, R 336.1639, R 336.1640, R 336.1641, R 336.1642, R 336.1643, R 336.1644, and R 336.1662 are added, and R 336.1661 is rescinded, as follows:

PART 6. EMISSION LIMITATIONS AND PROHIBITIONS-- EXISTING SOURCES OF VOLATILE ORGANIC COMPOUND EMISSIONS

R 336.1601 Definitions.

Rule 601. As used in this part:

(a) **"2015 ozone nonattainment area" means Berrien, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, Wayne, the western portion of Allegan, and the western portion of Muskegon Counties.**

(b) "Eastern portion of Muskegon County" means the areas located in Muskegon County described as Casnovia Township, Cedar Creek Township, Egelston Township, Holton Township, Moorland Township, Ravenna Township, and Sullivan Township.

~~(a)~~**(c)** "Existing source" means any ~~of the following: (i)~~ ~~Any~~ process or process equipment ~~which~~ **that** is subject to the ~~provisions~~ **rules listed in table 60** ~~of R 336.1604 to R 336.1618~~ and ~~which~~ **has** either has been placed into operation before **the corresponding date listed in table 60** ~~July 1, 1979~~, or for which an application for a

permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before ~~July 1, 1979~~ **the corresponding date listed in table 60**. The term does not include a process or process equipment operated for research, development, or pilot studies, if the operation is not for the purpose of producing saleable products or goods.

TABLE 60

Rules	**Date**
R 336.1604 to R 336.1605	**July 1, 1979**
R 336.1606 to R 336.1609	**March 1, 2023**
R 336.1610	**July 1, 1979**
R 336.1610a	**March 1, 2023**
R 336.1611 to R 336.1617	**July 1, 1979**
R 336.1618	**March 1, 2023**
R 336.1620	**July 1, 1980**
R 336.1620a	**March 1, 2023**
R 336.1621	**July 1, 1980**
R 336.1621a	**March 1, 2023**
R 336.1622 to R 336.1624	**July 1, 1980**
R 336.1624a	**March 1, 2023**
R 336.1625	**July 1, 1980**
R 336.1628	**January 5, 1981**
R 336.1629	**January 20, 1984**
R 336.1630 and R 336.1631	**July 1, 1987**
R 336.1632 to R 336.1644	**March 1, 2023**
Any process or process equipment not subject to the provisions of any rule in this part.	**July 1, 1979**

~~(ii) Any process or process equipment which is subject to the provisions of R 336.1619 to R 336.1625 and which either has been placed into operation before July 1, 1980, or for which an application for a permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before July 1, 1980.~~

~~(iii) Any process or process equipment which is subject to the provisions of R 336.1628 and which either has been placed into operation before January 5, 1981, or for which an application for a permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before January 5, 1981.~~

~~(iv) Any process or process equipment which is subject to the provisions of R 336.1629 and which either has been placed into operation before January 20, 1984, or for which an application for a permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before January 20, 1984.~~

~~(v) Any process or process equipment which is subject to the provisions of R 336.1630 or R 336.1631 and which either has been placed into operation before July 1, 1987, or for~~

~~which an application for a permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before July 1, 1987.~~

~~(vi) Any process or process equipment which is subject to the provisions of R 336.1632 and which either has been placed into operation before the effective date of R 336.1632 or for which an application for a permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before the effective date of R 336.1632.~~

~~(vii) Any process or process equipment which is not subject to the provisions of any rule in this part and which either has been placed into operation before July 1, 1979, or for which an application for a permit to install, pursuant to the provisions of part 2 of these rules, was made to the department before July 1, 1979. The term does not include a process or process equipment operated for research, development, or pilot studies, if the operation is not for the purpose of producing saleable products or goods.~~

(d) "Heavier vehicles" means a self-propelled vehicle designed for transporting persons or property on a street or highway that has a gross vehicle weight rating over 8,500 pounds.

(e) "Natural gas distribution" means activities in which the natural gas is provided for the end user by a distribution facility after that facility receives the natural gas from the natural gas transmission and storage segment.

(f) "Natural gas processing" means the process of separating and recovering certain hydrocarbons and fluids from the raw gas to produce pipeline quality natural gas and natural gas products.

(g) "Natural gas processing plant" means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products or both. Natural gas processing plant does not include a Joule-Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid.

(h) "Natural gas transmission and storage" means the transport of natural gas, excluding processing, sometimes long distances, and the temporary storage of that gas. Specific equipment used in natural gas transmission includes the land, mains, valves, meters, boosters, regulators, storage vessels, dehydrators, compressors, and their driving units and appurtenances, and equipment used for transporting gas from a production facility, delivery point of purchased gas, gathering system, storage area, or other wholesale source of gas to 1 or more distribution areas.

(i) "Oil and natural gas industry" means the operations involved in the extraction and production of crude oil and natural gas, as well as the processing, transmission, storage, and distribution of natural gas. For the purposes of the rules in this part, oil and natural gas industry operations will be referred to in the following 4 segments:

(i) Oil and natural gas production.

(ii) Natural gas processing.

(iii) Natural gas transmission and storage.

(iv) Natural gas distribution.

(j) "Oil and natural gas production" means operations including the wells and all related processes used in the extraction, production, recovery, lifting, stabilization, and separation or treating of oil or natural gas, or both, including condensate.

(k) "Person responsible" means a person that owns, leases, controls, operates, or supervises a source of air contaminants.

(~~lb~~) **"Western portion of Allegan County" means the areas in Allegan County described as Casco Township, Cheshire Township, city of Douglas, city of Holland, city of Saugatuck, Clyde Township, Fillmore Township, Ganges Township, Heath Township, Laketown Township, Lee Township, Manlius Township, Overisel Township, Saugatuck Township, and Valley Township.** ~~"Person responsible" means a person who owns, leases, controls, operates, or supervises a source of air contaminants.~~

(m) "Western portion of Muskegon County" means the areas located in Muskegon County described as Blue Lake Township, city of Montague, city of Muskegon, city of Muskegon Heights, city of North Muskegon, city of Roosevelt Park, city of Whitehall, Dalton Township, including the village of Lakewood Club, Fruitland Township, Fruitport Township, including the village of Fruitport, Laketon Township, Montague Township, Muskegon Township, city of Norton Shores, White River Township, and Whitehall Township.

R 336.1602 Existing sources of volatile organic compound emissions generally.

Rule 602. (1) A person shall not cause or allow the emission of volatile organic compounds from any existing source in excess of the provisions of any rule of this part or the maximum allowable emission rate specified in any of the following, whichever results in the lowest maximum allowable emission rate:

(a) A permit to install.

~~(b) A permit to operate.~~

(**b**~~c~~) A renewable operating permit issued under R 336.1210.

(**c**~~d~~) A voluntary agreement.

(**d**~~e~~) A performance contract.

(**e**~~f~~) A stipulation.

(**f**~~g~~) An order of the department.

(2) Department approvals for the equivalent emission rates, alternate emission rates, or compliance methods that are authorized pursuant to any of the provisions listed in subdivision (a) of this subrule **must comply** ~~shall be in compliance~~ with all of the following provisions:

(a) The provisions of this subrule apply to approvals by the department pursuant to any of the following provisions:

(i) R 336.1610(5)(a) (More than 24-hour but less than 1-month averaging period).

(ii) R 336.1610(11) table 63 (Column B - transfer efficiency).

(iii) R 336. 1610a(4)(d)(i) (More than 24-hour but less than 1-month averaging period).

(iv) R 336.1610a(4) table 64-b and table 64-d (Column B – transfer efficiency).

(v~~iii~~) R 336.1611(1) (Equivalent control method).

(~~i~~v**i**) R 336.1620(~~3~~**4**)(a) (More than 24-hour but less than 1-month averaging period).

(v**ii**) R 336.1621(~~3~~**4**) (Transfer efficiency).

(vi**ii**) R 336.1621(4) (Baseline transfer efficiency less than 60%).

(~~vi~~i**x**) R 336.1621(6)(a) (More than 24-hour but less than 1-month averaging period).

(~~viii~~**x**) R 336.1621(9)(e) (Metallic-nonmetallic part).

(xi) R 336.1621a(2)(b)(ii) (Metallic-nonmetallic part).

(xii) R 336.1621a(3)(c) (Alternate emission limits).

(xiii) R 336.1621a(3)(h)(i) (More than 24-hour but less than 1-month averaging period).

(~~i~~x**iv**) R 336.1622(1) (Equivalent control method).

(x**v**) R 336.1623(1) (Equivalent control method).

(x**v**i) R 336.1623(8)(d) (Equivalent compliance provisions).

(x**v**ii) R 336.1624(1) (Equivalent emission rate).

(x**v**iii) R 336.1624(5)(d) (More than 24-hour but less than 1-month averaging period).

(xi~~v~~**x**) R 336.1625(1) (Equivalent control method, except alternative to condenser in R 336.1625(2)(b)).

(x~~v~~**x**) R 336.1625(2)(b) (Alternative control method).

(x~~v~~**x**i) R 336.1625(8) (Alternative control system).

(x~~v~~**x**ii) R 336.1628(1) (Equivalent control method).

(x~~v~~**x**iii) R 336.1629(1) (Equivalent control method).

(x~~i~~x**iv**) R 336.1630(1) (Equivalent control method).

(xx**v**) R 336.1631(1) (Equivalent control method).

(xx**v**i) R 336.1631(5) (Alternate compliance method).

(xx**v**ii) R 336.1632(~~86~~)(a) (More than 24-hour but less than 1-month averaging period).

~~(xxiii) R 336.1632(13) (Alternate compliance provisions).~~

~~(xxiv) R 336.1632(14) (Cross-line averaging).~~

(xxviii) R336.1633(3)(f)(i) (More than 24-hour but less than 1-month averaging period).

(xxix) R 336.1636(4)(a) (Alternate emission limits).

(xxx) R 336.1636(6)(b)(i) (More than 24-hour but less than 1-month averaging period).

(xx~~v~~**xi**) R 336.2004(4) (Alternate test method).

(xx~~v~~**xi**i) R 336.2040(5)(a)(i)(A) (Alternate test method).

(xx~~v~~**xi**ii) R 336.2040(5)(a)(iv) (Alternate test method).

(xx~~viix~~**v**) R 336.2040(9) (Transfer efficiency test method).

(xx~~i~~x**v**) R 336.2040(9)(j)(ii) (Alternate measurement procedure).

(xxx**vi**) R 336.2040(10) (Modified capture efficiency test method).

(xxx**vi**i) R 336.2040(11)(a)(iv) (Alternate test method).

(xxx**vi**ii) R 336.2040(11)(b)(ii) (Alternate test method).

(b) Upon application for a new permit or order, or revision to an existing permit or order, to request the approval of the provisions outlined in subdivision (a) of this subrule, the source shall submit a demonstration containing the following, as applicable:

(i) Reasons why the applicant is requesting an alternative.

(ii) Information demonstrating why the limitation or requirement as described in the applicable part 6 rule is not possible to attain.

(iii) Explanation of why alternative options, such as implementation of add-on controls or modifying coating formulations would not be sufficient to meet other part 6 rules.

(iv) A demonstration showing why the ozone National Ambient Air Quality Standard will not be affected.

(v) Additional pertinent information, as needed.

~~(b) Department approvals for the equivalent emission rates, alternate emission rates, or compliance methods that are authorized by any of the provisions identified in subdivision (a) of this subrule shall be in compliance with all of the following provisions:~~

(**c**~~i~~) **At a minimum,** ~~T~~**t**he **portion of or the whole** proposed **draft permit or order** approval **related to this rule** ~~shall be~~ **is** subject to a 30-day public comment period. ~~(ii)~~ When the proposed approval is noticed for a 30-day public comment period, a copy of the notice ~~shall~~ **must** also be sent to the United States Environmental Protection Agency.

(**d**~~iii~~) The proposed **draft permit or order** approval **must** ~~shall~~ **offer** ~~is subject to~~ a public hearing **upon request** immediately after the 30-day public comment period that is required in ~~paragraph~~ **subdivision** (~~i~~**c**) of this **s**ub~~division~~ **rule**.

(**e**~~iv~~) The department approval ~~shall~~ become**s** part of a legally enforceable order of the department~~,~~ **or** permit to install~~, or permit to operate~~.

(**f**~~v~~) **Upon department issuance of** ~~T~~**t**he legally enforceable document identified in ~~paragraph~~ **subdivision** (~~iv~~**e**) of this sub~~division~~ **rule, it must** ~~shall~~ be sent to the United States Environmental Protection Agency as a request for a revision of the ~~Michigan~~ state implementation plan, together with all of the other information that is required for the submittal of a complete state implementation plan revision request. Department approval and the legally enforceable document **does not** ~~shall have no~~ effect ~~on~~ the federally approved state implementation plan until and unless the submitted state implementation plan revision request is formally approved by the United States Environmental Protection Agency.

(3) Department approval~~s~~ **of a derivative authorized by the** ~~for the equivalent emission rates, alternate emission rates, or compliance methods that are authorized by the provisions identified in subdivision (a) of this subrule shall be in compliance with both of~~ **in R 336.1625(4) include** the following ~~provisions~~ **actions**:

~~(a) The provisions of this subrule apply to approvals by the department pursuant to R 336.1625(4) (Alternate condenser temperature).~~

~~(b) Department approvals for the equivalent emission rates, alternate emission rates, or compliance methods that are authorized pursuant to the provisions identified in subdivision (a) of this subrule shall be in compliance with both of the following provisions:~~

(**a**~~i~~) The department approval ~~shall~~ become**s** part of a legally enforceable order of the department~~,~~ **or** permit to install~~, or permit to operate~~.

(**b**~~ii~~) A copy of the legally enforceable document that is identified in ~~paragraph (i) of this~~ subdivision **(a) of this subrule** ~~shall~~ **is** sent to the United States Environmental Protection Agency.

~~(4) In R 336.1610, R 336.1621, and R 336.1632, where emission limits are expressed in pounds of volatile organic compounds per gallon of coating, minus water, as applied, the phrase "minus water" shall also include compounds which are used as organic solvents and which are excluded from the definition of volatile organic compound.~~

(4) A person responsible for a facility with allowed or potential volatile organic compound emissions equal or greater than 100 tons per year in the 2015 ozone

nonattainment area for which no reasonably available control technology (RACT) requirement has been established in R 336.1604 to R336.1644, shall meet all of the following requirements:

(a) Provide the department and United States Environmental Protection Agency with the following information within 1 month after final promulgation of this rule revision:

(i) Identification of each facility, including individual emission sources, to which this rule applies.

(ii) Determination of the total potential to emit and the actual emissions of volatile organic compounds for the most recent calendar year from each source at the facility using emission testing, mass balance, or a calculation method acceptable by the department.

(b) Within 3 months after final promulgation of this rule revision, provide to the department and United States Environmental Protection Agency, a proposal for RACT for each source of volatile organic compounds at the facility. The RACT proposal must include, at a minimum, the following information:

(i) A list of each source subject to the RACT requirements.

(ii) The size or capacity of each affected source and the types and quantities of materials processed or produced in each source.

(iii) A physical description of each source and its operating characteristics.

(iv) Estimates of the potential and actual volatile organic compound emissions from each affected source and associated supporting documentation.

(v) A RACT analysis which meets the requirements of subdivision (c) of this subrule, including technical and economic support documentation for each affected source.

(vi) A schedule for completing implementation of the RACT proposal as expeditiously as practicable but not later than 6 months after department approval of the proposal, including interim dates for the issuance of purchase orders, start and completion of process, technology and control technology changes, and the completion of compliance testing.

(vii) The testing, monitoring, recordkeeping, and reporting procedures proposed to demonstrate compliance with RACT.

(viii) Any additional information requested by the department necessary for the evaluation of the RACT proposal.

(c) The RACT analysis required under subdivision (b)(v) of this subrule must include:

(i) A ranking of the available control options for the affected source in descending order of control effectiveness. Available control options are air pollution control technologies or techniques with a reasonable potential for application to the source. Air pollution control technologies and techniques include the application of production process or control methods that reduce volatile organic compound emissions. The control technologies and techniques must include existing controls for the source category and technology transfer controls applied to similar source categories.

(ii) An evaluation of the technical feasibility of the available control options identified in paragraph (i) of this subdivision. The evaluation of technical feasibility must be based on physical, chemical, and engineering principles. A determination of technical infeasibility must identify technical difficulties that would preclude the successful use of the control option on the affected source.

(iii) A ranking of the technically feasible control options in descending order of overall control effectiveness for volatile organic compound emissions. The list must present the array of control options and include, at a minimum, the following information:

(A) The baseline emissions of volatile organic compounds before implementation of each control option.

(B) The estimated emission reduction potential or the estimated control efficiency of each control option.

(C) The estimated emissions after the application of each control option.

(D) The economic impacts and cost effectiveness of each control option.

(iv) An evaluation of cost effectiveness of each control option consistent with the "EPA Air Pollution Control Cost Manual (Sixth Edition)," EPA-452/B-02-001, adopted by reference in R 336.1902. The evaluation must be conducted in accordance with the following requirements:

(A) The cost effectiveness must be evaluated in terms of dollars per ton of volatile organic compound emissions reduction.

(B) The cost effectiveness must be calculated as the annualized cost of the control option, divided by the baseline emission rate, minus the control option emission rate, as shown by the following equation:

$$\text{Average cost effectiveness (\$/ton removed)} = \frac{\text{Control option total annualized cost (\$/yr)}}{\text{Baseline emission rate} - \text{Control option rate (tons/yr)}}$$

(C) For purposes of this subparagraph, baseline emission rate represents the maximum emissions before the implementation of the control option. The baseline emission rate is established using either test results or approved emission factors and historic operating data.

(d) The department shall approve, deny, or modify each RACT proposal.

(e) Upon receipt of notice of the department's approval of the RACT proposal, the facility shall begin implementation of the measures necessary to comply with the approved or modified RACT proposal. Implementation of the RACT program must be completed according to the schedule established in the approved RACT proposal and be as expeditious as practicable, but no later than 6 months after department approval of the RACT proposal.

(f) The department shall submit each approved RACT program to the United States Environmental Protection Agency for approval as a revision to the state implementation plan.

R 336.1606 Loading gasoline into existing stationary vessels of more than 2,000-gallon capacity at dispensing facilities ~~handling 250,000 or more gallons per year~~.

Rule 606. (1) ~~After June 30, 1980, i~~**I**t is unlawful for a person to load or allow the loading of gasoline from a delivery vessel into any existing stationary vessel of more than 2,000-gallon capacity located at a gasoline dispensing facility ~~which is in any county listed in table 61-a and which has a throughput of 250,000 or more gallons per year,~~ unless **the** ~~such~~ stationary vessel is equipped with a permanent submerged fill pipe **for either of the following:**.

(a) A facility with a throughput of 250,000 or more gallons per year, and the stationary vessel was installed before July 1, 1979.

(b) The stationary vessel was installed after July 1, 1979, and before March 1, 2023.

~~(2) After June 30, 1981, it is unlawful for a person to load or allow the loading of gasoline from a delivery vessel into any existing stationary vessel of more than 2,000-gallon capacity located at a gasoline dispensing facility which is outside of any county listed in table 61-a and which has a throughput of 250,000 or more gallons per year, unless such stationary vessel is equipped with a permanent submerged fill pipe.~~

(**2**~~3~~) ~~After December 31, 1982, i~~**I**t is unlawful for a person to load or allow the loading of gasoline from a delivery vessel into any existing stationary vessel of more than 2,000-gallon capacity located at a gasoline-dispensing facility ~~which is in any area listed in table 61 and which has a throughput of 250,000 or more gallons per year,~~ unless **the** ~~such~~ stationary vessel is controlled by a vapor balance system or an equivalent control system approved by the department **for the following:**

(a) Any stationary vessel installed before July 1, 1979, located in the area listed in table 61 and which has a throughput of 250,000 or more gallons per year, except those served exclusively by gasoline loading facilities that have a throughput of less than 1,000,000 gallons of gasoline per year.

(b) Any stationary vessel installed or modified after July 1, 1979, and before March 1, 2023, and located in an area listed in table 61 or in the 2015 ozone nonattainment area.

(3) Proper operation of t~~T~~he vapor balance system **as required in subrule (2) of this rule is when** ~~shall capture~~ displaced gasoline vapor and air **are captured** by means of a ~~vaportight~~ **vapor tight** collection line and ~~shall be~~ **is** designed to return not less than 90%, by weight, of the displaced gasoline vapor from the stationary vessel to the delivery vessel.

(4) Any stationary vessel that is subject to the provisions of subrule (~~3~~**2**) of this rule ~~shall~~ **must** be equipped, maintained, or controlled with both of the following:

(a) An interlocking system or procedure to ensure that the ~~vaportight~~ **vapor tight** collection line is connected before any gasoline can be loaded.

(b) A device to ensure that the ~~vaportight~~ **vapor tight** collection line **is** ~~shall close~~ **closed** upon disconnection ~~so as~~ to prevent the release of gasoline vapor.

(5) Any delivery vessel that is subject to the provisions of subrule (~~3~~**2**) of this rule **must** ~~shall~~ be ~~vaportight~~ **vapor tight** and ~~shall be~~ filled only at a loading facility that is equipped with a system as required by R 336.1608(~~3~~**2**) and (~~4~~**5**), and R 336.1609(2) and (~~3~~**4**). ~~R 336.1705(2) and (3), or R 336.1706(2) and (3).~~

(6) ~~The provisions of subrules (3) and (4) of this rule shall not apply to a stationary vessel at a gasoline-dispensing facility that is served exclusively by gasoline-loading facilities exempted by the department under R 336.1608(7).~~ **An existing stationary**

vessel installed or modified after July 1, 1979, and before March 1, 2023, at a gasoline dispensing facility that is not subject to the provisions of subrule (2) of this rule must be constructed in a manner that allows the vessel to be retrofitted according to subrules (2) and (4) of this rule.

(7) Tables 61 and 61-a read as follows:

TABLE 61

List of major metropolitan areas.

(Subject to R 336.1606, R 336.1607, and R 336.1608) ~~R 336.1703, R 336.1704, and R 336.1705)~~

Metropolitan Area	County	Affected area (1)
1) Detroit	Macomb	T3N, R12E, Sections 3-10, 15-22, & 27-34 T3N, R13E, Sections 25, 35, & 36 T3N, R14E, Sections 11-14 & 19-32 T3N, R15E, Sections 7 and 18 T4N, R12E, Sections 27-34 Macomb County south of the T2N north township line
	Oakland	T1N, R8E, Sections 1-36 T1N, R9E, Sections 1-36 T1N, R1OE, Sections 1-36 T1N, R11E, Sections 1-36 T2N, R8E, Sections 1-3, 10-16, & 19-36 T2N, R9E, Sections 1-36 T2N, R1OE, Sections 1-36 T2N, R11E, Sections 1-36 T3N, R8E, Sections 13-15, 20-29, & 33-36 T3N, R9E, Sections 1-36 T3N, R1OE, Sections 2-36 T3N, R11E, Sections 1-5 & 7-36 T4N, R9E, Sections 17, 19-22, & 26-36 T4N, R1OE, Sections 1-3, 10-12, 14-16, 20-23, 25-29, & 31-35 T5N, R1OE, Sections 22, 26-29, 34, & 35
	Washtenaw	T2S, R5E, Sections 12-27 & 36 T2S, R6E, Sections 7-11 & 13-36 T2S, R7E, Sections 18, 19, & 29-36 T3S, R6E, Sections 1-6, 8-17, 23, & 24 T3S, R7E, Sections 1-26

	Wayne	All areas except the following: T1S, R8E, Sections 5-8, 17-20, 30, & 31 T2S, R8E, Sections 5-9, 16-21, & 28-30 T3S, R8E, Sections 31-35 T4S, R8E, Sections 2-36 T4S, R9E, Sections 1-5 & 9-36 T4S, R1OE, Sections 7, 8, 17, & 18
2)Flint	Genesee	T6N, R5E, Sections 1-3 T6N, R6E, Sections 1-6, 11-14, 24, & 25 T6N, R7E, Sections 1-30 T7N, R5E, Sections 34-36 T7N, R6E, Sections 1-36 T7N, R7E, Sections 1-36 T7N, R8E, Sections 3-11, 14-19, 21, 22, and 30 T8N, R5E, Sections 13-15, 22-27, & 34-36 T8N, R6E, Sections 1, 2, 11-14, & 19-36 T8N, R7E, Sections 5-11 & 13-36 T9N, R6E, Sections 11, 14, 15, 22-27, 35, and 36 T9N, R7E, Sections 31 & 32
3)Grand Rapids	Kent	T5N, R11W, Sections 4-8, 17, & 18 T5N, R12W, Sections 1, 12, & 13 T6N, R1OW, Sections 3-10, 15-21, & 28-33 T6N, R11W, Sections 1-36 T6N, R12W, Sections 1-36 T7N, R1OW, Sections 28-35 T7N, R11W, Sections 3-10, 15-23, & 25-36 T7N, R12W, Sections 1-36 T8N, R11W, Sections 13-16, 19-23, & 26-34
	Ottawa	T5N, R13W, Sections 4 & 5 T6N, R13W, Sections 9-16, 21-29, 32, & 33
4)Lansing	Clinton	T5N, R2W, Sections 4, 5, 7-9, 15-18, 20-23, 26-29, & 31-35
	Eaton	T3N, R3W, Sections 1-3 & 9-12 T4N, R3W, Sections 1-4, 9-16, 20-26, 35, and 36
	Ingham	T3N, R2W, Sections 1-12 14-16, 22, & 23 T4N, R1W, Sections 2-11, 14-23, 26-29, & 33 T4N, R2W, Sections 1-36

(8) ~~(1)~~ Maps of affected areas ~~may be reviewed and inspected at the Lansing office of the Air Quality Division of the department of environmental quality~~ **described in table 61 are available upon request**.

TABLE 61-a

List of counties referenced in ~~R 336.1606 through~~ R 336.1609

Allegan	Ingham	Muskegon
Barry	Ionia	Oakland
Bay	Jackson	Ottawa
Berrien	Kalamazoo	Saginaw
Branch	Kent	St. Clair
Calhoun	Lapeer	St. Joseph
Cass	Lenawee	Sanilac
Clinton	Livingston	Shiawassee
Eaton	Macomb	Tuscola
Genesee	Marquette	Van Buren
Gratiot	Midland	Washtenaw
Hillsdale	Monroe	Wayne
Huron	Montcalm	

R 336.1607 Loading gasoline into existing stationary vessels of more than 2,000-gallon capacity at loading facilities.

Rule 607. (1) ~~After June 30, 1980, i~~**I**t is unlawful for a person to load~~,~~ or allow the loading of~~,~~ gasoline from a delivery vessel into any existing stationary vessel of more than 2,000-gallon capacity located at a gasoline-loading facility**,** ~~in any county listed in table 61-a,~~ unless the stationary vessel is equipped with a permanent submerged fill pipe. ~~(2) After June 30, 1981, it is unlawful for a person to load, or allow the loading of gasoline from a delivery vessel into any existing stationary vessel of more than 2,000-gallon capacity located at a gasoline-loading facility outside of any county listed in table 61-a, unless the stationary vessel is equipped with a permanent submerged fill pipe.~~

(**2**~~3~~) ~~After December 31, 1982, i~~**I**t is unlawful for a person to load, or allow the loading of, gasoline from a delivery vessel into any existing stationary vessel of more than 2,000-gallon capacity located at ~~either of~~ the following loading facilities, unless the stationary vessel is controlled by a vapor balance system**,** or an equivalent control system approved by the department:

(a) A loading facility located in any area listed in table 61.

(b) **A loading facility located in the 2015 ozone nonattainment area.**

(c)A loading facility ~~which is~~ located **outside both the 2015 ozone nonattainment area and** ~~in~~ any area ~~that is not~~ listed in table 61 ~~and which~~ **that** delivers gasoline to a gasoline-dispensing facility subject to R 336.1606(~~3~~**2**) ~~and (4) or R 336.1703(2) and (3)~~.

(3) Proper operation of t~~T~~he vapor balance system **as required in subrule (2) of this rule is when** ~~shall capture displaced~~ gasoline vapor**s** and air **are captured** by means of a ~~vaportight~~ **vapor tight** collection line ~~and shall be~~ **that is** designed to return not less than 90%, by weight, of the displaced gasoline vapor from the stationary vessel to the delivery vessel.

(4) Any stationary vessel that is subject to the provisions of subrule (~~3~~**2**) of this rule ~~shall~~ **must** be equipped, maintained, or controlled with all of the following:

(a) An interlocking system or procedure to ensure that the ~~vaportight~~ **vapor tight** collection line is connected before any gasoline can be loaded.

(b) A device to ensure that the ~~vaportight~~ **vapor tight** collection line **must** ~~shall~~ close upon disconnection so as to prevent the release of gasoline vapor.

(c) Pressure-vacuum relief valves on above ground stationary vessels with a minimum pressure valve setting of 8 ounces~~,~~ if that setting does not exceed the container's maximum pressure rating.

(5) Any delivery vessel subject to subrule (~~3~~**2**) of this rule **must** ~~shall~~ be ~~vaportight~~ **vapor tight**.

(6) A person who is responsible for the operation of all control measures required by this rule shall develop written procedures for the operation of all ~~such~~ control measures. The procedures ~~shall~~ **must** be posted in an accessible, conspicuous location near the stationary vessel.

(7) An existing stationary vessel installed or modified after July 1, 1979, and before March 1, 2023, at a gasoline loading facility that is not subject to the provisions of subrule (2) of this rule, must be constructed in a manner that allows the vessel to be retrofitted, according to subrules (2) and (4) of this rule.

R 336.1608 Loading gasoline into delivery vessels at existing loading facilities handling less than 5,000,000 gallons per year.

Rule 608. (1) ~~After June 30, 1980, i~~**I**t is unlawful for a person to load, or allow the loading of, gasoline from a stationary vessel into any delivery vessel located at an existing gasoline-loading facility**,** ~~which is located in any county listed in table 61 a and~~ which has a throughput of less than 5,000,000 gallons of gasoline per year, unless the delivery vessel is filled by a submerged fill pipe.

~~(2) After June 30, 1981, it is unlawful for a person to load, or allow the loading of, gasoline from a stationary vessel into any delivery vessel located at an existing gasoline-loading facility which is located outside of any county listed in table 61 a and which has a throughput of less than 5,000,000 gallons of gasoline per year, unless the delivery vessel is filled by a submerged fill pipe.~~

(**2**~~3~~) ~~After December 31, 1982, i~~**I**t is unlawful for a person to load, or allow the loading of, gasoline from a stationary vessel into any delivery vessel located at ~~either~~ **any** of the following loading facilities having a throughput of less than 5,000,000 gallons per year, unless the delivery vessel is controlled by a vapor balance system**,** or an equivalent control system approved by the department:

(a) An existing loading facility located in any area listed in table 61.

(b) **An existing loading facility located in the 2015 ozone nonattainment area.**

(c) An existing loading facility ~~which is~~ located **outside both the 2015 ozone nonattainment area and** ~~in~~ any area ~~that is not~~ listed in table 61 ~~and which~~ **that** delivers gasoline to a gasoline-dispensing facility subject to R 336.1606(~~3~~**2**) ~~and (4) or R 336.1703(2) and (3)~~.

(3) The provisions of subrule (2) of this rule do not apply to the following gasoline-loading facilities, provided the facility was installed before July 1, 1979, and has a throughput of less than 1,000,000 gallons of gasoline per year:

(a) An existing loading facility located in any area listed in table 61.

(b) An existing loading facility located outside any area listed in table 61 which delivers gasoline to a gasoline-dispensing facility subject to R 336.1606(2).

(4) Proper operation of t~~T~~he vapor balance system **as required in subrule (2) of this rule is when** ~~shall capture displaced~~ gasoline vapor and air **are captured** by means of a ~~vaportight~~ **vapor tight** collection line ~~and shall be~~ **that is** designed to return not less than 90%, by weight, of the displaced gasoline vapor from the delivery vessel to the stationary vessel.

(**5**~~4~~) Any delivery vessel that is loaded at a facility subject to subrule (~~3~~**2**) of this rule ~~shall~~ **must** be equipped, maintained, or controlled with all of the following:

(a) An interlocking system or procedure to ensure that the ~~vaportight~~ **vapor tight** collection line is connected before any gasoline can be loaded.

(b) A device to ensure that the ~~vaportight~~ **vapor tight** collection line ~~will~~ close**s** upon disconnection ~~so as~~ to prevent the release of gasoline vapor.

(c) A device or procedure to accomplish complete drainage before the loading device is disconnected or to prevent liquid drainage from the loading device when not in use.

(d) Pressure-vacuum relief valves that are ~~vaportight~~ **vapor tight** and set to prevent the emission of displaced gasoline vapor during the loading of the delivery vessel, except under emergency conditions.

(e) Hatch openings that are kept closed and ~~vaportight~~ **vapor tight** during the loading of the delivery vessel.

(**6**~~5~~) Any stationary vessel at a facility subject to subrule (~~3~~**2**) of this rule ~~shall~~ **must** be ~~vaportight~~ **vapor tight**.

(**7**~~6~~) A person who is responsible for the operation of all control measures required by this rule shall develop written procedures for the operation of all such control measures. The procedures ~~shall~~ **must** be posted in an accessible, conspicuous location near the loading device.

~~(7) The provisions of subrule (3) of this rule shall not apply to any gasoline loading facility that has a throughput of less than 1,000,000 gallons of gasoline per year.~~

R 336.1609 Loading delivery vessels with organic compounds having true vapor pressure of more than 1.5 psia at existing loading facilities handling 5,000,000 or more gallons of ~~such~~ **the** compounds per year.

Rule 609. (1) After June 30, 1981, it is unlawful for a person to load, or allow the loading of, any organic compound that has a true vapor pressure of more than 1.5 psia at actual conditions from any stationary vessel into any delivery vessel located at the following existing loading facilities that are outside any county listed in table 61-a and have a throughput of 5,000,000 or more gallons of the compounds per year, unless the delivery vessel is filled by a submerged fill pipe:

(a) An existing facility installed outside the counties listed in table 61-a before July 1, 1979.

(b) An existing facility installed or modified in this state after July 1, 1979, and before March 1, 2023.

(~~1~~**2**) ~~After December 31, 1982,~~ **I**~~i~~t is unlawful for a person to load, or allow the loading of, any organic compound that has a true vapor pressure of more than 1.5 psia at actual conditions from any stationary vessel into any delivery vessel located at **the following** ~~an~~ existing loading facilit~~y~~**ies** ~~which is in any county listed in table 61-a and~~ which has~~**ve** a

throughput of 5,000,000 or more gallons of ~~such~~ **the** compounds per year, unless **the** ~~such~~ delivery vessel is controlled by a vapor recovery system **as described in subrule (3) of this rule:**

(a) An existing facility installed in counties listed in table 61-a before July 1, 1979.

(b) An existing facility installed or modified in this state after July 1, 1979, and before March 1, 2023.

(3) Proper operation of the vapor recovery system as required by subrule (2) of this rule is when ~~that captures~~ all displaced organic vapor and air **are captured** by means of a ~~vapor-tight~~ **vapor tight** collection line and **the system** recovers the organic vapor such that emissions to the atmosphere do not exceed 0.7 pounds of organic vapor per 1,000 gallons of organic compounds loaded.

(**4**~~3~~) Any delivery vessel located at a facility that is subject to the provisions of subrule (2) of this rule **must**~~shall~~ be equipped, maintained, or controlled with all of the following:

(a) An interlocking system or procedure to ensure that the ~~vapor-tight~~ **vapor tight** collection line is connected before any organic compound can be loaded.

(b) A device to ensure that the ~~vapor-tight~~ **vapor tight** collection line ~~shall~~ close**s** upon disconnection ~~so as~~ to prevent the release of organic vapor.

(c) A device to accomplish complete drainage before the loading device is disconnected, or a device to prevent liquid drainage from the loading device when not in use.

(d) Pressure-vacuum relief valves that are ~~vapor-tight~~ **vapor tight** and set to prevent the emission of displaced organic vapor during the loading of the delivery vessel, except under emergency conditions.

(e) Hatch openings that are kept closed and ~~vapor-tight~~ **vapor tight** during the loading of the delivery vessel.

(**5**~~4~~) A person who is responsible for the operation of all control measures required by this rule shall develop written procedures for the operation of all such control measures. ~~Such~~ **The** procedures~~shall~~ **must** be posted in an accessible, conspicuous location near the loading device.

(**6**~~5~~) The provisions of~~subrule (2) of~~ this rule **do**~~shall~~ not apply to the loading of **the following:**

(a) C~~c~~rude oil or condensate into delivery vessels at production facilities if ~~such~~ loading is accomplished with a submerged fill pipe ~~after June 30, 1981.~~

(b) Butane, isobutane, propane, propylene, butylene, C3-C4 mixtures, and mixtures of these organic compounds that comply with the following specified requirements:

(i) Utilizes a pressurized loading system that does not allow organic vapor to be discharged from the delivery vessel during loading.

(ii) Utilizes a device to ensure the loading line closes upon disconnection to prevent release of organic vapor.

(iii) Ensures that all pressure-vacuum relief valves are vapor-tight and set to prevent the emission of organic vapor during the loading of the delivery vessel, except under emergency conditions.

(iv) All hatch openings are kept closed and vapor-tight during the loading of the delivery vessel.

(v) Written procedures for the operation of the loading device are posted in an accessible, conspicuous location near the loading device.

R 336.1610 Existing coating lines; emission of volatile organic compounds from existing automobile, light-duty truck, and other product and material coating lines.

Rule 610. (1) A person shall not cause or allow the emission of volatile organic compounds from the coating of automobiles and light-duty trucks, from any existing coating line, in excess of the applicable emission rates shown in table 62.

(2) A person shall not cause or allow the emission of volatile organic compounds from the coating of any of the following, from an existing coating line, in excess of the applicable emission rates shown in column A of table 63 or the equivalent emission rates in column B of table 63:

(a) Cans.

(b) Coils.

(c) Large appliances.

(d) Metal furniture.

(e) Magnet wire.

(f) The nonmetallic surfaces of fabrics, vinyl, or paper.

(3) Subrule (2) of this rule notwithstanding, and as an alternative to the allowable emission rate established by table 63, the existing paper coating lines at Fletcher ~~p~~**P**aper ~~c~~**C**ompany of Alpena may comply with subrule (2) of this rule by not exceeding a volatile organic compound emission rate of 180 tons per calendar year and 30 tons per calendar month.

(4) A person who is responsible for the operation of a coating line that is subject to this rule shall obtain current information and keep records necessary for the determination of compliance with this rule, as required in R 336.2041.

(5) For each coating line, compliance with the emission limits specified in table 62 and table 63 ~~shall~~ **must** be based upon all of the following provisions:

(a) For prime coat operations that utilize an electrodeposition process in automobile and light-duty truck coating lines that are regulated under table 62, compliance **must** ~~shall~~ be based upon all coatings that belong to the same coating category that is used during each calendar month averaging period. For all other coatings, compliance **must** ~~shall~~ be based upon the volume-weighted average of all coatings ~~which~~ **that** belong to the same coating category and ~~which~~ are used during each calendar day averaging period. The department may specifically authorize compliance to be based upon a longer averaging period, which ~~shall~~ **must** not be more than 1 calendar month.

(b) If coatings that belong to more than 1 coating category are used on the same coating line during the specified averaging period, then compliance **must** ~~shall~~ be determined separately for each coating category.

(c) The information and records as required by subrule (4) of this rule.

(6) Compliance with the emission limits specified in this rule **must** ~~shall~~ be determined using ~~the applicable method described in the following subdivisions:~~**1 of the following methods, as applicable:**

(a) For the prime-electrodeposition process and for the final repair emission limits specified in table 62, the method described in either R 336.2040(12)(a) if the coating line

does not have an add-on emissions control device or R 336.2040(12)(b) if the coating line has 1 or more add-on emissions control devices.

(b) For the primer surfacer and topcoat emission limits specified in table 62, compliance **must** ~~shall~~ be determined by the methodology described in the publication entitled "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-duty Truck Topcoat Operations~~,~~"**,** ~~EPA-450/3-88-018~~ **EPA-453/R-08-002**, adopted by reference in R 336.1902. References to topcoat operations in this publication ~~shall~~ also apply to primer surfacer lines, with the following added provisions:

(i) Unless specifically included in the adopted publication, if an anti-chip, color-in-prime, blackout, or spot primer coating is applied as part of either a primer surfacer or topcoat coating operation, then the anti-chip, color-in-prime, blackout, or spot primer coating **must** ~~shall~~ be included in the transfer efficiency tests for that coating operation, conducted according to section 18 or 19 of the adopted publication, and the transfer efficiency values in section 20 of the adopted publication ~~shall~~ **must** not be used.

(ii) If spot primer is applied as part of a primer surfacer coating operation, then the daily usage of spot primer, as calculated in section 8 of the adopted publication, may be derived from monthly usage of spot primer based upon the number of vehicles processed in the primer surfacer operation each day. If an add-on emissions control device is used on the coating line application area to achieve compliance with the primer surfacer or topcoat emission limits specified in table 62, then the capture efficiency **must** ~~shall~~ be determined in accordance with R 336.2040(10).

(c) For the emission limits specified in column B of table 63, the method described in either R 336.2040(12)(e) if the coating line does not have an add-on emissions control device or R 336.2040(12)(f) if the coating line has 1 or more add-on emissions control devices.

(d) For the emission limits specified in column A of table 63, the method described in either R 336.2040(12)(a) if the coating line does not have an add-on emissions control device or R 336.2040(12)(b) if the coating line has 1 or more add-on emissions control devices.

(7) The provisions of this rule, ~~with the exception of~~ **except for** the provisions in subrule (4) of this rule, do not apply to coating lines that are within a stationary source and that have a combined actual emission rate of volatile organic compounds of less than 100 pounds per day or 2,000 pounds per month as of **November 4, 1999**. If the combined actual emission rate equals or is more than 100 pounds per day for a subsequent day or 2,000 pounds per month for a subsequent month, then this rule ~~shall~~ permanently ~~apply~~ **applies** to the coating lines.

(8) A person may exclude low-use coatings that total 55 gallons or less per rolling 12-month period at a stationary source from the provisions of this rule, except for subrule (4) of this rule.

(9) Between November 1 and March 31, a person may discontinue the operation of a natural gas-fired afterburner that is used to achieve compliance with the emission limits in this rule, unless the afterburner is used to achieve compliance with, or is required by, any of the following:

(a) ~~Any other~~ **Another** provision of these rules.

(b) A permit to install.

(c) A permit to operate.
(d) A voluntary agreement.
(e) A performance contract.
(f) A stipulation.
(g) An order of the department.

(10) If the operation of a natural gas-fired afterburner is discontinued between November 1 and March 31 under subrule (9) of this rule, then both of the following provisions ~~shall~~ apply between November 1 and March 31:

(a) All other provisions of this rule, except for the emission limits, ~~shall~~ remain in effect.

(b) All other measures that are used to comply with the emission limits in this rule between April 1 and October 31 ~~shall~~ **must** continue to be used.

(11) Tables 62 and 63 read as follows:

~~Table~~ **TABLE** 62

Volatile organic compound emission limits for existing automobile and light-duty truck coating lines

Coating Category	Emission Limit
Prime-electrodeposition process	1.2[1]
Primer surfacer[3]	14.9[2]
Topcoat	14.9[2]
Final repair	4.82[1]

[1]Pounds of volatile organic compounds per gallon of coating, minus water, as applied.

[2]Pounds of volatile organic compounds per gallon of applied coating solids.

[3]The primer surfacer or topcoat coating category would include an anti-chip, blackout, or spot primer coating if this coating is applied as part of the primer surfacer or topcoat coating operation.

~~Table~~ **TABLE** 63

Volatile organic compound emission limits for existing coating lines

Coating Category	Column A[1]	Column B[2]
Metallic surfaces		
Coating of cans		
Sheet basecoat (exterior and interior and overvarnish; 2-piece Can exterior (basecoat and overvarnish)	2.8	
2- and 3-piece can interior body spray; 2-piece can interior end (spray or roll coat)	4.2	
3-piece can side-seam	5.5	
End sealing compound	3.7	
Coating of coils	2.6	
Coating of large appliances[3]	2.8	7.5
Coating of metal furniture[3]	3.0	8.4
Insulation of magnet wire	1.7	
Nonmetallic surfaces		
Coating of fabric	2.9	
Coating of vinyl	3.8	
Coating of paper	2.9	

[1]Pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied.

[2]Pounds of volatile organic compounds emitted per gallon of applied coating solids. The purpose of column B emission limits is to allow credit for transfer efficiencies greater than the baseline transfer efficiency. Note: department approval of the transfer efficiency test method is required.

[3]The allowable emission rate does not apply to coatings that are used for the repair of scratches and nicks.

(12) A coating line subject to R 336.1610a does not need to meet the provisions of R 336.1610.

Commented [GJ1]: Does this mean sources that are excluded from 610a are also excluded from 610? If so, can this be revised to say it also includes those that are exempt from 610a are also exempt from 610?

R 336.1610a Existing coating lines; emission of volatile organic compounds from existing automobile, light-duty truck; and paper, film, and foil; cans, coils, and

fabrics; insulation of magnet wire; metal furniture coating lines in 2015 ozone nonattainment areas.

Rule 610a. (1) As used in this rule:

(a) "Automobile" means a motor vehicle designed to carry up to 8 passengers. Automobile does not include vans, sport utility vehicles, or motor vehicles designed primarily to transport light loads of property.

(b) "Coatings of paper, film, and foil" means materials applied onto or impregnated into a substrate for decorative, protective, or functional purposes, including, but not limited to, solvent-borne coatings, water-borne coatings, adhesives, wax coatings, wax laminations, extrusion laminations, 100% solid adhesives, UV cured coatings, electron beam cured coatings, hot melt coatings, and cold seal coatings.

(c) "Occurrence" means the application of the combination of coatings that constitute a final repair coat for a single automobile or light-duty truck.

(2) Except as provided in subrule (3) of this rule, the provisions of this rule apply to a person causing or allowing the emission of any volatile organic compound from the following existing coating lines at a facility located in the 2015 ozone nonattainment areas:

(a) Automobile and light-duty truck assembly coatings product category, as defined in R 336.1103.

(b) The coating of bodies or body parts, or both, for new heavier vehicles at an automobile and light-duty truck assembly facility or a heavier vehicle assembly facility, that meets the applicability requirements of R 336.1621a and has elected to comply with the requirements of this rule instead of the requirements of R 336.1621a.

(c) Metal furniture coating operations.

(d) Paper, film, and foil surface coating operations.

(3) The provisions of this rule, as specified, do not apply to the following:

(a) With the exception of the requirements in subrule (6) of this rule, the following coating lines at a stationary source that have a combined actual emission rate of volatile organic compounds, including related cleaning activities, of less than 15 pounds per calendar day before consideration of controls. If the combined actual emission rate equals or is more than 15 pounds per calendar day for a subsequent day, then this rule permanently applies to these coating lines:

(i) Automobile and light-duty truck assembly coating lines that are within an automobile and light-duty truck assembly facility.

(ii) Metal furniture coating lines at a stationary source.

(iii) Cans, coils, fabrics, and insulation of magnet wire coating lines at a stationary source.

(b) With the exception of the requirements in subrule (6) of this rule, low-use coatings that have a combined total of less than 55 gallons per rolling 12-month period at a stationary source.

(c) Automobile and light-duty truck coatings used at plastic or composites molding facilities.

(d) The limits in table 64-a of this rule do not apply to automobile and light-duty truck coating materials that are supplied in containers with a net volume of 16 ounces or less, or a net weight of 1 pound or less.

(e) The coating of metallic surfaces that are subject to R 336.1621 or R 336.1621a.

(f) With the exception of the requirements in subrules (5) and (6) of this rule, paper, film, and foil surface coating lines within a stationary source that have a potential to emit less than 25 tons per year of volatile organic compounds before controls. If the potential to emit equals or is more than 25 tons per year of volatile organic compounds from paper, film, and foil coatings for a subsequent year, then this rule permanently applies to the paper, film, and foil surface coating lines.

(g) Facilities subject to R 336.1624 or R 336.1635.

(h) Coatings performed on, in, or off-line with any screen or digital printing press.

(i) Size presses and on-machine coaters on paper making machines applying sizing or water-based clays.

(j) Paper, film, or foil materials used to form unsupported substrates, such as calendaring of vinyl, blown film, cast film, extruded film, and co-extruded film.

(k) Coatings performed at research and development or prototype facilities.

(4) A person subject to this rule shall not cause or allow the emission of any volatile organic compound, unless the following provisions are met:

(a) An automobile and light-duty truck coating facility must not cause or allow the emission of volatile organic compounds from the coating of automobiles and light-duty trucks or miscellaneous materials, as outlined within table 64-a, from any existing coating line as defined in R 336.1103, in excess of the applicable emission rates shown in table 64-a.

(b) A person subject to this rule shall not cause or allow the emission of volatile organic compounds from the coating of metal furniture, from an existing coating line, in excess of the applicable emission rate as shown in column A of table 64-b or the equivalent emission rates in column B of table 64-b.

(c) A person subject to this rule shall meet an overall volatile organic compound control efficiency of 90% for each existing coating line at a paper, film, and foil stationary source. Alternatively, a person shall not cause or allow the emission of volatile organic compounds from the coating of paper, film, and foil, from an existing coating line, in excess of the applicable emission rate as shown in column A of table 64-d or the equivalent emission rates in column B of table 64-d.

(d) For each coating line, compliance with the emission limits specified in table 64-a, table 64-b, and table 64-d is based upon all of the following provisions:

(i) For prime coat operations that utilize an electrodeposition process in automobile and light-duty truck coating lines that are regulated under table 64-a, compliance is based on all coatings that belong to the same coating category that is used during each calendar month averaging period. For all other coatings, compliance is based on the volume-weighted average of all coatings that belong to the same coating category and are used during each calendar day averaging period. Under R 336.1602(2), the department may specifically authorize compliance to be based on a longer averaging period, not to exceed more than 1 calendar month.

(ii) If coatings that belong to more than 1 coating category are used on the same coating line during the specified averaging period, then compliance is determined separately for each coating category.

(iii) The information and records as required by subrule (5) of this rule.

(e) Compliance with the emission limits specified in this rule must be determined using the applicable method described in the following paragraphs:

(i) For the prime-electrodeposition process emission limit specified in table 64-a, the method described in either R 336.2040(12)(a) if the coating line does not have an add-on emissions control device or R 336.2040(12)(b) if the coating line has 1 or more add-on emissions control devices.

(ii) For the primer surfacer, topcoat, and combined primer surfacer and topcoat coating category emission limits specified in table 64-a, compliance must be determined by the methodology described in the publication entitled "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-duty Truck Topcoat Operations," EPA-453/R-08-002, adopted by reference in R 336.1902. References to topcoat operations in this publication also apply to primer surfacer lines, with the following added provisions:

(A) Unless specifically included in the adopted publication, if an anti-chip, color-in-prime, blackout, or spot primer coating is applied as part of either a primer surfacer or topcoat coating operation, then the anti-chip, color-in-prime, blackout, or spot primer coating is included in the transfer efficiency tests for that coating operation, conducted according to section 18 or 19 of the adopted publication, and the transfer efficiency values in section 20 of the adopted publication must not be used.

(B) When spot primer is applied as part of a primer surfacer coating operation, then the daily usage of spot primer, as calculated in section 8 of the adopted publication, may be derived from monthly usage of spot primer based upon the number of vehicles processed in the primer surfacer operation each day. If an add-on emissions control device is used on the coating line application area to achieve compliance with the primer surfacer or topcoat emission limits specified in table 64-a, then the capture efficiency must be determined in accordance with R 336.2040(10).

(iii) For the final repair coating category emission limit specified in table 64-a, compliance must be on an occurrence weighted average basis, calculated in accordance with the following equation, in which clear coatings have a weighting factor of 2 and all other coatings have a weighting factor of 1:

$$\mathbf{VOC_{tot}} = \frac{2VOC_{cc}\sum_{i=1}^{n} VOC}{n+2}$$

Where:

VOC_{tot} = Total volatile organic compound content of all coating, as applied, on an occurrence weighted average basis, and used to determine compliance with this paragraph.

i = subscript denoting a specific coating applied.

n = Total number of coatings applied in the final repair operation, other than clear coatings

VOC_{cc} = The volatile organic compound content, as applied, of the clear coat used in the final repair operation.

VOC_i = The volatile organic compound content of each coating used in the final repair operation, as applied, other than clear coatings.

(iv) For determining the volatile organic compounds content of coatings, other than reactive adhesives, used at automobile and light-duty truck coating assembly facilities specified in table 64-a, compliance must be determined in accordance with R 336.2040(5).

(v) For determining the volatile organic compounds content of reactive adhesives used at automobile and light-duty truck coating assembly facilities, specified in table 64-a, compliance must be determined by the procedure described in appendix A of 40 CFR part 63, subpart PPPP, adopted by reference in R 336.1902.

(vi) As an alternative for the compliance methods in subrules (4)(iv) and (4)(v) of this rule, automobile and light-duty truck coating assembly facilities may use the manufacturer's formulation data. If there is a disagreement between the manufacturer's formulation data and the results of a subsequent test, the department shall use the test method results unless the facility can make a determination approved by the department that the manufacturer's formulation data are correct.

(vii) For the emission limits specified in column A of table 64-b, table 64-c, and table 64-d, the method described in either R 336.2040(12)(a) if the coating line does not have an add-on emissions control device or R 336.2040(12)(b) if the coating line has 1 or more add-on emissions control devices.

(viii) For the emission limits specified in column B of table 64-b and table 64-d, the method described in either R 336.2040(12)(e) if the coating line does not have an add-on emissions control device or R 336.2040(12)(f) if the coating line has 1 or more add-on emissions control devices.

(f) A person responsible for the following coating lines shall make a determination of compliance with these emission limits using the method specified in subrule (3)(e) of this rule and submit a copy of this determination and supporting data to the department by the following specified date, as applicable:

(i) For primer surfacer and topcoat coating lines, no later than 6 months after the effective date of this rule.

(ii) Metal furniture coating lines that are subject to the equivalent emission rates in column B of table 64-b, no later than 6 months after the effective date of this rule.

TABLE 64-a

Volatile organic compound emission limits for existing automobile and light-duty truck coating lines and miscellaneous materials used at automobile and light-duty truck assembly coating facilities.

Coating Category	VOC Emission Limit		
Prime-electrodeposition process (EDP) (including application area, spray/rinse stations, and curing oven)	When solids turnover ratio (R_T)≥0.16:	When 0.040≤ R_T≤0.160:	When R_T≤0.040:
	0.7[1]	(0.084 x $350^{0.160-R_T}$ x 8.34)[1]	No VOC emission limit.
Primer surfacer[4] (including application area, flash-off area, and oven)	12.0[2]		
Topcoat (including application area, flash-off area, and oven)	12.0[2]		
Final repair operations	4.8[3]		
Combined primer-surfacer and topcoat	12.0[2]		
Miscellaneous Materials Used at Automobile and Light-Duty Truck Assembly Coating Facilities			
Coating Category	lb VOC/gal coating (minus water, as applied)	g VOC/L of coating (minus water and exempt compounds, as applied)	
Glass Bonding Primer[5]	7.5[3]	900	
Adhesive[5]	2.1[3]	250	
Cavity Wax[5]	5.4[3]	650	
Sealer[5]	5.4[3]	650	
Deadener[5]	5.4[3]	650	
Gasket/Gasket sealing material[5]	1.7[3]	200	
Underbody Coating[5]	5.4[3]	650	
Trunk interior coating[5]	5.4[3]	650	
Bedliner[5]	1.7[3]	200	
Weatherstrip adhesive[5]	6.3[3]	750	
Lubricating wax/compound[5]	5.8[3]	700	

[1] Pounds of volatile organic compounds per gallon of applied coating solids.

[2] Pounds of volatile organic compounds per gallon of applied coating solids on a daily weighted average basis as determined by following the procedures in the "Protocol for determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations" (EPA-453/R-08-002).

[3] Pounds of volatile organic compounds per gallon of coating, minus water, as applied.

[4] The primer surfacer or topcoat coating category would include an anti-chip, blackout, or spot primer coating if this coating is applied as part of the primer surfacer or topcoat coating operation.

[5] VOC emission limits must not be applied to materials supplied in containers with a net volume of 16 ounces or less, or a net weight of 1 pound or less.

TABLE 64-b

Volatile organic compound emission limits for existing metal furniture coating lines.

Coating Type	Column A[1]		Column B[2]	
	Baked	Air Dried	Baked	Air Dried
General, 1 Component	2.3	2.3	3.3	3.3
General, Multi-Component	2.3	2.8	3.3.	4.5
Extreme High Gloss	3.0	2.8	5.1	4.5
Extreme Performance	3.0	3.5	5.1	6.7
Heat Resistant	3.0	3.5	5.1	6.7
Metallic	3.5	3.5	6.7	6.7
Pretreatment Coatings	3.5	3.5	6.7	6.7
Solar Absorbent	3.0	3.5	5.1	6.7

[1] Pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied.

[2] Pounds of volatile organic compounds emitted per gallon of applied coating solids. The purpose of column B emission limits is to allow credit for transfer efficiencies greater than the baseline transfer efficiency. Note: department approval under R 336.1602(2) of the transfer efficiency test method is required.

TABLE 64-c

Volatile organic compound emission limits for existing cans, coils, fabrics, and insulation of magnet wire coating lines.

Coating Category	Column A[1]
Coating of cans	
Sheet basecoat (exterior and interior) and overvarnish; 2-piece Can exterior (basecoat and overvarnish)	2.8
2- and 3-piece can interior body spray; 2-piece can interior end (spray or roll coat)	4.2
3-piece can side-seam	5.5
End sealing compound	3.7
Coating of coils	2.6
Coating of fabric	2.9
Insulation of magnet wire	1.7

[1] Pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied.

TABLE 64-d

Volatile organic compound emission limits for paper, film, and foil surface coating and pressure sensitive tape and label surface coating.

Coating Category	Column A[1]	Column B[2]
Paper, Film, and Foils Surface Coating (not including pressure sensitive type and label)	0.08	0.40

Pressure Sensitive Tape and Label Surface Coating	**0.067**	**0.20**

[1] Pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied.

[2] Pounds of volatile organic compounds emitted per gallon of applied coating solids. The purpose of column B emission limits is to allow credit for transfer efficiencies greater than the baseline transfer efficiency. Note: department approval of the transfer efficiency test method is required.

(5) A person subject to this rule shall comply with the following work practices for each coating line subject to this rule, unless the source has an equivalent work practice plan established for coatings in a post-1990 federal standard found in 40 CFR part 63 with an equivalent subpart approved by the department. The person responsible for a surface coating operation subject to this rule shall develop written procedures for compliance with the following provisions:

(a) Store all volatile organic compound-containing coatings, thinners, and cleaning materials, including used shop towels, in closed containers.

(b) Minimize spills of volatile organic compound-containing coatings, thinners, and cleaning materials.

(c) Clean up spills immediately.

(d) Convey any coatings, thinners, and cleaning materials in closed containers or pipes.

(e) Close mixing vessels that contain volatile organic compound coatings and other materials except when specifically in use.

(f) Minimize usage of solvents during cleaning of storage, mixing, and conveying of equipment.

(6) A person responsible for the operation of a coating line that is subject to this rule shall obtain current information and keep records that are necessary for the determination of compliance with the provisions of this rule, as required in R 336.2041.

R 336.1611 Existing cold cleaners.

Rule 611. (1) A person shall not operate an existing cold cleaner unless all of the provisions of subrules (2) to (4) of this rule are met or unless an equivalent control method is approved by the department **under R 336.1602(2)**.

(2) A person shall not operate an existing cold cleaner unless all of the following conditions are met:

(a) A cover ~~shall~~ **must** be installed and ~~shall~~ **must** be closed when parts are not being handled in the cleaner.

(b) A device ~~shall~~ **must** be available for draining cleaned parts, and the parts ~~shall~~ **must** be drained **for** not less than 15 seconds or until dripping ceases.

(c) Waste organic solvent ~~shall~~ **must** be stored only in closed containers, unless the stored solvent is demonstrated to be a safety hazard and is disposed of so that not more than 20%, by weight, is allowed to evaporate into the atmosphere.

(3) A person who is responsible for the operation of a cold cleaner shall develop written procedures for compliance with the provisions of this rule. The procedures ~~shall~~ **must be** posted in an accessible, conspicuous location near the cold cleaner.

(4) The provisions of this rule do not apply to cold cleaners that are subject to the provisions of ~~40 C.F.R. Part 63, Subpart T,~~ "National Emission Standards for Halogenated Solvent Cleaning**,**" **40 CFR part 63, subpart T,** adopted by reference in R 336.1902.

R 336.1618 Use of cutback or emulsified paving asphalt.

Rule 618. (1) ~~After May 1, 2012, a~~**A** person shall not manufacture, mix, store, use, or apply cutback or emulsified paving asphalt, from ~~May 1 to September 30~~ **March 1 to October 31**, unless the cutback or emulsified paving asphalt contains no greater than 3% volatile organic compounds by volume, which is equivalent to 6.0 milliliters of oil distillate, from a 200 milliliters sample, at 500 degrees Fahrenheit as determined by a test method in subrule (2) of this rule. This rule **applies** ~~is applicable~~ to both existing and new sources as defined by the dates in R 336.1601**(**~~ca)(i)~~ and R 336.1701.

(2) Compliance with subrule (1) of this rule ~~shall~~ **must** be determined by 1 of the following test methods:

(a) ASTM Method D6997, Standard Test Methods and Practice for Distillation of Emulsified Asphalts, adopted by reference in R 336.1902.

(b) AASHTO T59 Standard Method of Test for Emulsified Asphalts, adopted by reference in R 336.1902.

(c) ASTM Method D402, Standard Test Method ~~F~~**f**or Distillation of Cutback Asphaltic (Bituminous) Products, adopted by reference in R 336.1902.

(d) AASHTO T78, Standard Method of Test for Cutback Asphaltic Products, adopted by reference in R 336.1902.

(3) Any person subject to this rule shall maintain records of the manufacture, mixing, storage, use**,** or application of any cutback or emulsified paving asphalt containing volatile organic compounds during the period ~~May 1 to September 30~~ **March 1 to October 31**. The records ~~shall~~ **must** include information on the volatile organic compound content documented in the product data sheets or material safety data sheets. The records **must** ~~shall~~ be available to any representative of the department during normal business hours, and copies **must** ~~shall~~ be provided to the department upon request.

(4) ~~The following definitions apply to this rule and supersede any similar definitions in R 336.1103:.~~**As used in this rule:**

(a) "Asphalt" means a dark**-**brown to black solid, liquid, or semisolid cementitious material composed primarily of bitumens that occur naturally or are obtained as a residue of petroleum refining.

(b) "Cutback paving asphalt" means asphalt that has been liquefied by blending with an organic solvent and that is used for the purpose of paving or repairing, or paving and repairing, a road surface.

(c) "Emulsified paving asphalt" means asphalt that has been liquefied by mixing with water and an emulsifying agent and that is used for the purpose of paving or repairing, or paving and repairing, a road surface.

R 336.1620 Emission of volatile organic compounds from existing interior flat wood paneling coating lines.

Rule 620. (1) **As used in this rule, "coating of interior flat wood paneling" means the factory-finished coating of flat products that are constructed of wood, and are intended for use as interior paneling. Coating of interior flat wood paneling does not include the coating of flat wood products intended for use as exterior siding, tileboard, cabinets, or furniture components.**

(2~~1~~) A person shall not cause or allow the emission of volatile organic compounds from the coating of **interior** flat wood paneling from any existing coating line in excess of the applicable emission rates as follows:

(a) Six pounds per 1,000 square feet of coated finished product from printed interior panels made of hardwood, plywood, or thin particle board, regardless of the number of coats applied.

(b) Twelve pounds per 1,000 square feet of coated finished product from natural finish hardwood plywood panels, regardless of the number of coats applied.

(c) Ten pounds per 1,000 square feet of coated finished product from class II finishes on hardboard panels, regardless of the number of coats applied.

(**3~~2~~**) A person who is responsible for the operation of a coating line that is subject to this rule shall obtain current information, and keep daily records necessary~~,~~ for the determination of compliance with this rule, as required in R 336.2041.

(**4~~3~~**) For each coating line, compliance with the emission limits specified in this rule ~~shall~~ **must** be based upon all of the following:

(a) The volume-weighted average of all coatings ~~which~~ **that** belong to the same coating category and ~~which~~ are used during each calendar day averaging period. The department may specifically authorize compliance to be based upon a longer averaging period, ~~which shall not be~~ **not to exceed** more than 1 calendar month.

(b) If coatings that belong to more than 1 coating category are used on the same coating line during the specified averaging period, then compliance ~~shall~~ **must** be determined separately for each coating category.

(c) The information and records as required by the provisions of subrule (2) of this rule.

(**5~~4~~**) Compliance with the limits specified in subrule (1) of this rule **must** ~~shall~~ be determined using the method described in either R 336.2040(12)(i) if the coating line does not have an add-on emissions control device or R 336.2040(12)(j) if the coating line has 1 or more add-on emissions control devices.

(**6~~5~~**) This rule, with the exception of subrule (2) of this rule, does not apply to flat wood paneling coating lines ~~which~~ **that** are within a stationary source and ~~which~~ have a combined actual emission rate of volatile organic compounds of less than 100 pounds per day or 2,000 pounds per month as of the effective date of this amendatory rule. If the combined actual emission rate equals or exceeds 100 pounds per day for a subsequent day or 2,000 pounds per month for a subsequent month, then this rule ~~shall~~ permanently ~~apply~~ **applies** to the coating lines.

(**7~~6~~**) A person may exclude low-use coatings that total 55 gallons or less per rolling 12-month period at a stationary source from the provisions of this rule, except for subrule (2) of this rule.

(**8~~7~~**) A person may discontinue the operation of a natural gas-fired afterburner, which is used to achieve compliance with the emission limits in this rule, between November 1 and March 31**,** unless the afterburner is used to achieve compliance with, or is required by, any of the following:

(a) ~~Any other~~ **Another** provision of these rules.
(b) A permit to install.
(c) A permit to operate.
(d) A voluntary agreement.
(e) A performance contract.
(f) A stipulation.
(g) An order of the department.

(~~9~~**8**) If the operation of a natural gas-fired afterburner is discontinued between November 1 and March 31 under subrule ~~(7)~~ **(8)** of this rule, then both of the following provisions ~~shall~~ apply between November 1 and March 31:

(a) All other provisions of this rule, except the emission limits, ~~shall~~ remain in effect.

(b) All other measures that are used to comply with the emission limits in this rule between April 1 and October 31 ~~shall~~ **must** continue to be used.

(10) A flat wood paneling coating line subject to R 336.1620a does not need to meet the provisions of R 336.1620.

R 336.1620a Emission of volatile organic compounds from existing flat wood paneling coating lines in 2015 ozone nonattainment areas.

Rule 620a. (1) As used in this rule, "coating of flat wood paneling" means the factory-finished coating of flat products that are constructed of wood and intended for use as interior paneling, exterior siding, tileboard, cabinets, or furniture components.

(2) Unless all of the applicable provisions this rule are met, a person shall not cause or allow the emission of any volatile organic compound from the coating of flat wood paneling on existing lines located in the 2015 ozone nonattainment area for the following materials:

(a) Printed interior panels made of hardwood, plywood, or thin particleboard.
(b) Natural finish hardwood plywood panels.
(c) Class 2 finishes on hardboard panels.
(d) Tileboard.
(e) Exterior siding.

(3) Except as provided in subrule (7), the provisions of this rule do not apply to the following:

(a) Flat wood paneling coating lines that are within a stationary source and have a combined actual emission rate of volatile organic compounds, including related cleaning activities, of less than 15 pounds per day before consideration of controls. If the combined actual emission rate equals or is more than 15 pounds per day for a subsequent day, then this rule permanently applies to these coating lines.

(b) Low-use coatings that total 55 gallons or less per rolling 12-month period at a stationary source.

(4) A person subject to subrule (2) of this rule shall not cause or allow the emission of any volatile organic compound from flat wood paneling coating, unless 1 of the following provisions are met:

(a) Surface coatings, inks, or adhesives are less than 2.1 pounds per gallon coating, excluding water and exempt solvents.

(b) Surface coatings, inks, or adhesives are less than 2.9 pounds per gallon solids.

(c) Add-on control is operated and maintained and has an overall control efficiency of volatile organic compounds of 90% or more.

(5) For each coating line, compliance with the emission limits specified in this rule must be based upon all of the following:

(a) The volume-weighted average of all coatings that belong to the same coating category and are used during each calendar day averaging period.

(b) If coatings that belong to more than 1 coating category are used on the same coating line during the specified averaging period, then compliance must be determined separately for each coating category.

(c) The information and records as required by the provisions of subrule (7) of this rule.

(6) Compliance with the limits specified in subrule (4) of this rule, as appropriate, must be determined using the methods described in R 336.2040(12), as applicable.

(7) A person who is responsible for the operation of a coating line that is subject to this rule shall obtain current information and keep daily records necessary for the determination of compliance with this rule, as required in R 336.2041.

R 336.1621 Emission of volatile organic compounds from existing metallic surface coating lines.

Rule 621. (1) A person shall not cause or allow the emission of volatile organic compounds from the coating of metallic surfaces from any existing coating line in excess of the applicable emission rates as follows:

(a) Four and three-tenths pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied for clear coatings.

(b) Three and one-half pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied for air-dried coatings.

(c) Three and one-half pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied for extreme performance coatings.

(d) Four and eight-tenths pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied for truck final repair coatings.

(e) Four and nine-tenths pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied for glass adhesion body primer. ~~For the purpose of~~ **As used in** this subdivision, "glass adhesion body primer" means the prime coating that is applied to automobile or truck bodies as part of the glass bonding system.

(f) Four and three-tenths pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied for steel pail and drum interior coatings.

(g) Three pounds of volatile organic compounds emitted per gallon of coating, minus water, as applied for all other coatings.

(2) If the provisions of more than 1 subdivision of subrule (1) of this rule are applicable for a specific coating, then the least stringent provision ~~shall apply~~ **applies**.

(3) To take credit for improved transfer efficiency, upon written request and approval by the department, a person may achieve the emission limits specified in subrule (1) of this rule by an equivalent emission limit expressed in pounds of volatile organic compounds emitted per gallon of applied coating solids. The equivalent emission limit **is** ~~shall be~~ established by the following equation:

$$A = \frac{E}{S\frac{(TE)_b}{100}}$$

Where:

A = Allowable equivalent emission limit, pounds of volatile organic compounds per gallon of applied coating solids.

E = Applicable emission limit as specified in subrule (1) of this rule, pounds of volatile organic compounds per gallon of coating, minus water, as applied.

S = Solids volume fraction representative of a compliance coating, gallon of solids per gallon of coating, minus water, as applied.

The value of "S" ~~shall~~ **must** be determined by using the following equation:

$$S = 1 - \frac{E}{7.36}$$

$(TE)_b$ = Overall baseline transfer efficiency of the coating line as specified in subrule (4) of this rule, percent. ~~Where~~ **If** multiple application methods are used on the coating line, the overall baseline transfer efficiency ~~shall~~ **must** be determined using the method described in R 336.2040(9). Department approval of the transfer efficiency test method is required.

(4) For the purpose of establishing an equivalent emission limit under subrule (3) of this rule, the value of (TE)b, the overall baseline transfer efficiency of the coating line~~,~~ **must** ~~shall~~ be 60%. Notwithstanding this provision, a person may request, in writing to the department, and the department may approve, a value for (TE)b that is less than 60%, but not less than 40%. A request for a value for (TE)b of less than 60% ~~shall~~ **must** include a demonstration that the lower requested value is representative of the overall transfer efficiency achieved by similar coating lines which use the most efficient type of application equipment that is reasonably available for the similar coating lines.

(5) A person ~~who~~ **that** is responsible for the operation of a coating line that is subject to this rule shall obtain current information, and keep daily records necessary, for the determination of compliance with the provisions of this rule, as required in R 336.2041.

(6) For each coating line, compliance with the emission limits specified in this rule **must** ~~shall~~ be based upon all of the following:

(a) The volume-weighted average of all coatings ~~which~~ **that** belong to the same coating category**,** and ~~which~~ are used during each calendar day averaging period. The department may specifically authorize compliance to be based upon a longer averaging period, ~~which shall not be~~ **not to exceed** more than 1 calendar month.

(b) If coatings that belong to more than 1 coating category are used on the same coating line during the specified averaging period, then compliance **must** ~~shall~~ be determined separately for each coating category.

(c) The information and records required by subrule (5) of this rule.

(7) Compliance with the emission limits specified in this rule **must** ~~shall~~ be determined using the applicable method described in **1 of** the following**:** ~~subdivisions:~~

(a) For coating lines that are subject to the emission limits specified in subrule (1) of this rule, the method described in either R 336.2040(12)(a) if the coating line has no add-

on emissions control device or R 336.2040(12)(b) if the coating line has 1 or more add-on emissions control devices.

(b) For coating lines subject to the equivalent emission limits specified in subrule (3) of this rule, the method described in either R 336.2040(12)(e) if the coating line has no add-on emissions control device or R 336.2040(12)(f) if the coating line has 1 or more add-on emissions control device.

(8) This rule does not apply to the coating of metallic surfaces that are subject to R 336.1610.

(9) This rule does not apply to any of the following:

(a) Automobile refinishing.

(b) Customized topcoating of less than 35 automobiles or trucks, or both, per day.

(c) Coating of the exterior of airplanes when the part to be coated has already been assembled on the airplane.

(d) Coating of the exterior of marine vessels when the part to be coated has already been assembled on the marine vessel.

(e) Coating of a part consisting of both metallic and nonmetallic components if a demonstration is made, to the satisfaction of the department, that the limits of this rule cannot be met due to the presence of the nonmetallic component. In this case, and if the nonmetallic component of the part is plastic and used as an automobile, truck, or business machine plastic part, R 336.1632 ~~shall apply~~ **applies** to the coating of the part.

(10) This rule, except for subrule (5) of this rule, does not apply to a metallic surface coating line that complies with both of the following provisions:

(a) The coating line has an actual emission rate of volatile organic compounds equal to or less than 2,000 pounds per month and 10.0 tons per year as of **November 4, 1999**. If the actual rate of emissions from an exempted metallic surface coating line exceeds 2,000 pounds per month for a subsequent month or 10.0 tons per year for a subsequent year, then the provisions of this rule ~~shall thereafter~~ permanently appl~~y~~**ies** to the metallic surface coating line **for as long as the applicable equipment is in operation**.

(b) Volatile organic compound emissions from the coating line, when combined with the total emissions of volatile organic compounds from all other metallic surface coating lines at the stationary source that are exempted by this subrule, do not exceed 30.0 tons per year.

(11) A person may exclude low-use coatings that total 55 gallons or less per rolling 12-month period at a stationary source from the provisions of this rule, except for subrule (5) of this rule.

(12) A person may discontinue the operation of a natural gas-fired afterburner, which is used to achieve compliance with the emission limits in this rule, between November 1 and March 31**,** unless the afterburner is used to achieve compliance with, or is required by, any of the following:

(a) ~~Any other~~ **Another** provision~~s~~ of these rules.

(b) A permit to install.

(c) A permit to operate.

(d) A voluntary agreement.

(e) A performance contract.

(f) A stipulation.

(g) An order of the department.

(13) If the operation of a natural gas-fired afterburner is discontinued between November 1 and March 31 under subrule (12) of this rule, then both of the following provisions ~~shall~~ apply between November 1 and March 31:

(a) All other provisions of this rule, except the emission limits, ~~shall~~ remain in effect.

(b) All other measures that are used to comply with the emission limits in this rule between April 1 and October 31 ~~shall~~ **must** continue to be used.

(14) A metallic surface coating line subject to R 336.1621a does not need to meet the provisions of this rule.

R 336.1621a Emission of volatile organic compounds from existing metal parts, metal products, and motor vehicle material surface coating lines in 2015 ozone nonattainment areas.

Rule 621a. (1) A person shall not cause or allow the emission of any volatile organic compound from an existing metallic surface coating line at a facility located in the 2015 ozone nonattainment areas in excess of the applicable emission rates provided in subrule (3) of this rule.

(2) This rule does not apply to the following:

(a) Except as provided in subrule (5) of this rule, metallic surface coating lines that are within a stationary source and have a combined actual emission rate of volatile organic compounds, including related cleaning activities, of less than 15 pounds per calendar day before consideration of controls. If the combined actual emission rate equals or is more than 15 pounds per calendar day for a subsequent day, then this rule permanently applies to these coating lines.

(b) Metallic surface coating lines that meet any of the following processes:

(i) The portion of a metallic surface coating process that is addressed in R 336.1610, R 336.1610a, R 336.1620, R 336.1620a, R 336.1635, R 336.1636, R 336.1637, R 336.1638, and R 336.1639.

(ii) Coating of a part consisting of both metallic and nonmetallic components if a demonstration is made to the satisfaction of the department, under R 336.1602(2), that the limits of this rule cannot be met due to the presence of the nonmetallic component. In this case, and if the nonmetallic component of the part is plastic and used as an automobile, truck, or business machine plastic part, R 336.1632 applies to the coating of the part, as applicable.

(iii) Aerosol coatings.

(iv) Architectural coatings, and automobile refinish coatings that are used for architectural coating or automobile refinish coating purposes as defined by their respective national volatile organic compound rules.

(v) Coatings that are applied to test panels and coupons as part of research and development, quality control, or performance testing activities at paint research or manufacturing facilities.

(vi) Customized top coating of less than 35 automobiles or trucks, or both, per calendar day.

(vii) Coating of the exterior of airplanes when the part to be coated has already been assembled on the airplane.

(viii) Coating of the exterior of marine vessels when the part to be coated has already been assembled on the marine vessel.

(ix) Coatings used on a non-production basis.

(x) Rubber to metal bonding.

(c) The following metal parts coating processes are exempt from subrule (3) of this rule:

(i) Stencil coatings.

(ii) Safety-indicating coatings.

(iii) Solid-film lubricants.

(iv) Electric-insulating and thermal-conducting coatings.

(v) Magnetic data storage disk coatings.

(vi) Plastic extruded onto metal parts to form a coating.

(d) The coating of bodies or body parts for new heavier vehicles at an automobile and light-duty truck assembly facility or a heavier vehicle assembly facility where the person responsible elects to comply with the provisions of R 336.1610a under the classification of automobile and light-duty truck coating lines.

(e) The application methods required by subrule (3)(b) of this rule do not apply to airbrush operations using 5 gallons or less per year of coating.

(f) A person subject to this rule may exclude low-use coatings that have a combined total less than 55 gallons per rolling 12-month period at a stationary source from the provisions of this rule, except for subrule (5) of this rule.

(3) A person shall not cause or allow the emission of volatile organic compounds from metallic surface coating operations, unless the following provisions are met:

(a) A person responsible for a coating line engaged in the surface coating of metallic surfaces, with the exception of motor vehicle materials as listed in table 64-g, shall limit volatile organic compounds emissions from all volatile organic compound-containing materials, such as coatings, thinners, and other additives, used by each metallic surface coating line by complying with either subdivision (c), (d), or (e) of this subrule, as applicable.

(b) A person subject to this rule shall not apply volatile organic compound-containing coatings to metal parts and products subject to the provisions of this rule, unless the coating is applied with properly operating equipment according to an operating procedure specified by the equipment manufacturer or the executive officer, or designee, and by the use of 1 of the following methods:

(i) Electrostatic application.

(ii) Flow coat.

(iii) Dip coat (including electrodeposition).

(iv) Roll coater.

(v) High-volume, low-pressure (HVLP) spray.

(vi) Airless spray.

(vii) Air-assisted airless spray.

(viii) Alternative coating application methods that demonstrate equal or better transfer efficiency capability than HVLP spraying. Written departmental approval is required for alternative coating application methods.

(c) A metallic surface coating operation must not cause or allow the emission of volatile organic compounds from the coating of metallic surfaces from any existing metal parts coating line in any of the 2015 ozone nonattainment areas, in excess of the applicable content limits expressed in terms of mass of volatile organic compounds per volume of coating excluding water and exempt compounds, as applied, as specified in table 64-e, or emission rates expressed in terms of mass of volatile organic compounds per volume of solids as applied, as specified in table 64-f, unless a demonstration is made to the satisfaction of the department, under R 336.1602(2).

TABLE 64-e

Metal Parts and Products low-VOC Coating Content Limits

Coating Category	Air Dried	Baked
	lb VOC/gal coating (excluding water), as applied	lb VOC/gal coating (excluding water), as applied
General 1 Component	2.8	2.3
General Multi Component	2.8	2.3
Camouflage	3.5	3.5
Electric-Insulating Varnish	3.5	3.5
Etching Filler	3.5	3.5
Extreme High-Gloss	3.5	3.0
Extreme Performance	3.5	3.0
Heat-Resistant	3.5	3.0
High Performance Architectural	3.5	3.5
High Temperature	3.5	3.5
Metallic	3.5	3.0
Military Specification	2.8	2.3
Mold-Seal	3.5	3.0
Pan Backing	3.5	3.5
Prefabricated Architectural Multi-Component	3.5	2.3
Prefabricated Architectural One-Component	3.5	2.3
Pretreatment Coatings	3.5	3.5
Repair and Touch Up	3.5	3.0
Silicone Release	3.5	3.5
Solar-Absorbent	3.5	3.0
Vacuum-Metalizing	3.5	3.0
Drum Coating, New, Exterior	2.8	2.8
Drum Coating, New, Interior	3.5	3.5
Drum Coating, Reconditioned, Exterior	3.5	3.5
Drum Coating, Reconditioned, Interior	4.2	4.2

TABLE 64-f

Metal Parts and Products VOC Emission Rate Limits (VOC per Volume Solids)

Coating Category	Air Dried	Baked
	lb VOC/gal solids, as applied	lb VOC/gal solids, as applied
General 1 Component	4.52	3.35
General Multi Component	4.52	3.35
Camouflage	6.67	6.67
Electric-Insulating Varnish	6.67	6.67
Etching Filler	6.67	6.67
Extreme High-Gloss	6.67	5.06
Extreme Performance	6.67	5.06
Heat-Resistant	6.67	5.06
High Performance Architectural	6.67	6.67
High Temperature	6.67	6.67
Metallic	6.67	5.06
Military Specification	4.52	3.35
Mold-Seal	6.67	5.06
Pan Backing	6.67	6.67
Prefabricated Architectural Multi-Component	6.67	3.35
Prefabricated Architectural One-Component	6.67	3.35
Pretreatment Coatings	6.67	6.67
Silicone Release	6.67	6.67
Solar-Absorbent	6.67	5.06
Vacuum-Metalizing	6.67	5.06
Drum Coating, New, Exterior	4.52	4.52
Drum Coating, New, Interior	6.67	6.67
Drum Coating, Reconditioned, Exterior	6.67	6.67
Drum Coating, Reconditioned, Interior	9.78	9.78

(d) A metallic surface coating operation applicable to this rule, except for motor vehicle materials, may choose to use an equivalent volatile organic compound emission rate limit based on the use of a combination of low-volatile organic compound coatings specified in tables 64-e and table 64-f, specified methods of application specified under subdivision (b) of this subrule, and add-on controls. The overall emission reduction efficiency needed to demonstrate compliance is determined each day as follows:

(i) Obtain the emission limitation from table 64-e or table 64-f. If using the lb volatile organic compounds/gal coating, excluding water, as applied limit from table 64-e, then calculate the emission limitation in a solids basis according to the following equation:

$$S = C / 1 - (C/7.36 \text{ lb/gal})$$

Where:

S = The volatile organic compound emission limitation in terms of lb volatile organic compounds/gal of coating solids.

C = The volatile organic compound emission limitation in terms of lb volatile organic compounds/gal of coating, excluding water, as applied.

(ii) Calculate the required overall emission reduction efficiency of the control system for the day according to the following equation:

$$E = [(VOC_a - S)/VOC_a] \times 100$$

Where:

E = The required overall emission reduction efficiency of the control system for the day.

VOC_a = The maximum volatile organic compound content of the coatings, as applied, used each day on the subject coating line, in units of lb volatile organic compounds/gal of coating solids, as determined by the applicable test methods and procedures specified in subdivision (h) of this subrule.

S = The volatile organic compound emission limitation in terms of lb volatile organic compounds/gal of coating solids.

(e) A metallic surface coating operation applicable to this rule, with the exception of motor vehicle materials, can choose to use add-on control equipment that must have an overall control efficiency of 90% or higher. The coating operation would not have to limit the volatile organic compound content of the coating materials and would not need to use any particular coating application method.

(f) A person subject to this rule shall not cause or allow the emissions of volatile organic compounds from existing motor vehicle material coating operations in any of the 2015 ozone nonattainment areas in excess of the emission rates as specified in table 64-g, as applicable.

TABLE 64-g

Volatile organic compound emission limitation for existing motor vehicle materials

Coating category	lb VOC/gal coating (excluding water), as applied
Motor vehicle cavity wax	3.5
Motor vehicle sealer	3.0
Motor vehicle deadener	3.0
Motor vehicle gasket/gasket sealing material	1.7
Motor vehicle underbody coating	3.5
Motor vehicle trunk interior coating	3.0
Motor vehicle bedliner	1.7
Motor vehicle lubricating wax/compound	3.5

(g) If the provisions of more than 1 coating category of this subrule are applicable for a specific coating, then the least stringent provision may be applied.

(h) For each coating line, compliance with the emission limits specified in this rule must be based upon all of the following:

(i) The volume-weighted average of all coatings that belong to the same coating category, and are used during each calendar day averaging period. Under R 336.1602(2), the department may specifically authorize compliance to be based upon a longer averaging period, not to exceed more than 1 calendar month.

(ii) If coatings that belong to more than 1 coating category are used on the same coating line during the specified averaging period, then compliance must be determined separately for each coating category.

(iii) The information and records required by subrule (5) of this rule.

(i) Compliance with the emission limits specified in this rule must be determined using the applicable method described in the following subdivisions:

(i) For coating lines that are subject to the emission limits specified in subdivision (c) of this subrule, the method described in either R 336.2040(12)(a) if the coating line has no add-on emissions control device or R 336.2040(12)(b) if the coating line has 1 or more add-on emissions control devices.

(ii) For coating lines that are subject to the emission limits specified in subrule (3)(d) of this rule, the method described in either R 336.2040(12)(c) if the coating line has no add-on emissions control device or R 336.2040(12)(d) if the coating line has 1 or more add-on emissions control devices.

(4) The following work practices are required for storage, mixing operations, and handling operations for coatings, thinners, cleaning, and coating-related waste materials. The person responsible for a metallic parts surface coating operation shall develop written procedures to comply with the following provisions:

(a) Store all volatile organic compound-containing coatings, thinners, coating-related waste, and cleaning materials in closed containers.

(b) Ensure that mixing and storage containers used for volatile organic compound-containing coatings, thinners, coating-related waste, and cleaning materials are kept closed at all times, except when depositing or removing these materials.

(c) Minimize spills of volatile organic compound-containing coatings, thinners, coating-related waste, and cleaning materials.

(d) Convey volatile organic compound-containing coatings, thinners, coating-related waste, and cleaning materials from 1 location to another in closed containers or pipes.

(e) Minimize volatile organic compound emission from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(5) A person who is responsible for the operation of a coating line that is subject to this rule shall obtain current information, and keep daily records necessary for the determination of compliance with the provisions of this rule, and as required in R 336.2041.

R 336.1622 Emission of volatile organic compounds from existing components of

petroleum refineries; refinery monitoring program.

Rule 622. (1) A person shall not cause or allow the emission of any volatile organic compound from any existing component, as listed in subrule (2) of this rule, of a petroleum refinery, including topping plants, unless all of the provisions of this rule are satisfied or unless an equivalent control method, as approved by the department **under R 336.1602(2)**, is implemented. An alternate acceptable control method is described in "Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After January 4, 1983, and on or Before November 7, 2006," 40 **CFR** ~~C.F.R.~~, ~~P~~**p**art 60, ~~S~~**s**ubpart GGG adopted by reference in R 336.1902.

(2) A person shall not operate an existing petroleum refinery unless a monitoring program and schedule approved by the department is implemented. This monitoring program and schedule ~~shall~~ **must** provide for, and identify by type and refinery unit, by quarter, all of the following:

(a) An annual inspection of all of the following components:

(i) Pump seals.

(ii) Process valves in liquid volatile organic compound service.

(iii) Process drains.

(iv) Components that are difficult to monitor.

(b) A quarterly inspection of all of the following components:

(i) Compressor seals.

(ii) Process valves in gaseous volatile organic compound service.

(iii) Pressure-relief valves in gaseous volatile organic compound service.

(c) A weekly visual inspection of all pump seals from which volatile organic compounds could leak.

(d) An immediate inspection of any pump seal from which a liquid, **including** ~~which includes~~ a volatile organic compound, is observed dripping.

(e) An inspection of any relief valve from which a volatile organic compound could discharge within 2 normal business days **after** ~~of~~ it~~s~~ **begins** venting to the atmosphere.

(f) An inspection as soon as is practical, but not later than 2 normal business days, after the repair of any component that was found leaking.

(3) Except for the visual inspections required by subrule (2)(c) of this rule, all inspections ~~shall~~ **must** be performed using equipment and procedures as specified in 40 **CFR** ~~C.F.R.~~ ~~P~~**p**art 60, ~~A~~**a**ppendix A, ~~M~~**m**ethod 21, adopted by reference in R 336.1902. A component is leaking when a concentration of more than 10,000 ppm, by volume, as methane or hexane, is measured by ~~M~~**m**ethod 21.

(4) If implementation of the quarterly leak detection program as specified in subrule (2)(b) of this rule shows that 2% or less of the process valves in a given refinery unit are leaking for 2 consecutive quarters, then the inspections of process valves in that refinery unit may be skipped for 1 quarter. If 2% or less of the process valves in a given refinery unit are leaking for 5 consecutive quarters, then the inspections may be done annually. If a subsequent inspection shows that **if** more than 2% of the process valves are leaking, then quarterly inspections of valves shall again be required.

(5) The percent of valves leaking on a refinery unit, as referenced in subrule (4) of this rule, ~~shall~~ **must** be determined by dividing the total number of valves found to be leaking

on the refinery unit during the specified monitoring period by the total number of valves on the refinery unit that are required to be monitored by this rule.

(6) ~~The provisions of this~~ **This** rule ~~do~~ **does** not apply to any of the following:

(a) Pressure-relief valves that vent to an operating flare header, fuel gas system, or vapor control device.

(b) Components that are unsafe to monitor, until monitoring personnel would no longer be exposed to immediate danger.

(c) Storage tank valves.

(d) Valves that are not externally regulated.

(e) Components that process, transfer, or contain 1 or more volatile organic compounds in the liquid phase under actual conditions, all of which have a true vapor pressure of less than 1.55 psia.

(7) Notwithstanding the provisions of subrule (2) of this rule, the monitoring of components, such as process drains and valves, that are used solely in effecting a refinery unit turnaround**,** is required only within the quarter following the turnaround.

(8) A leak that is detected pursuant to the monitoring program provisions of subrule (2) of this rule or for ~~any other~~ **another** reason **must** ~~shall~~ be repaired. Except as provided in subrule (10) of this rule, this leak ~~shall~~ **must** be repaired as soon as possible, but not more than 15 days after the leak is detected. Until the time that the leak is repaired and retested verifying a successful repair, the component causing the leak **must** ~~shall~~ bear a weather-resistant, numbered, identifying tag that indicates the date the leak was discovered.

(9) A log of all leaks detected pursuant to the provisions of subrules (2), (3), (5), and (6) of this rule or by **another** ~~any other~~ method ~~shall~~ **must** be maintained by the operator of the petroleum refinery. This log ~~shall~~ **must** identify all of the following:

(a) The leaking component by type and location.

(b) The number of the identifying tag.

(c) The date the leak was discovered.

(d) The date the leak was repaired.

(e) The date the component was retested after the repair with an indication of the testing results.

(f) The person or persons who performed the inspections. The log **must** ~~shall~~ be made available to any representative of the department during normal business hours of the refinery and ~~shall~~ be ~~kept~~ **maintained** for a minimum of 2 years.

(10) If a leak cannot be repaired within 15 days due to circumstances beyond the control of the operator of the petroleum refinery or because the leaking component cannot be repaired unless a significant portion of the refinery unit is shut down for turnaround, then the operator shall maintain a separate log of the non-repair. The log ~~shall~~ **must** identify all of the following:

(a) The leaking component by type, location, and refinery unit.

(b) The date ~~on which~~ the leak was discovered.

(c) The reason why the leak cannot be repaired within 15 days.

(d) The estimated date of repair.

(11) Within 25 days **after** ~~of~~ the end of the previous quarter, the operator shall submit to the department a report that contains all of the following information for that quarter:

(a) The total number of components tested, by type.

(b) The total number of components found leaking and repaired, by type.

(c) The accumulative total number of components, by refinery unit and type, found to be leaking and not repaired within the required time period and the reason for non-repair.

(d) The type or types of monitoring equipment utilized during the quarter. The report required by this subrule ~~shall~~ **must** be made on a form approved by the department.

(12) The department may require the early shutdown for turnaround of a refinery unit if the department feels that there are a significant number of leaks that would justify this action.

(13) Except for safety pressure-relief valves, a person shall not operate existing petroleum refinery equipment that has a valve at the end of a pipe or line that contains a volatile organic compound, unless the pipe or line is sealed with a second valve, blind flange, plug, or cap. The sealing device may be removed only when a sample is being taken or during maintenance operations. A current, written description detailing routine sampling procedures and listing the sealing devices involved **must** ~~shall~~ be maintained and~~, upon request by the department, shall~~ be submitted to the department in an acceptable format **upon request.**

R 336.1623 Storage of petroleum liquids having a true vapor pressure of more than 1.0 psia, but less than 11.0 psia, in existing external floating roof stationary vessels of more than 40,000-gallon capacity.

Rule 623. (1) A person shall not store any petroleum liquid having a true vapor pressure of more than 1.0 psia, but less than 11 psia, at actual storage conditions in any existing external floating roof stationary vessel of more than 40,000-gallon capacity, unless ~~the provisions of~~ subrules (2) to (11) of this rule are met or unless an equivalent control method, as approved by the department **under R 336.1602(2)**, is implemented.

(2) Any stationary vessel subject to ~~the provisions of~~ this rule **must** ~~shall~~ be equipped with a floating roof to which a continuous rim-mounted secondary seal has been attached.

(3) The secondary seal, as required by subrule (2) of this rule, **must** ~~shall~~ meet all of the following requirements:

(a) There ~~shall~~ **must** be no visible holes, tears, or other nonfunctional openings in the seal or seal fabric.

(b) The seal ~~shall~~ **must** be intact and uniformly in place around the circumference of the floating roof between the floating roof and the vessel wall.

(c) For vessels equipped with vapor-mounted primary seals, the accumulated area of gaps exceeding 1/8 of an inch in width between the secondary seal and the vessel wall shall not exceed 1.0 square inch per foot of tank diameter.

(4) All openings in the external floating roof in any stationary vessel subject to the provisions of this rule, except for automatic bleeder vents, rim space vents, and leg sleeves, ~~shall~~ **must** be equipped with both of the following:

(a) Covers, seals, or lids that **must** ~~shall~~ remain in the closed position, except when the openings are in actual use.

(b) Projections into the vessel that remain below the liquid surface at all times.

(5) All automatic bleeder vents in any stationary vessel subject to the provisions of this rule ~~shall~~ **must** be closed at all times, except when the floating roof is floated off or landed on the roof leg supports.

(6) All rim vents in any stationary vessel subject to the provisions of this rule ~~shall~~ **must** be set to open only when the floating roof is being floated off the leg supports or at the manufacturer's recommended setting.

(7) All emergency floating roof drains in any stationary vessel subject to the provisions of this rule ~~shall~~ **must** be provided with slotted membrane fabric covers, or equivalent covers, that cover not less than 90% of the area of the opening.

(8) A person who is responsible for the operation of a stationary vessel subject to the provisions of this rule shall comply with all of the following requirements:

(a) Perform a semiannual routine inspection to ensure compliance with all provisions of subrules (2) to (7) of this rule, with the exception of subrule (3)(c) of this rule.

(b) For vessels equipped with a vapor-mounted primary seal, perform an annual inspection to document compliance with the provisions of subrule (3)(c) of this rule.

(c) Maintain a record of the results of the inspections performed as required by this subrule. This record **must** ~~shall~~ be made available to any representative of the department and ~~shall~~ be **maintained** ~~kept~~ for a minimum of 2 years.

(d) The provisions of this subrule may, upon written notice, be modified by the department **under R 336.1602(2),** if considered necessary to accomplish the purpose of this rule.

(9) The provisions of subrules (2) and (3) of this rule do not apply to any of the following external floating roof stationary vessels:

(a) Vessels that are used to store waxy, heavy-pour crude oil.

(b) Vessels of less than 420,000-gallon capacity that are used to store produced crude oil and condensate before lease custody transfer.

(c) Vessels of welded construction ~~which~~ **that** are equipped with a primary seal consisting of a metallic-type shoe seal, a liquid-mounted foam seal, or a liquid-mounted, liquid-filled-type seal and ~~which~~ contain a petroleum liquid that has a true vapor pressure of less than 4.0 psia.

(d) Vessels that are used to store jet naphtha (jet b or jp-4).

(10) A person ~~who~~ **that** is responsible for the operation of a stationary vessel that meets 1 of the exemption provisions of subrule (9) of this rule shall maintain records that include all of the following information:

(a) The type of vessel and, for a stationary vessel that meets the exemption provisions of subrule (9)(c) of this rule, the type of primary seal.

(b) The capacity of the stationary vessel.

(c) The contents of the stationary vessel.

(d) For a stationary vessel that meets the exemption provisions of subrule (9)(c) of this rule, the true vapor pressure of the petroleum liquid in the stationary vessel.

(11) The provisions of subrules (2) to (8) of this rule do not apply to any existing floating roof stationary vessel that contains a petroleum liquid ~~which~~ **that** has a true vapor pressure of less than 1.5 psia. A person ~~who~~ **that** is responsible for such stationary vessel shall maintain a record that includes all of the following information:

(a) Average monthly stored liquid temperature.

(b) Type of petroleum liquid.

(c) Reid vapor pressure of the petroleum liquid. The record that is required by this subrule **must** ~~shall~~ be made available to any representative of the department and ~~shall~~ be **maintained** ~~kept~~ for a minimum of 2 years.

R 336.1624 Emission of volatile organic compounds from existing graphic arts lines.

Rule 624. (1) A person shall not cause or allow the emission of any volatile organic compound from an existing graphic arts line, unless all of the provisions of ~~the following subrules~~ **this rule** are met or unless an equivalent emission rate, as approved by the department, is achieved. ~~For the purpose of this rule, the term~~ **As used in this rule,** "graphic arts" applies to rotogravure and flexographic operations only.

(2) For the purpose of this rule, both of the following provisions apply:

(a) In calculating the calendar day averaging period percent reduction of volatile organic compound emissions from a graphic arts line that is subject to the emission limits specified in subrule (3)(c) of this rule, the starting level ~~shall~~ **must** be the total amount of volatile organic compounds used on the graphic arts line during the calendar day averaging period. This level **must** ~~shall~~ be expressed as pounds of volatile organic compounds.

(b) It ~~will be~~ **is** assumed that all volatile organic compounds applied to the substrate are emitted, unless captured and controlled by control equipment.

(3) A person shall not cause or allow the emission of any volatile organic compound from an existing graphic arts line, unless the provisions of 1 or more of the following subdivisions are met:

(a) The volatile fraction of all inks and coatings used on a graphic arts line as applied to the substrate **must** ~~shall~~ contain a maximum of 25%, by volume, of volatile organic compounds, based upon a calendar day averaging period.

(b) The nonvolatile fraction of all inks and coatings used on a graphic arts line as applied to the substrate, minus water, ~~shall~~ **must** be a minimum of 60%, by volume, based upon a calendar day averaging period.

(c) The overall reduction in volatile organic compound emissions, based on pounds of volatile organic compounds from a graphic arts line for which compliance is to be achieved through the use of 1 or more add-on emissions control devices **must** ~~shall~~ be 1 of the following, based upon a calendar day averaging period:

(i) For publication rotogravure printing, a minimum of 75%.

(ii) For packaging rotogravure printing, a minimum of 65%.

(iii) For flexographic printing, a minimum of 60%.

(4) A person ~~who~~ **that** is responsible for the operation of a graphic arts line that is subject to this rule shall obtain current information, and keep records necessary, for a determination of compliance with this rule, as follows:

(a) As required in subrule (12) of this rule for sources subject to subrule (3)(a) or (b) of this rule.

(b) As required in R 336.2041(10)(d) and (e) for sources subject to subrule (3)(c) of this rule.

(5) Compliance with the emission limits specified in this rule **must** ~~shall~~ be based upon all of the following provisions, as applicable:

(a) Compliance with the emission limit specified in subrule (3)(a) or (b) of this rule ~~shall~~ **must** be based upon all inks and coatings that are used during each calendar day averaging period.

(b) Compliance with the applicable calendar day averaging period overall reduction provision specified in subrule (3)(c) of this rule ~~shall~~ **must** be based upon all inks and coatings that are used during each calendar day averaging period.

(c) If more than 1 compliance option listed in subrule (3) of this rule is used on a graphic arts line during a calendar day averaging period, then compliance **must** ~~shall~~ be determined separately for each option used and ~~shall~~ be based upon all inks and coatings used for each option during each calendar day averaging period.

(d) The department may specifically authorize compliance to be based upon a longer averaging period than the calendar day averaging period specified in subdivision (a), (b), or (c) of this subrule, **not to exceed** ~~but the period shall not be~~ more than 1 calendar month.

(e) The information and records as required by subrule (4) of this rule.

(6) Compliance with subrule (3)(a) and (b) of this rule **must** ~~shall~~ be determined using the method described in subrule (11) of this rule. Compliance with subrule (3)(c) of this rule ~~shall~~ **must** be determined using the method described in R 336.2040(11).

(7) This rule, except for subrule (4) of this rule, does not apply to graphic arts lines ~~which~~ **that** are within a stationary source and ~~which~~ have a total combined actual emission rate of volatile organic compounds of less than 100 pounds per day or 2,000 pounds per month as of **November 4, 1999**. If the combined actual emission rate equals or is more than 100 pounds per day for a subsequent day or 2,000 pounds per month for a subsequent month, then this rule ~~shall~~ permanently ~~apply~~ **applies** to the graphic arts lines.

(8) A person may exclude low-use inks or coatings that total 55 gallons or less per rolling 12-month period at a stationary source from the provisions of this rule, except for subrule (4) of this rule.

(9) A person may discontinue the operation of a natural gas-fired afterburner ~~, which~~ **that** is used to achieve compliance with the emission limits in this rule ~~,~~ between November 1 and March 31**,** unless the afterburner is used to achieve compliance with, or is required by, any of the following:

(a) ~~Any other~~ **Another** provision~~s~~ of these rules.

(b) A permit to install.

(c) A permit to operate.

(d) A voluntary agreement.

(e) A performance contract.

(f) A stipulation.

(g) An order of the department.

(10) If the operation of a natural gas-fired afterburner is discontinued between November 1 and March 31 under subrule (9) of this rule, then both of the following provisions ~~shall~~ apply between November 1 and March 31:

(a) All other provisions of this rule, except the emission limits, ~~shall~~ remain in effect.

(b) All other measures that are used to comply with the emission limits in this rule between April 1 and October 31 ~~shall~~ **must** continue to be used.

(11) Compliance with subrule (3)(a) and (b) of this rule **must** ~~shall~~ be determined as follows:

(a) The following equation **must** ~~shall~~ be used to determine if the volatile fraction of all inks and coatings used on a graphic arts line, as applied, meets the volatile organic compound limitation specified in subrule (3)(a) of this rule:

$$VOC = \frac{\sum_{I=1}^{N} L_I V_{VOCI}}{\sum_{I=1}^{N} L_I V_{VCI}} \text{ x } 100$$

Where:

VOC = Volatile organic compound fraction of the volatile fraction of all inks and coatings used on a graphic arts line, as applied, each calendar day averaging period, percent.

I = Individual ink or coating, as applied.

N = Number of different inks and coatings used on a graphic arts line, as applied, each calendar day averaging period.

LI = Volume of each ink or coating, as applied, used on the calendar day averaging period, gallons.

VVOCI = Volume fraction of volatile organic compounds in each ink or coating, as applied, percent.

VVCI = Volume fraction of volatiles in each ink or coating, as applied, percent. The provisions of subrule (3)(a) of this rule **must** ~~shall~~ be met if the value for "VOC" in the equation is less than or equal to 25**%** ~~percent~~.

(b) The following equation **must** ~~shall~~ be used to determine if the nonvolatile fraction of all inks and coatings used on a graphic arts line, as applied, meets the limitation specified in subrule (3)(b) of this rule:

$$NV = \frac{\sum_{I=1}^{N} L_I V_{VOCI}}{\sum_{I=1}^{N} L_I V_{VCI}} \text{ x } 100$$

Where:

NV = Nonvolatile fraction of all inks and coatings used on a graphic arts line, as applied, minus water and exempt compounds, by volume, on a calendar day averaging period, percent.

I = Individual ink or coating, as applied.

N = Number of different coatings and inks used on a graphic arts line, as applied, each calendar day averaging period.

LI = Volume of each ink or coating, as applied, used on the calendar day averaging period, gallons.

VI = Volume fraction of non-volatiles in each ink or coating, as applied, percent.

VVOCI = Volume fraction of volatile organic compounds in each ink or coating, as applied, percent.

The provisions of subrule (3)(b) of this rule **must** ~~shall~~ be met if the value for "NV" in the equation is equal to or greater than 60**%** ~~percent~~.

(12) A person subject to subrule (3)(a) or (b) of this rule shall keep the following records:

(a) For graphic arts lines subject to subrule (3)(a) of this rule:

(i) The name, identification number, and volume "LI"~~,~~ of each ink or coating used each calendar day averaging period.

(ii) The volume fraction of volatile organic compounds in each ink or coating, as applied, each calendar day averaging period.

(iii) The volume fraction of volatiles in each ink or coating, as applied, during each calendar day averaging period.

(iv) The volatile organic compound fraction of the volatile fraction of all inks and coatings used on a graphic arts line, as applied, each calendar day averaging period.

(b) For graphic arts lines subject to subrule (3)(b) of this rule:

(i) The name, identification number, and volume "LI"~~,~~ of each ink or coating used each calendar day averaging period.

(ii) The volume fraction of non-volatiles in each ink or coating, as applied, each calendar day averaging period.

(iii) The volume fraction of non-volatiles in all inks and coatings used each calendar day averaging period.

(13) Sources demonstrating compliance with a control efficiency as required in subrule (3)(c) of this rule shall submit a stack testing protocol based on the conditions in (Reference the appropriate section in 1040 or 1041 for approval by the department.

(14) A graphic art line subject to R 336.1624a does not need to meet the provisions of this rule accept as specified in R 336.1624a.

R 336.1624a Emission of volatile organic compounds from existing flexographic printing lines located in the 2015 ozone nonattainment areas.

Rule 624a. (1) As used in this rule:

(a) "Flexible packaging" means packaging that is not rigid and whose shapes can be readily changed. Flexible packaging includes, but is not limited to, bags, pouches, liners, and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

(b) "Flexible packaging printing" means the subset of graphic arts lines used in the printing of packages or parts of packages.

(c) "Graphic arts" means rotogravure and flexographic printing operations only.

(2) A person shall not cause or allow the emission of any volatile organic compound from inks, coatings, adhesives, and cleaning material from an existing flexible package printing line located in the 2015 ozone nonattainment areas, unless all of the applicable provisions of this rule are met.

(3) Except as provided in subrule (8) of this rule, the provisions of this rule do not apply to flexible package printing lines that are within a stationary source and have a combined actual emission rate of volatile organic compounds, including related cleaning activities, of less than 3 tons per year on a 12-month rolling basis before consideration of controls

(a) **In lieu of calculating emissions to establishing that the facility's total actual VOC emissions are less than 3 tons per year on a 12-month rolling basis before consideration of controls, the owner or operator may maintain monthly records of material usage demonstrating the following thresholds have not been exceeded:**

Commented [GJ2]: This is confusing as subrule 8 contains recordkeeping requirements for sources that are subject to the rule and need to demonstrate compliance. You may want to add a provision to subrule 8 that says to track emissions on a 12 month rolling basis and then reference that specific provision.

Commented [GJ3]: Please delete this once in always in provision as it is not supported by current EPA requirements. It is not in the CTG for offset lithographic printing or letterpress printing.

Commented [GJ4]: This allows smaller facilities to determine if the rule is applicable to them without having to perform complex emission calculations.

Type of Printing Operation	12-Month Rolling Threshold
Flexographic and Rotogravure solvent based materials	6,000 pounds of solvent from inks, dilution solvents, coatings, clean-up solutions and adhesives, combined
Flexographic and Rotogravure water based materials	24,000 pounds of water-based inks, coatings, and adhesives, combined;

(4) Each printing press line with a potential to emit less than 25 tons per year of volatile organic compounds must meet the overall reduction of volatile organic compound emissions in R 336.1624(3), if they exceed the applicability threshold in the applicability threshold in 336.1624(7)~~as applicable~~.

(5) Each printing press line with a potential to emit of 25 tons per year or more of volatile organic compounds must meet the overall reduction of volatile organic compound emissions in subdivisions (a), (b) or (c) of this subrule, as applicable:

(a) The volatile fraction of all inks, coatings, and adhesives used on a flexible package printing line as applied to the substrate must contain a maximum of 0.8 kg volatile organic compounds per kilogram solids applied. ~~0.8 pounds volatile organic compounds per pound of solids applied.~~

(b) The volatile fraction of all inks, coatings, and adhesives used on a flexible package printing line as applied to the substrate must contain a maximum of , or 0.16 kilogram volatile organic compounds per kilogram materials ~~0.16 pounds volatile organic compounds per pound of materials~~ applied~~per line~~.

(c) The overall reduction in volatile organic compound emissions, based on pounds of volatile organic compounds from a flexible package printing line for which compliance is to be achieved through the use of 1 or more add-on emissions control devices, must be 1 of the following, based upon a monthly averaging period:

(i) A minimum of 65% control efficiency if the press was first installed before March 14, 1995, and control installed before March 1, 2023.

(ii) A minimum of 70% control efficiency if the press was first installed before March 14, 1995, and control installed on or after March 1, 2023.

(iii) A minimum of 75% control if the press was installed on or after March 14, 1995, and control installed before March 1, 2023.

(iv) A minimum of 80% control if the press was installed on or after March 14, 1995, and control installed on or after March 1, 2023.

(d) An overall reduction in volatile organic compound emissions equivalent to the reductions in subdivision (c) of this subrule, using a combination of control efficiency and low volatile organic compound content materials.

Commented [GJ5]: Having to meet this requirement needs to be contingent upon meeting the applicability threshold in 336.1624(7). This also needs to be stated and a condition of applicability before the requirements of 336.1624(3) apply. Otherwise any flexible source that is not subject to 336.1624a would have to meet the requirements of 336.1624(3) even if they would be exempt per 336.1624(7).

Commented [GJ6]: The CTG does not use pounds, but kilograms and has a second limit based on materials applied. Also rule 1040 and 1041 need to be revised as they do not have kilograms as one of the compliance methods.

See Page 14 at https://www3.epa.gov/airquality/ctg_act/200609_voc_epa453_r-06-003_flexible_package_printing.pdf

(e) In lieu of calculating emissions to establish that the flexographic or rotogravure press line potential VOC emissions are less than twenty-five tons per year the owner or operator may maintain monthly records of material usage as follows:

Commented [GJ7]: This allows smaller facilities to determine if the rule is applicable to them without having to perform complex emission calculations.

Type of Printing Operation	12-Month Rolling Threshold
Flexographic and Rotogravure solvent based materials	50,000 pounds of solvent from inks, dilution solvents, coatings, clean-up solutions and adhesives, combined

(6) Facilities must conduct the following work practice standards for cleaning materials:

(a) Keep cleaning materials and used shop towels in closed containers.

(b) Convey cleaning materials from 1 location to another in closed containers or pipes.

(7) Compliance with the emission limits specified in this rule must be based upon all of the following provisions, as applicable:

(a) Compliance with the emission limit specified in subrule (5)(a) or (b) of this rule must be based upon all inks, coatings, and adhesives that are used during each calendar month by using manufactures formulation data for pounds of material, pounds of solids, and volatile organic compounds in each product.

(b) Compliance with the overall reduction specified in subrule (5)(c) of this rule must be based upon all inks, coatings, and adhesives that are used during each month, calculated using methods described in R 336.2040(11).

(c) Compliance with the emission limit specified in subrule (4) of this rule must be determined as described in R 336.1624(5), (6) and (11).

(d) Sources demonstrating compliance with a control efficiency as required in subrule (5)(c) of this rule shall submit a stack testing protocol based on the conditions in (Reference the appropriate section in 1040 or 1041 for approval by the department.

(e) If more than 1 control option or limit listed in subrule (5) of this rule is used on a graphic arts line during a monthly averaging period, compliance must be determined separately for each option used and be based upon all inks, coatings, and adhesives used for each option during each monthly averaging period.

(8) A person that is responsible for the operation of a graphic arts line that is subject to this rule shall obtain current information, and keep records necessary, for a determination of compliance with this rule, as follows:

(a) For lines subject to subrule (5)(a) of this rule:

(i) The volume fraction of volatile organic compounds in each ink, coating, and adhesive as applied, each month.

(ii) The pounds of solids as applied, each month.

(b) For lines subject to subrule (5)(b) of this rule:

(i) The volume fraction of volatile organic compounds in each ink, coating, or adhesive, as applied, each month.

(ii) The pounds of materials as applied, each month.

(c) For lines subject to subrule (5)(c) of this rule, follow requirements as described in R 336.2041(10)(d) and (e).

(d) For lines subject to subrule (4) of this rule, follow requirements as described in R 336.1624(4) and (12).

(e)

When shop towels are properly stored and conveyed as required by subrule (6)

When shop towels are properly stored and conveyed as required by subrule (6) of this rule, the affected source may use a retention factor from cleaning solutions of up to 50% for VOCs with a composite vapor pressure of no more than 10 mmHg at 20 degrees Celsius.

Commented [GJ8]: There is no requirement in the CTG to track cleaning solution use or VOC content.

R 336.1625 Emission of volatile organic compound from existing equipment utilized in manufacturing synthesized pharmaceutical products.

Rule 625. (1) A person shall not cause or allow the emission of any volatile organic compound from existing equipment utilized in the manufacturing of synthesized pharmaceutical products, unless all of the provisions of ~~the following **subrules**~~ **this rule** are met or unless an equivalent control method, as approved by the department **under R 336.1602(2)**, is implemented.

(2) A person shall not operate an existing reactor, distillation operation, crystallizer, centrifuge, or vacuum dryer, unless the emissions from this equipment are controlled by either of the following:

(a) A condenser, such that the outlet gas temperature does not exceed the following levels:

(i) Minus 25 degrees Celsius (minus 13 degrees Fahrenheit) when the sum of the partial pressure or pressures of the volatile organic compound or compounds in the gas stream, as measured at 20 degrees Celsius (68 degrees Fahrenheit), is greater than 300 millimeters of mercury (5.8 pounds per square inch).

(ii) Minus 15 degrees Celsius (5 degrees Fahrenheit) when the sum of the partial pressure or pressures of the volatile organic compound or compounds in the gas stream, as measured at 20 degrees Celsius (68 degrees Fahrenheit), is greater than 150 millimeters of mercury (2.9 pounds per square inch).

(iii) Zero degrees Celsius (32 degrees Fahrenheit) when the sum of the partial pressure or pressures of the volatile organic compound or compounds in the gas stream, as measured at 20 degrees Celsius (68degrees Fahrenheit), is greater than 75 millimeters of mercury (1.5 pounds per square inch).

(iv) Ten degrees Celsius (50 degrees Fahrenheit) when the sum of the partial pressure or pressures of the volatile organic compound or compounds in the gas stream, as measured at 20 degrees Celsius (68 degrees Fahrenheit), is greater than 52.5 millimeters of mercury (1.0 pounds per square inch).

(v) Twenty-five degrees Celsius (77 degrees Fahrenheit) when the sum of the partial pressure or pressures of the volatile organic compound or compounds in the gas stream,

as measured at 20 degrees Celsius (68 degrees Fahrenheit), is greater than 26.2 millimeters of mercury (0.5 pounds per square inch).

(b) An alternative control technology **approved by the department under R 336.1602(2)**, the use of which results in an emission level no greater than would occur by meeting the provisions of subdivision (a) of this subrule. For purposes of comparing the actual emission level from an alternative control technology to the allowable emission level resulting from meeting the provisions of subdivision (a) of this subrule, the actual emission level **must** ~~shall~~ be determined using the methods described in 40 **CFR** ~~C.F.R. Pp~~**p**art 60, ~~Aa~~**a**ppendix A and the allowable emission level ~~shall~~ **must** be determined using the calculation methods described in appendix B of "Control of Volatile Organic Emissions From Manufacture of Synthesized Pharmaceutical Products," EPA-450/2-78-029, both adopted by reference in R 336.1902.

(3) For the purpose of this rule, the sum of the partial pressure or pressures of the volatile organic compound or compounds in the gas stream is to be determined as follows:

Where:

$$\text{Pt} = \sum_{i=1}^{n} (Pi)(Xi)$$

Pt = Sum of the partial pressures of all volatile organic compounds.

Pi = Vapor pressure of volatile organic compounds at 20 degrees Celsius (68 degrees Fahrenheit).

Xi = Mole fraction of volatile organic compounds in liquid mixture.

n = Number of different volatile organic compounds in liquid mixture.

i = Individual volatile organic compound.

The mole fraction, Xi, is determined as follows:

Xi = moles of "i" in liquid mixture total moles of liquid mixture

The total moles of liquid mixture **must** ~~shall~~ include both the moles of volatile organic compounds and volatile inorganic compounds**,** ~~(such as water)~~ **such as water,** in the liquid mixture.

(4) Notwithstanding the provisions of subrule (2)(a) of this rule, a person shall not be required to reduce the temperature of a gas stream below the freezing point of a condensable component in that gas stream if it can be demonstrated, using intrinsic chemical data, to the satisfaction of the department **under R 336.1602(3)**, that in doing so, the condenser would be rendered ineffective. In this case, the temperature of the gas stream **must** ~~shall~~ be reduced as low as can be achieved without freezing of the condenser occurring.

(5) The provisions of this rule do not apply to any single existing reactor, distillation operation, crystallizer, centrifuge, or vacuum dryer that has a maximum uncontrolled volatile organic compound emission rate of less than 15 pounds per day.

(6) A person shall not operate an existing air dryer or production equipment exhaust system unless the volatile organic compound emissions from this equipment are reduced by not less than 90% if the uncontrolled volatile organic compound emissions are 330

pounds per day or more or are reduced to less than or equal to 33 pounds per day if the uncontrolled volatile organic compound emissions are less than 330 pounds per day.

(7) A person shall not load or allow the loading of a volatile organic compound that has a vapor pressure of more than 210 millimeters of mercury (4.1 pounds per square inch), as measured at 20 degrees Celsius (68 degrees Fahrenheit), from a truck or railcar into an existing stationary vessel of more than a 2,000-gallon capacity, unless a vapor balance system or an alternate control system that provides not less than 90% control of loading emissions is utilized.

(8) A person shall not store a volatile organic compound that has a vapor pressure of more than 75 millimeters of mercury (1.5 pounds per square inch), as measured at 20 degrees Celsius (68 degrees Fahrenheit), in an existing above ground stationary vessel, unless the stationary vessel is equipped with a pressure/vacuum conservation vent set at plus or minus 1.5 millimeters of mercury (0.03 pounds per square inch) or an alternate control system at least as effective**, under R 336.1602(2)**. For purposes of comparing the actual emission level from an alternative control technology to the allowable emission level resulting from the use of a pressure/vacuum conservation vent meeting this requirement, the actual emission level **must** ~~shall~~ be determined using the methods described in 40 **CFR** ~~C.F.R.~~ ~~P~~**p**art 60, ~~A~~**a**ppendix A, and the allowable emission level ~~shall~~ **must** be determined using the calculation methods described in appendix B of "Control of Volatile Organic Emissions From Manufacture of Synthesized Pharmaceutical Product~~s,~~"**,** EPA-450/2-78-029, both adopted by reference in R 336.1902.

(9) A person shall not operate an existing centrifuge, rotary vacuum filter, or other filter that has an exposed liquid surface, ~~where~~ **if** the liquid contains a volatile organic compound or compounds and the sum of the partial pressure or pressures of volatile organic compound or compounds is 26.2 millimeters of mercury (0.5 pounds per square inch) or more, as measured at 20 degrees Celsius (68 degrees Fahrenheit), unless the equipment is enclosed.

(10) A person shall not operate an existing in-process tank that may contain a volatile organic compound at any time, unless the tank is equipped with a cover and the cover remains closed, except when production, sampling, maintenance, or inspection procedures require operator access.

(11) A person shall not operate any existing equipment utilized in the manufacturing of synthesized pharmaceutical products from which a liquid containing a volatile organic compound or compounds can be observed dripping or running, unless the leak is repaired immediately, if possible, but not later than the first time the equipment is off-line for a period of time that is long enough to complete the repair.

(12) A person who is responsible for the operation of a synthesized pharmaceutical process subject to the provisions of this rule shall obtain current information and maintain records that are necessary for a determination of compliance with the provisions of this rule. The information ~~shall~~ **must** include all of the following:

(a) For operations subject to ~~the provisions of~~ subrule (2) of this rule, all of the following information:

(i) A list of all volatile organic compounds in each gas stream.

(ii) The vapor pressure, as measured at 20 degrees Celsius (68 degrees Fahrenheit), of each volatile organic compound.

(iii) The mole fraction of each volatile organic compound in the liquid mixture.

(iv) Continuous records of the gas outlet temperature of each condenser or of a parameter that ~~insures~~ **ensures** proper operation of an equivalent control device used pursuant to subrule (2)(b) of this rule.

(b) For operations that ~~are in compliance~~ **comply** with ~~the exemption provisions of~~ subrule (5) of this rule, the amount of material entering and exiting each reactor, distillation operation, crystallizer, centrifuge, and vacuum dryer.

(c) For air dryers subject to ~~the provisions of~~ subrule (6) of this rule, the amount of material entering and exiting each air dryer.

(d) For operations subject to ~~the provisions of~~ subrule (7) of this rule, the following information:

(i) The date when each stationary vessel is loaded.

(ii) The type and vapor pressure, as measured at 20 degrees Celsius (68 degrees Fahrenheit), of each volatile organic compound loaded into each stationary vessel.

(e) For operations subject to ~~the provisions of~~ subrule (9) of this rule, all of the following information:

(i) A list of all volatile organic compounds in the liquid.

(ii) The vapor pressure, as measured at 20 degrees Celsius (68 degrees Fahrenheit), of each volatile organic compound.

(iii) The mole fraction of each volatile organic compound in the liquid mixture.

(f) For operations subject to ~~the provisions of~~ subrule (11) of this rule, the following information:

(i) The date each leak was detected.

(ii) The date each leak was repaired.

R 336.1627 Delivery vessels; vapor collection systems.

Rule 627. (1) A person shall not operate any delivery vessel that is subject to control by a vapor collection system, either vapor balance or recovery system, required by R 336.1606, R 336.1607, R 336.1608, **or** R 336.1609, ~~R 336.1703, R 336.1704, R 336.1705, or R 336.1706,~~ unless all of the provisions of this rule are met.

(2) Delivery vessels ~~shall~~ **must** comply with all requirements described in the 40 **CFR** ~~C.F.R. P~~**p**art 60, ~~A~~**a**ppendix A, ~~M~~**m**ethod 27, adopted by reference in R 336.1902.

(3) The owner of any delivery vessel that is subject to subrule (1) of this rule shall test the delivery vessel in accordance with 40 **CFR** ~~C.F.R. P~~**p**art 60, ~~A~~**a**ppendix A, ~~M~~**m**ethod 27, within 1 year **after** ~~of~~ the date of the previous test. Notification of the exact time and location of the test ~~shall~~ **must** be given to the department, in writing, not less than 7 days before the actual test. If the time or location of the test changes for any reason, then the owner or operator shall notify the department as soon as practical.

(4) The test ~~shall~~ **must** comply with documentation requirements described in 40 **CFR** ~~C.F.R. P~~**p**art 60, ~~A~~**a**ppendix A, ~~M~~**m**ethod 27 and ~~shall~~ be submitted to the department within 30 days ~~of~~ **after** the test completion and in a form acceptable to the department. Upon successful completion of the required testing, the vessel **is** ~~shall be deemed~~ provisionally certified providing the department does not invalidate the certification by issuing disapproval within 45 days **after** ~~of~~ receipt of the results.

(5) There ~~shall~~ **must** be no visible liquid leaks from the vessel or collection system, except when the disconnection of dry breaks in liquid lines produces a few drops of liquid.

(6) A person shall not operate any vapor collection system, either vapor balance or recovery system, required by R 336.1606, R 336.1607, R 336.1608, **and** R 336.1609, ~~R 336.1703, R 336.1704, R 336.1705, or R 336.1706,~~ unless ~~all of~~ the provisions of subrules (7) to (11) of this rule are met.

(7) There ~~shall~~ **must** be no gas detector reading greater than or equal to 100% of the lower explosive limit at a distance of 1 inch from the location of the potential leak in the vapor collection system. Leaks ~~shall~~ **must** be detected by a combustible gas detector using the test procedure described in R 336.2005.

(8) There ~~shall~~ **must** be no visible leaks, except from the disconnection of bottom loading dry breaks and from raising top loading vapor heads, where a few drops are **allowed** ~~permitted~~.

(9) The vapor collection system ~~shall~~ **must** be designed and operated to prevent gauge pressure in the delivery vessel from exceeding 0.6 pounds per square inch and to prevent vacuum from exceeding -0.2 pounds per square inch gauge.

(10) The department may require the owner or operator of any vapor collection system subject to the provisions of subrule (6) of this rule to test the system in accordance with R 336.2005. The tests **must** ~~shall~~ be conducted within 60 days following receipt of written notification from the department. Notification of the exact time and location of the test ~~shall~~ **must** be given to the department, in writing, not less than 7 days before the actual test. Documentation of the test that states the date and location of the test, test procedures, the type of equipment used, and the results of the test **must** ~~shall~~ be submitted to the department within 60 days following the last date of the test. If the time or location of the test changes for any reason, then the owner or operator shall notify the department as soon as practical.

(11) Any delivery vessel or component of a vapor collection system that fails to meet any provision of this rule ~~shall~~ **must** not be operated until the necessary repairs have been made, the vessel or collection system has been retested, and the test results have been submitted to the department.

R 336.1628 Emission of volatile organic compounds from components of existing process equipment used in manufacturing synthetic organic chemicals and polymers; monitoring program.

Rule 628. (1) A person shall not cause or allow the emission of a volatile organic compound from a component of existing manufacturing process equipment at a synthetic organic chemical and polymer manufacturing plant located in any of the following counties, unless ~~all of~~ the provisions of subrules (2) to (16) of this rule are met or unless an equivalent control method, as approved by the department **under R 336.1602(2)**, including the control method described in "Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006," 40 **CFR** ~~C.F.R.~~, ~~P~~**p**art 60, subpart VV adopted by reference in R 336.1902, is implemented:

(a) ~~Kent~~ **Western portion of Allegan.**

(b) ~~Livingston~~ **Berrien.**

(c) ~~Macomb~~ **Kent.**
(d) ~~Monroe~~ **Livingston.**
(e) ~~Muskegon~~ **Macomb.**
(f) ~~Oakland~~ **Monroe.**
(g) ~~Ottawa~~ **Muskegon.**
(h) ~~St. Clair~~ **Oakland.**
(i) ~~Washtenaw~~ **Ottawa.**
(j) ~~Wayne~~ **St. Clair.**
(k) Washtenaw.
(l) Wayne.

(2) A person shall not operate existing manufacturing process equipment at a synthetic organic chemical and polymer manufacturing plant unless a monitoring program is implemented. The monitoring program ~~shall~~ **must** provide for all of the following:

(a) A quarterly inspection of all components in light liquid or gaseous volatile organic compound service that are not designated as difficult-to-monitor components.

(b) An annual inspection of all difficult-to-monitor components in light liquid or gaseous volatile organic compound service. Annual inspections ~~shall~~ **must** take place during the period of April 1 t**o** ~~hrough~~ June 30.

(c) A weekly visual inspection of all seals of pumps in light liquid service.

(d) An immediate inspection of all components from which a liquid, ~~which includes~~ **including** a volatile organic compound, is observed dripping or from which a gaseous volatile organic compound is observed venting to the atmosphere.

(e) Within 2 normal business days **after** ~~of~~ it~~s~~ **begins** venting to the atmosphere, an inspection of each relief valve from which a volatile organic compound could discharge.

(f) An inspection, as soon as is practical, but not later than 5 calendar days, after the repair of a component that was found leaking.

(3) Except for the visual inspections required by the provisions of subrule (2)(c) of this rule, all inspections ~~shall~~ **must** be performed using equipment and procedures as specified in 40 **CFR** ~~C.F.R.~~, ~~P~~**p**art 60, ~~A~~**a**ppendix A, ~~M~~**m**ethod 21, adopted by reference in R 336.1902. A component is leaking when a concentration of more than 10,000 ppm, by volume, as methane or hexane, is measured by ~~M~~**m**ethod 21.

(4) If implementation of the quarterly leak detection program as specified in subrule (2)(a) of this rule shows that 2% or less of the process valves in a given process unit are leaking for 2 consecutive quarters, then the inspections of process valves in that unit are not required for 1 quarter. If 2% or less of the process valves in a given process unit are leaking for 5 consecutive quarters, then the inspections may be performed annually. If a subsequent inspection shows that more than 2% of the process valves are leaking, then quarterly inspections of valves shall again be required.

(5) The percentage of valves leaking on a process unit, as referenced in subrule (4) of this rule, ~~shall~~ **must** be determined by dividing the total number of valves found to be leaking on the process unit during the specified monitoring period by the total number of valves on the process unit that are required to be monitored by this rule.

(6) The provisions of subrule (2) of this rule do not apply to either of the following:

(a) A component that is equipped with a closed vent system ~~which~~ **that** is capable of capturing and transporting a leakage from the component to a control device that is designed and operated to reduce the volatile organic compound emissions vented to it by 95% or more.

(b) An unsafe-to-monitor component, until conditions would no longer expose monitoring personnel to immediate danger.

(7) The provisions of this rule do not apply to any of the following:

(a) A component that contains or contacts a gaseous stream with a volatile organic compound concentration of less than 10% by weight. Procedures that conform to the general methods in the following ASTM standards, adopted by reference in R 336.1902, ~~shall~~ **must** be used to determine the percentage of volatile organic compound contents in the process fluid that is contained in or contacts a piece of equipment:

(i) ~~"~~Standard Practice for General Techniques of Infrared Quantitative Analysis,~~"~~ ASTM E168.

(ii) ~~"~~Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis,~~"~~ ASTM E169~~-04;~~.

(iii) ~~"~~Standard Practice for Packed Column Gas Chromatography,~~"~~ ASTM E260.

(b) A component that operates under a vacuum.

(c) Components of synthetic organic chemical and polymer manufacturing process units that produce 1,100 tons per calendar year or less of light liquid or gaseous volatile organic compounds.

(d) A relief valve that has an upstream rupture disc.

(8) A person shall seal open-ended lines with a second valve, a blind flange, a cap, or a plug, except when the open end is in use, as with relief valves, double block and bleed valves, and composite samplers. In the case of a second valve, the upstream valve **must** ~~shall~~ be closed first after each use.

(9) A component that is found to be leaking pursuant to the monitoring program provisions of subrule (2) of this rule or for another reason **must** ~~shall~~ be repaired. Except as provided in subrule (11) of this rule, the leak ~~shall~~ **must** be repaired as soon as possible, but not more than 15 days after the leak is detected. Until ~~such time as~~ the leak is repaired and retested verifying a successful repair, the component that is causing the leak ~~shall~~ **must** bear a weather-resistant, numbered identifying tag that indicates the date the leak was discovered.

(10) A log of all leaks that are detected under subrule (2) of this rule **must** ~~shall~~ be maintained by the person who operates the synthetic organic chemical and polymer manufacturing plant. The log ~~shall~~ **must** list all of the following information:

(a) The leaking component and synthetic organic chemical and polymer manufacturing process unit.

(b) The number of the identifying tag.

(c) The date the leak was discovered.

(d) The date the leak was repaired.

(e) The date the component was retested after the repair, with an indication of the testing results.

(f) The person or persons who performed the inspections.

(11) All of the following provisions apply to delays in the repair of leaking components:

(a) If a leak cannot be repaired within 15 calendar days because the leaking component cannot be repaired unless the synthetic organic chemical and polymer manufacturing process unit is shut down, then the person who operates the synthetic organic chemical and polymer manufacturing plant shall maintain a log of the non-repair and the leak **must** ~~shall~~ be repaired at the next unit turnaround.

(b) If a leak cannot be repaired within 15 calendar days due to circumstances beyond the control of the person who operates the synthetic organic chemical and polymer manufacturing plant, then the person shall notify the department of the circumstances causing the delay in repair before the end of the fifteenth day and ~~shall~~ maintain a log of the non-repair. The leak **must** ~~shall~~ be repaired in an expeditious manner, which **must** ~~shall~~ be within 6 months ~~of~~ **after** the date the leak was detected.

(c) The log specified in subdivisions (a) and (b) of this subrule **must** ~~shall~~ list all of the following information:

(i) The leaking component and synthetic organic chemical and polymer manufacturing process unit.

(ii) The date ~~on which~~ the leak was discovered.

(iii) The reason why the leak cannot be repaired within 15 days.

(iv) The estimated date of repair.

(v) The number of the identifying tag.

(12) A log of all unsafe-to-monitor components that are not part of the written program as required by subrule (14) of this rule **must** ~~shall~~ be maintained by the person ~~who~~ **that** operates the synthetic organic chemical and polymer manufacturing plant. This log **must** ~~shall~~ list all of the following information:

(a) The unsafe-to-monitor component and synthetic organic chemical and polymer manufacturing process unit.

(b) The number of the identifying tag.

(c) The reason why the component was unsafe to monitor.

(d) The date~~,~~ or dates~~, on which~~ the component was unsafe to monitor.

(13) Not later than 25 calendar days after the end of the previous quarter, the person ~~who~~ **that** operates the synthetic organic chemical and polymer manufacturing plant shall submit, to the department, a report that contains all of the following information for that quarter:

(a) The total number of components tested, by type.

(b) The total number of components which are found leaking and which are repaired, by type.

(c) The total number of components, by synthetic organic chemical and polymer manufacturing process unit and type, which are found to be leaking and ~~which~~ are not repaired within the required time period and the reason for non-repair.

(d) The type or types of monitoring equipment utilized during the quarter.

(e) The total number of unsafe-to-monitor components that are logged as required by ~~the provisions of~~ subrule (12) of this rule. The report required by this subrule **must** ~~shall~~ be made on a form that is provided by the department.

(14) A person ~~who~~ **that** is subject to the provisions of this rule shall ~~comply with both of the following provisions:~~

~~(a)~~ ~~D~~**d**evelop a written program detailing how the provisions of this rule will be implemented. The program **must** ~~shall~~ include listings, by type and synthetic organic chemical and polymer manufacturing process unit, of all of the following:

(~~i~~**a**) All components that are regularly inspected as required in subrule (2) of this rule.

(~~ii~~**b**) All components that are equipped with a closed vent system subject to the provisions of subrule (6)(a) of this rule.

(~~iii~~**c**) All components that are exempted from the provisions of this rule pursuant to the provisions of subrule (7)(b), (c), and (d) of this rule.

(~~iv~~**d**) All difficult-to-monitor components in light liquid or gaseous volatile organic compound service.

(~~v~~**e**) All components ~~which~~ **that** are located outside a building, which can only be monitored by elevating the monitoring personnel more than 6 feet above ground level, and ~~which~~ are unsafe to monitor during the period of November 1 **to** ~~through~~ March 31.

~~(b) Except as noted in subrule (16) of this rule, begin inspections as required in subrule (2) of this rule not later than 6 months after the effective date of this rule.~~

(15) The written program required by the provisions of subrule (14) of this rule and the logs required by the provisions of subrules (10), (11), and (12) of this rule **must** ~~shall~~ be made available, to any representative of the department, on Monday through Friday between 9 a.m. and 5 p.m., at the synthetic organic chemical and polymer manufacturing plant. The logs **must** ~~shall~~ be **maintained** ~~kept~~ for a minimum of 2 years.

(16) If a synthetic organic chemical and polymer manufacturing process unit that was previously exempt pursuant to the provisions of subrule (7)(c) of this rule produces light liquid or gaseous volatile organic compounds in excess of 1,100 tons in a calendar year, then the provisions of this rule ~~shall~~ apply. Inspections ~~shall~~ begin no~~t~~ later than 6 months after the end of that calendar year and ~~be~~ **are** maintained **for as long as the applicable equipment is in operation** ~~thereafter~~.

R 336.1629 Emission of volatile organic compounds from components of existing process equipment used in processing natural gas; monitoring program.

Rule 629. (1) A person shall not cause or allow the emission of a volatile organic compound from a component of existing process equipment at a natural gas processing plant located in any of the following counties, unless all of the provisions of subrules (2) to (16) of this rule are met or unless an equivalent control method, as approved by the department **under R 336.1602(2)**, is implemented:

(a) ~~Kent~~ **Western portion of Allegan.**

(b) ~~Livingston~~ **Berrien.**

(c) ~~Macomb~~ **Kent.**

(d) ~~Monroe~~ **Livingston.**

(e) ~~Muskegon~~ **Macomb.**

(f) ~~Oakland~~ **Monroe.**
(g) ~~Ottawa~~ **Muskegon.**
(h) ~~St. Clair~~ **Oakland.**
(i) ~~Washtenaw~~ **Ottawa.**
(j) ~~Wayne~~ **St. Clair.**
(k) Washtenaw.
(l) Wayne.

(2) A person shall not operate existing process equipment at a natural gas processing plant unless a monitoring program is implemented. The monitoring program **must** ~~shall~~ provide for all of the following:

(a) A quarterly inspection of all components in gaseous or liquid volatile organic compound service that are not designated as difficult-to-monitor components.

(b) An annual inspection of all difficult-to-monitor components in gaseous or liquid volatile organic compound service. Annual inspections **must** ~~shall~~ take place during the period of April 1 **to** ~~through~~ June 30.

(c) A weekly visual inspection of all pump seals from which volatile organic compounds could leak.

(d) An immediate inspection of all components from which a liquid, **including** ~~which includes~~ a volatile organic compound, is observed dripping or from which a gaseous volatile organic compound is observed venting to the atmosphere.

(e) Within 2 normal business days **after** ~~of~~ it~~s~~ **begins** venting to the atmosphere, an inspection of each relief valve from which a volatile organic compound could discharge.

(f) An inspection, as soon as is practical but no~~t~~ later than 5 calendar days after the repair, of a component that was found leaking.

(3) Except for the visual inspections required by the provisions of subrule (2)(c) of this rule, all inspections **must** ~~shall~~ be performed using equipment and procedures as specified in 40 **CFR** ~~C.F.R. P~~**p**art 60, ~~A~~**a**ppendix A, ~~M~~**m**ethod 21, adopted by reference in R 336.1902. A component is leaking when a concentration of more than 10,000 ppm, by volume, as methane or hexane, is measured by ~~M~~**m**ethod 21.

(4) If implementation of the quarterly leak detection program as specified in subrule (2)(a) of this rule shows that 2% or less of the process valves in a given process unit are leaking for 2 consecutive quarters, then the inspections on process valves in that process unit are not required for 1 quarter. If 2% or less of the process valves in a given process unit are leaking for 5 consecutive quarters, then the inspection may be performed annually. If a subsequent inspection shows that more than 2% of the process valves are leaking, then quarterly inspections of valves shall again be required.

(5) The percentage of valves leaking on a process unit, as referenced in subrule (4) of this rule, ~~shall~~ **must** be determined by dividing the total number of valves that are found to be leaking on the process unit during the specified monitoring period by the total number of valves on the process unit that are required to be monitored by this rule.

(6) A relief valve that is located in a nonfractionating plant that is inspected only by nonplant personnel may be inspected after a pressure release the next time that the inspecting personnel are at the plant, instead of within 5 days as specified in subrule (2)(e) of this rule. A relief valve **must** ~~shall~~ not be allowed to operate for more than 30 days after a pressure release without an inspection.

(7) The provisions of subrule (2) of this rule do not apply to any of the following:

(a) A component that is equipped with a closed vent system ~~which~~ **that** is capable of capturing and transporting a leakage from the component to a control device that is designed and operated to reduce the volatile organic compound emissions vented to it by 95% or more.

(b) A pump ~~which~~ **that** is equipped with a dual seal system that includes a barrier fluid and ~~which~~ is equipped with a sensor that will detect a failure of the seal system.

(c) An unsafe-to-monitor component, until conditions do not expose monitoring personnel to immediate danger.

(8) The provisions of this rule do not apply to any of the following:

(a) A component, except any in field gas service, that contains or contacts a process stream that has a volatile organic compound concentration of less than 1.0% by weight. A component in field gas service is excluded from the provisions of this subrule. Procedures that conform to the general methods in the following ASTM standards, adopted by reference in R 336.1902, **must** ~~shall~~ be used to determine the percentage of volatile organic compound contents in the process fluid that is contained in or contacts a piece of equipment:

(i) ~~"~~Standard Practice for General Techniques of Infrared Quantitative Analysis,~~"~~ ASTM E168.

(ii) ~~"~~Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis,~~"~~ ASTM E169~~-04;~~.

(iii) ~~"~~Standard Practice for Packed Column Gas Chromatography,~~"~~ ASTM E260.

(b) A component that operates under a vacuum.

(c) A component in heavy liquid service.

(d) A reciprocating compressor in field gas service.

(e) A natural gas processing plant which has a capacity of less than 10,000,000 cubic feet per day and which does not fractionate natural gas liquids.

(f) A relief valve that has an upstream rupture disc.

(9) A person shall seal open-ended lines with a second valve, ~~a~~ blind flange, ~~a~~ cap, or ~~a~~ plug, except when the open end is in use, as with relief valves and double block and bleed valves. In the case of a second valve, the upstream valve **must** ~~shall~~ be closed first after each use.

(10) A component that is found to be leaking pursuant to the monitoring program provisions of subrule (2) of this rule or for another reason **must** ~~shall~~ be repaired. Except as provided in subrule (12) of this rule, the leak **must** ~~shall~~ be repaired as soon as possible, but not more than 15 days after the leak is detected. Until ~~such time as~~ the leak is repaired and retested verifying a successful repair, the component that is causing the leak shall bear a weather-resistant, numbered identifying tag that indicates the date the leak was discovered.

(11) A log of all leaks that are detected pursuant to the provisions of this rule **must** ~~shall~~ be maintained by the person ~~who~~ **that** operates the natural gas processing plant. The log **must** ~~shall~~ list all of the following information:

(a) The leaking component and natural gas process unit.

(b) The number of the identifying tag.

(c) The date the leak was discovered.

(d) The date the leak was repaired.

(e) The date the component was retested after the repair, with an indication of the testing results.

(f) The person or persons who performed the inspections.

(12) All of the following provisions apply to delays in the repair of leaking components:

(a) If a leak cannot be repaired within 15 calendar days because the leaking component cannot be repaired unless the natural gas process unit is shut down, then the person ~~who~~ **that** operates the natural gas processing plant shall maintain a log of the non-repair and the leak **must** ~~shall~~ be repaired at the next unit turnaround.

(b) If a leak cannot be repaired within 15 calendar days due to circumstances beyond the control of the person ~~who~~ **that** operates the natural gas processing plant, then the person shall notify the department of the circumstances causing the delay in repair before the end of the fifteenth day and ~~shall~~ maintain a log of the non-repair. The leak **must** ~~shall~~ be repaired in an expeditious manner, which **must** ~~shall~~ not be more than 6 months ~~from~~ **after** the date the leak was detected.

(c) The log specified in subdivisions (a) and (b) of this subrule **must** ~~shall~~ list all of the following information:

(i) The leaking component and natural gas process unit.

(ii) The date ~~on which~~ the leak was discovered.

(iii) The reason why the leak cannot be repaired within 15 days.

(iv) The estimated date of repair.

(v) The number of the identifying tag.

(13) A log of all unsafe-to-monitor components that are not part of the written program as required by the provisions of subrule (15) of this rule **must** ~~shall~~ be maintained by the person ~~who~~ **that** operates the natural gas processing plant. The log **must** ~~shall~~ list all of the following information:

(a) The unsafe-to-monitor component and natural gas process unit.

(b) The number of the identifying tag.

(c) The reason why the component was unsafe to monitor.

(d) The date~~,~~ or dates~~, on which~~ the component was unsafe to monitor.

(14) No~~t~~ later than 25 calendar days after the end of the previous quarter, the person ~~who~~ **that** operates the natural gas processing plant shall submit, to the department, a report that contains all of the following information for that quarter:

(a) The total number of components tested, by type.

(b) The total number of components ~~which~~ **that** are found leaking and ~~which~~ are repaired, by type.

(c) The total number of components, by natural gas process unit and type ~~, which~~ **that** are found to be leaking and ~~which~~ are not repaired within the required time period and the reason for non-repair.

(d) The type or types of monitoring equipment utilized during the quarter.

(e) The total number of unsafe-to-monitor components that are logged as required by the provisions of subrule (13) of this rule. The report required by this subrule **must** ~~shall~~ be made on a form that is provided by the department.

(15) A person ~~who~~ **that** is subject to the provisions of this rule shall ~~comply with both of the following provisions:~~

~~(a)~~ **d**~~D~~evelop a written program detailing how the provisions of this rule will be implemented. The program **must** ~~shall~~ include listings, by type and natural gas process unit, of all of the following:

(~~i~~**a**) All components that are regularly inspected as required in subrule (2) of this rule.

(**b**) All components that are subject to the provisions of subrule (7)(a) and (b) of this rule.

(~~iii~~**c**) All components that are exempted from the provisions of this rule pursuant to the provisions of subrule (8) of this rule.

(~~iv~~**d**) All difficult-to-monitor components in gaseous or liquid volatile organic compound service.

(~~v~~**e**) All components which are located outside a building, which can only be monitored by elevating the monitoring personnel more than 6 feet above ground level, and which are unsafe to monitor during the period of November 1 **to** ~~through~~ March 31.

~~(b) Begin inspections, as required in subrule (2) of this rule, not later than 6 months after the effective date of this rule.~~

(16) The written program required by the provisions of subrule (15) of this rule and the logs required by the provisions of subrules (11), (12), and (13) of this rule **must** ~~shall~~ be made available, to any representative of the department, on Monday through Friday between 9 a.m. and 5 p.m., at the natural gas processing plant. The logs **must** ~~shall~~ be **maintained** ~~kept~~ for a minimum of 2 years.

R 336.1630 Emission of volatile organic compounds from existing paint manufacturing processes.

Rule 630. (1) ~~After April 19, 1990, a~~ **A** person shall not cause or allow the emission of a volatile organic compound from existing equipment utilized in paint manufacturing located in any of the following counties, unless all of the provisions of subrules (2) to (4) of this rule are met or unless an equivalent control method, as approved by the department **under R 336.1602(2)**, is implemented:

(a) ~~Kent~~ **Western portion of Allegan.**

(b) ~~Livingston~~ **Berrien.**

(c) ~~Macomb~~ **Kent.**

(d) ~~Monroe~~ **Livingston.**

(e) ~~Muskegon~~ **Macomb.**

(f) ~~Oakland~~ **Monroe.**

(g) ~~Ottawa~~ **Muskegon.**

(h) ~~St. Clair~~ **Oakland.**

(i) ~~Washtenaw~~ **Ottawa.**

(j) ~~Wayne~~ **St. Clair.**

(k) Washtenaw.

(l) Wayne.

(2) All stationary and portable mixing tanks and high-speed dispersion mills **must** ~~shall~~ be equipped with covers that completely cover the tank or mill opening, except for an opening which is no larger than necessary to allow for safe clearance for the mixer shaft. The tank opening **must** ~~shall~~ be covered at all times, except when operator access is necessary.

(3) The cleaning of paint manufacturing equipment and paint shipping containers **must** ~~shall~~ be done by methods and materials that minimize the emission of volatile organic compounds.

These methods and materials ~~shall~~ **must** include 1 of the following:

(a) Hot alkali or detergent cleaning.

(b) High-pressure water cleaning.

(c) Cleaning by use of an organic solvent if the equipment being cleaned is completely covered or enclosed, except for an opening that is no larger than necessary to allow for safe clearance considering the method and materials being used.

(4) Wash solvent **must** ~~shall~~ be stored only in closed containers.

(5) The provisions of this rule do not apply to tanks or equipment which, pursuant to the provisions of this subrule that were in effect on April 19, 1989, was exempt from the provisions of this rule that were in effect on April 19, 1989, but which are now subject to the provisions of this rule, until 1 year after the effective date of this rule.

R 336.1631 Emission of volatile organic compounds from existing process equipment utilized in manufacture of polystyrene or other organic resins.

Rule 631. (l) ~~After December 31, 1989, a~~ **A** person shall not cause or allow the emission of volatile organic compounds from existing process equipment that is utilized in the manufacturing of polystyrene or other organic resins located in any of the following counties, unless all of the provisions of subrules (2) to (10) of this rule are met or unless an equivalent control method, as approved by the department **under R 336.1602(2)**, is implemented:

(a) ~~Kent~~ **Western portion of Allegan.**

(b) ~~Livingston~~ **Berrien.**

(c) ~~Macomb~~ **Kent.**

(d) ~~Monroe~~ **Livingston.**

(e) ~~Muskegon~~ **Macomb.**

(f) ~~Oakland~~ **Monroe.**

(g) ~~Ottawa~~ **Muskegon.**

(h) ~~St. Clair~~ **Oakland.**

(i) ~~Washtenaw~~ **Ottawa.**

(j) ~~Wayne~~ **St. Clair.**

(k) Washtenaw.

(l) Wayne.

(2) The emission of volatile organic compounds from existing material recovery equipment that is utilized in the manufacture of polystyrene resin by a continuous process **must** ~~shall~~ not be more than 0.12 pounds per 1,000 pounds of polystyrene resin produced.

(3) A person shall not operate an existing reactor, thinning tank, or blending tank that is utilized in the manufacture of a completed organic resin unless either of the following provisions is complied with:

(a) All volatile organic compounds emitted from existing reactors, thinning tanks, and blending tanks **must** ~~shall~~ be vented to control equipment that is designed and operated to reduce the quantity of volatile organic compounds by not less than 95 weight percent. Reflux condensers that are essential to the operation of the resin reactor are not considered to be control equipment.

(b) The total volatile organic compounds emitted to the atmosphere from the reactors, thinning tanks, and blending tanks do not exceed 0.5 pounds per 1,000 pounds of completed organic resin produced.

(4) Notwithstanding the provisions of subrule (3) of this rule, a person shall not operate an existing reactor, thinning tank, or blending tank utilized in the manufacture of a dry organic resin at the Solutia, Inc. of Trenton unless ~~either~~ **1** of the following provisions is complied with:

(a) All volatile organic compounds emitted from existing reactors, thinning tanks, and blending tanks **must** ~~shall~~ be vented to control equipment that is designed and operated to reduce the quantity of volatile organic compounds by not less than 95 weight percent. Reflux condensers that are essential to the operation of the resin reactor are not considered to be control equipment.

(b) The total volatile organic compounds emitted to the atmosphere from the reactors, thinning tanks, and blending tanks do not exceed 2.6 pounds per 1,000 pounds of dry organic resin produced.

(5) Compliance with the emission limits specified in subrules (2), (3), and (4) of this rule **must** ~~shall~~ be determined using the method described in R 336.2060 or an alternate method acceptable to the department. Upon request by the department, a person ~~who~~ **that** is responsible for processes that are subject to the provisions of subrule (2), (3), or (4) of this rule shall submit, to the department, test data necessary for a determination of compliance.

(6) Compliance with the emission limits specified in subrules (2), (3), and (4) of this rule **must** ~~shall~~ be determined using the method described in R 336.2060 or an alternate method acceptable to the department **under R 336.1602(2)**. Upon request by the department, a person ~~who~~ **that** is responsible for processes that are subject to the provisions of subrule (2), (3), or (4) of this rule shall submit, to the department, test data necessary for a determination of compliance~~.~~ **including, but not limited to, the following:**

(a) Emissions test data.

(b) Material balance calculations.

(c) Process production rates.

(d) Control equipment specifications and operating parameters.

(7) A person ~~who~~ **that** is responsible for the operation of existing process equipment that is subject to the provisions of this rule shall submit, to the department, a written program for compliance with this rule or evidence of compliance with this rule. The written program for compliance ~~shall~~ **must** be submitted to the department before October 19, 1989.

(8) The program required by subrule (7) of this rule ~~shall~~ **must** include the method by which compliance with this rule ~~shall~~ **must** be achieved, a description of new equipment to be installed or modifications to existing equipment to be made, and a timetable that specifies, at a minimum, all of the following dates:

(a) The date or dates equipment ~~shall~~ **must** be ordered.

(b) The date or dates construction, modification, or process changes **must** ~~shall~~ begin.

(c) The date or dates initial start-up of equipment **must** ~~shall~~ begin.

(d) The date or dates final compliance **must** ~~shall~~ be achieved.

(9) A person may discontinue the operation of a natural gas-fired afterburner ~~, which~~ **that** is used to achieve compliance with the emission limits in this rule, between November 1 and March 31**,** unless the afterburner is used to achieve compliance with, or is required by, any of the following:

(a) ~~Any other~~ **Another** provision~~s~~ of these rules.

(b) A permit to install.

(c) A permit to operate.

(d) A voluntary agreement.

(e) A performance contract.

(f) A stipulation.

(g) An order of the department.

(10) If the operation of a natural gas-fired afterburner is discontinued between November 1 and March 31 pursuant to the provisions of subrule (9) of this rule, then both of the following provisions ~~shall~~ apply during this time period:

(a) All other provisions of this rule, except for the emission limits,~~ shall~~ remain in effect.

(b) All other measures that are used to comply with the emission limits in this rule between April 1 and October 31 ~~shall~~ **must** continue to be used.

R 336.1632 Emission of volatile organic compounds from existing automobile, truck, and business machine plastic part coating lines.

Rule 632. (1) A person shall not cause or allow the emission of volatile organic compounds from an automobile, truck, or business machine plastic part coating line in any of the following counties unless all of the provisions of subrules (2) to (~~2~~1**4**) of this rule are met**, as applicable**:

(a) ~~Kent~~ **Western portion of Allegan.**

(b) ~~Livingston~~ **Berrien.**

(c) ~~Macomb~~ **Kent.**

(d) ~~Monroe~~ **Livingston.**

(e) ~~Muskegon~~ **Macomb.**

(f) ~~Oakland~~ **Monroe.**

(g) ~~Ottawa~~ **Muskegon.**

(h) ~~St. Clair~~ **Oakland.**

(i) ~~Washtenaw~~ **Ottawa.**

(j) ~~Wayne~~ **St. Clair.**

(k) Washtenaw.

(l) Wayne.

~~(2) After December 31, 1989, and until December 31, 1992, a person shall not cause or allow the emission of volatile organic compounds from the coating of plastic parts of automobiles and trucks from any existing coating line in excess of the applicable emission rates as specified in table 65.~~

(~~2~~3) **The** ~~After December 31, 1992, both of the~~ following provisions **must** ~~shall~~ be met:

(a) A person shall not cause or allow the emission of volatile organic compounds from the coating of plastic parts of automobiles and trucks from any existing coating line in excess of the applicable emission rates as specified in table 66.

(b) Except as provided for in subrule (1~~6~~**0**) of this rule, any coating that is subject to an emission rate specified in table 66 **must** ~~shall~~ not be applied with conventional air-atomizing spray equipment. All spray equipment **must** ~~shall~~ be installed, maintained, and operated in accordance with the recommendations and design of the equipment manufacturer.

~~(4) After December 31, 1991, both of the following provisions shall be met:~~

(**c**~~a~~) A person shall not cause or allow the emission of volatile organic compounds from the coating of plastic parts of business machines from any existing coating line in excess of the applicable emission rates as specified in table 67.

(**d**~~b~~) Except as provided for in subrule (1~~6~~**0**) of this rule, any prime or topcoat coating that is subject to the emission rate specified in table 67 **must** ~~shall~~ not be applied with air-atomizing spray equipment. All spray equipment **must** ~~shall~~ be installed, maintained, and operated in accordance with the recommendations and design of the equipment manufacturer.

(**3**~~5~~) If a part consists of both plastic and metal surfaces and is exempted from the provisions of R 336.1621 **or R 336.1621a** based on the provisions of R 336.1621(9)(e) **and R 336.1621a(2)(b)(ii) respectively,** the part **is** ~~shall be~~ subject to this rule.

(**4**~~6~~) If a coating line is subject to the provisions of R 336.1610**, R 336.1610a, R 336.1621,** or R 336.1621**a**, the coating line ~~shall be~~ **is** exempt from this rule.

(**5**~~7~~) A person ~~who~~ **that** is responsible for the operation of a coating line that is subject to this rule shall obtain current information and maintain daily records necessary for a determination of compliance with the provisions of this rule, as required in R 336.2041.

(**6**~~8~~) For each coating line, compliance with the emission limits specified in this rule ~~shall be~~ **is** based upon all of the following:

(a) The volume-weighted average of all coatings ~~which~~ **that** belong to the same coating category and ~~which~~ are used during each calendar day averaging period. The **department** ~~commission~~ may specifically authorize compliance**, under R 336.1602(2),** to be based upon a longer averaging period, **not to exceed** ~~which shall not be~~ more than 1 calendar month.

(b) If coatings belonging to more than 1 coating category are used on the same coating line during the specified averaging period, then compliance **must** ~~shall~~ be determined separately for each coating category.

(c) The information and records as required by subrule (**5**~~7~~) of this rule.

(**7**~~9~~) Compliance with the emission limits specified in ~~this rule shall be determined using the following methods:~~

~~(a) For the emission limits specified in~~ subrule~~s~~ (2) ~~to (4)~~ of this rule, the method described in either R 336.2040(12)(a) if the coating line does not have an add-on emissions control device or R 336.2040(12)(b) if the coating line has 1 or more add-on emissions control devices.

~~(b) For the emission limits established pursuant to the provisions of subrule (13) or (14) of this rule, the method described in R 336.2040(12) that is applicable to the form of these established emission limits.~~

~~(10) A person who is responsible for the operation of an existing coating line that is subject to the provisions of this rule shall submit, to the commission, an acceptable written program for compliance with, or evidence of compliance with, the provisions of subrules (3) and (4) of this rule. This evidence shall include available emission test data,~~

~~material balance calculations, control equipment specifications, or other information that demonstrates compliance. The written program for compliance or evidence of compliance shall be submitted to the commission according to the following schedule:~~
~~(a) Before July 1, 1990, for compliance with the provisions of subrule (4) of this rule.~~
~~(b) Before July 1, 1991, for compliance with the provisions of subrule (3) of this rule.~~
~~(11) The program for compliance that is required by the provisions of subrule (10) of this rule shall include the method by which compliance with this rule shall be achieved, a description of the new equipment to be installed or modifications to existing equipment to be made, and a timetable that specifies, at a minimum, all of the following dates:~~
~~(a) The date or dates equipment shall be ordered.~~
~~(b) The date or dates construction, modification, or process changes shall begin.~~
~~(c) The date or dates initial start-up of equipment shall begin.~~
~~(d) The date or dates final compliance shall be achieved if the date or dates are not the same as the date or dates specified in subdivision (c) of this subrule.~~

(**8**~~12~~) A modification of coating applicator equipment for the primary purpose of achieving compliance with~~the provisions of~~ subrules ~~(3)(b) and (4)(b)~~ **(2)(b) and (d)** of this rule, to the extent that ~~such~~ **the** modification does not increase the potential to emit, ~~shall~~ **must** not be subject to the provisions of R 336.1220 and R 336.1702.

~~(13) As part of the compliance program required by the provisions of subrule (10) of this rule, a person who is responsible for the operation of a coating line that is subject to this rule may request alternate provisions to those specified in this rule. The commission may establish alternate provisions for a period of time to be specified by the commission if all of the following conditions are met:~~
~~(a) The coating line that is subject to the alternate provisions is in compliance, or on a legally enforceable schedule of compliance, with the other rules of the commission.~~
~~(b) Compliance with the provisions of this rule is not technically or economically reasonable.~~
~~(c) All measures that are both technically feasible and economically reasonable to reduce volatile organic compound emissions as required by this rule have been implemented in accordance with, or will be implemented in accordance with, a schedule approved by the commission. All alternate provisions approved by the commission shall become part of a legally enforceable order or part of an approved permit to install or operate.~~
~~(14) The program for compliance that is required by the provisions of subrule (10) of this rule may address a combination of coating lines that are subject to the provisions of this rule, or 1 or more coating lines that are subject to the provisions of this rule in combination with 1 or more existing sources that are subject to the provisions of other rules of this part, if all of the following conditions are met:~~
~~(a) All of the requirements specified in the United States Environmental Protection Agency's emissions trading policy statement, 51 F.R. 43814, December 4, 1986, adopted by reference in R 336.1902, are met.~~
~~(b) All existing sources are within the same stationary source.~~
~~(c) The total volatile organic compound emissions do not exceed the sum of the emissions allowed from each existing source using calculation methods acceptable to the commission and incorporating all of the requirements of the emissions trading policy statement.~~

~~(d) Emission reductions are accomplished in the time interval required for individual existing sources.~~

~~(e) All emission limits established by this program become part of a legally enforceable order of the commission, permit to install, or permit to operate.~~

(**9**~~15~~) The provisions of this rule, with the exception of the provisions of subrule (**5**~~7~~) of this rule, do not apply to any of the following:

(a) Automobile, truck, or business machine plastic part coating lines which are within a stationary source located within the 2015 ozone nonattainment areas and have a combined actual emission rate of volatile organic compounds of less than or equal to 15 pounds per calendar day.

(b~~a~~**) Automobile, truck, or business machine p**~~P~~lastic coating lines within any stationary source **located in Ottawa, the eastern portion of Muskegon as defined in R 336.1601, or Kent Counties and** that have a total combined emission rate of volatile organic compounds from plastic coating lines of less than 30 tons per calendar year. The total combined emission rate **must** ~~shall~~ include emissions from coatings and coating operations exempted from this rule. If the total combined emissions equal or exceed 30 tons in any subsequent year, the provisions of this rule ~~shall thereafter~~ permanently appl~~y~~**ies** to these plastic coating lines **for as long as the applicable equipment is in operation**.

(**c**~~b~~) The application of adhesion primes.

(**d**~~c~~) The application of electrostatic prep coats.

(**e**~~d~~) The application of resist coats.

(**f**~~e~~) The application of stencil coats.

(**g**~~f~~) The application of texture coats to automobile or truck parts.

(**h**~~g~~) The application of vacuum metalizing coatings.

(**i**~~h~~) The application of gloss reducer.

(**j**~~i~~) A**n automobile, truck, or business machine** plastic part coating operation **located in Ottawa, the eastern portion of Muskegon, or Kent Counties** consisting of an applicator and any subsequent flash-off area or oven, or both, from which the total emission rate of volatile organic compounds is equal to or less than 2,000 pounds per calendar month and 10.0 tons per calendar year. The total combined emission rate of volatile organic compounds from these exempted operations at a stationary source ~~shall~~ **must** not be more than 30.0 tons per calendar year. If the total emission rate for an operation is more than 2,000 pounds in any subsequent month or 10 tons per year in a subsequent year, the provisions of this rule ~~shall thereafter~~ permanently apply to these **automobile, truck, or business machine** plastic part coating operations **for as long as the applicable equipment is in operation**.

(**k**~~j~~) Low-use coatings that total 55 gallons or less per rolling 12-month period at a stationary source.

(1**0**~~6~~) The provisions of ~~subrules (3)(b) and (4)(b)~~ **subrule (2)(b) and (d)** of this rule do not apply to the equipment used in any of the following:

(a) The application of the final coat of metallic topcoat.

(b) The application of waterborne coatings.

(c) The application of touch-up and repair coatings.

(d) Coating operations controlled by add-on emission controls.

(e) Coating operations for which an acceptable demonstration has been made that conventional air-atomizing spray equipment is the only technically feasible application method.

(f) Other coating operations that together account for a total of 20% or less of the total volume of coatings applied by nonexempt coating application equipment calculated on a calendar day basis.

(11~~7~~) A person may discontinue the operation of a natural gas-fired afterburner, ~~which~~ **that** is used to achieve compliance with the emission limits in this rule, between November 1 and March 31 unless the afterburner is used to achieve compliance with, or is required by, any of the following:

(a) ~~Any other~~ **Another** provision~~s~~ of these rules.

(b) A permit to install.

(c) A permit to operate.

(d) A voluntary agreement.

(e) A performance contract.

(f) A stipulation.

(g) An order of the **department** ~~commission~~.

(12~~8~~) If the operation of a natural gas-fired afterburner is discontinued between November 1 and March 31 pursuant to the provisions of subrule (11~~7~~) of this rule, then both of the following provisions apply during this time period:

(a) All other provisions of this rule, except for the emission limits, ~~shall~~ remain in effect.

(b) All other measures that are used to comply with the emission limits in this rule between April 1 and October 31 ~~shall~~ **must** continue to be used.

~~(19) Table 65 reads as follows:~~

~~Table 65~~

~~Volatile organic compound emission limitations for existing automobile and truck plastic parts coating lines after 12/31/89~~

~~Coating category~~	~~Pounds of volatile organic compounds allowed to be emitted per gallon of coating (minus water) as applied~~
~~1. High bake coating exterior and interior parts[1,2]~~	
~~(a) Prime~~	
~~(i) Flexible coating~~	~~5.0~~
~~(ii) Nonflexible coating~~	~~4.0~~
~~(b) Topcoat~~	
~~(i) Basecoat~~	~~4.6~~
~~(ii) Clearcoat~~	~~4.3~~
~~(iii) Non-basecoat/clearcoat~~	~~4.7~~
~~2. Air dried coating exterior parts[3]~~	
~~(a) Prime[1]~~	~~6.1~~

~~(b)Topcoat~~	
~~(i) Basecoat~~	~~5.8~~
~~(ii) Clearcoat~~	~~5.4~~
~~(iii) Non-basecoat/clearcoat~~	~~6.3~~
~~3. Air-dried coating--interior parts[3]~~	~~6.3~~
~~4. Touch-up and repair[3]~~	~~6.3~~

~~[1]For red and black coatings, the emission limitation shall be determined by multiplying the appropriate limit in this table by 1.15.~~

~~[2]When 40 C.F.R. Part 60, Appendix A, Method 24 is used to determine the volatile organic compound content of a coating, the applicable emission limitation shall be determined by adding 0.5 to the appropriate limit in this table.~~

~~[3]When 40 C.F.R. Part 60, Appendix A, Method 24 is used to determine the volatile organic compound content of a coating, the applicable emission limitation shall be determined by adding 0.1 to the appropriate limit in this table.~~

(~~20~~**13**) Table 66 reads as follows:

~~Table~~ **TABLE** 66

Volatile organic compound emission limitations for existing automobile and truck plastic parts coating lines ~~after 12/31/92~~

Coating category	Pounds of volatile organic compounds allowed to be emitted per gallon of coating (minus water) as applied
1. High bake coating--exterior and interior parts[1,2]	
(a) Prime	
(i) Flexible coating	4.5
(ii) Nonflexible coating	3.5
(b) Topcoat	
(i) Basecoat	4.3
(ii) Clearcoat	4.0
(iii) Non-basecoat/clearcoat	4.3
2. Air-dried coating--exterior parts[1,3]	
(a) Prime	4.8
(b) Topcoat	
(i) Basecoat	5.0
(ii) Clearcoat	4.5
(iii) Non-basecoat/clearcoat	5.0
3. Air-dried coating—interior parts[1,3]	5.0
4. Touch-up and repair[3]	5.2

[1]For red and black coatings, the emission limitation **must** ~~shall~~ be determined by multiplying the appropriate limit in this table by 1.15.

[2]When 40 **CFR** ~~C.F.R.~~ ~~P~~**p**art 60, ~~A~~**a**ppendix A, ~~M~~**m**ethod 24 is used to determine the volatile organic compound content of a coating, the applicable emission limitation **must** ~~shall~~ be determined by adding 0.5 to the appropriate limit in this table.

[3]When 40 **CFR** ~~C.F.R.~~ ~~P~~**p**art 60, ~~A~~**a**ppendix A, ~~M~~**m**ethod 24 is used to determine the volatile organic compound content of a coating, the applicable emission limitation **must** ~~shall~~ be determined by adding 0.1 to the appropriate limit in this table.

(~~2~~1**4**) Table 67 reads as follows:

~~Table~~ **TABLE** 67

Volatile organic compound emission limitations for existing business machine plastic parts coating lines ~~after 12/31/91~~

Coating category	Pounds of volatile organic compounds allowed to be emitted per gallon of coating (minus water) as applied
1. Prime	2.9
2. Topcoat	2.9
3. Texture coat	2.9
4. Fog coat	2.2
5. Touch-up and repair	2.9

R 336.1633 Emission of volatile organic compounds from existing plastic parts and products surface coating; and pleasure craft coating operations in 2015 ozone nonattainment areas.

Rule 633. (1) As used in this rule:

(a) "Pleasure craft" means vessels that are manufactured or operated primarily for recreational purposes, or leased, rented, or chartered to a person for recreation purposes. The person responsible for the vessels is responsible for certifying that the intended use is for recreational purposes.

(b) "Pleasure craft surface coating" means any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

(2) A person shall not cause or allow the emission of any volatile organic compound from the surface coating of miscellaneous plastic parts and products, or pleasure craft coatings in excess of the limitations of this rule in miscellaneous plastic parts and products operations or pleasure craft operations from any existing source located within the 2015 ozone nonattainment area, in excess of the applicable emission rates provided in subrule (4) of this rule.

(3) The provisions of this rule do not apply to the following:

(a) With the exception of the requirements in subrule (6) of this rule, miscellaneous plastic parts or pleasure craft coating lines within any stationary source and that have a total combined actual emission rate of volatile organic compounds, including related cleaning activities, of less than 15 pounds per day before consideration of controls. If the combined actual emission rate equals or is

more than 15 pounds per day for a subsequent day, then this rule permanently applies to these coating lines.

(b) The portion of a plastic parts and products surface coating and pleasure craft coating operations that is addressed in R 336.1610, R 336.1610a, R 336.1620, R 336.1620a, R 336.1635, R 336.1636, R 336.1637, R 336.1638, and R 336.1639.

(c) Gel coats applied to fiber-reinforced plastic (fiberglass composite) products.

(d) Body fillers and putties used to repair surface defects in fiberglass composite parts, or putties used to bond fiberglass composite parts together.

(e) The following plastic parts coatings processes are exempt from subrule (4) of this rule:

(i) Touch-up and repair coatings.

(ii) Stencil coatings applied on clear or transparent substrates.

(iii) Clear or translucent coatings.

(iv) Coatings applied at a paint manufacturing facility while conducting performance tests on the coatings.

(v) Any individual coating category used in volumes less than 50 gallons in any 1 year, if substitute compliant coatings are not available, if the total usage of all coatings does not exceed 200 gallons per year, per facility.

(vi) Reflective coating applied to highway cones.

(vii) Mask coatings that are less than 0.5 millimeter thick (dried) and the area coated is less than 25 square inches.

(viii) Electromagnetic interference/radio frequency interference shielding coatings.

(ix) Heparin-benzalkonium chloride containing coatings applied to medical devices, if the total usage of all such coatings does not exceed 100 gallons per year, per facility.

(4) A person shall not cause or allow the emission of any volatile organic compound from surface coatings from plastic parts and product operations or from surface coatings from pleasure craft operations, unless the following provisions are met:

(a) A person responsible for the coating line engaged in the surface coating of existing miscellaneous plastic parts and products, and surface coating of pleasure crafts in the 2015 ozone nonattainment areas shall limit volatile organic compound emissions from all volatile organic compound-containing materials, such as coatings, thinners, and other additives, used by each miscellaneous plastic parts and products, and pleasure craft surface coating line by complying with either subdivision (c), (d), or (e) of this subrule.

(b) A person subject to this rule shall not apply volatile organic compound-containing coatings to existing miscellaneous plastic parts and products, or pleasure craft surfaces subject to the provisions of this rule, unless the coating is applied with properly operating equipment according to an operating procedure specified by the equipment manufacturer, executive officer, or designee, and by the use of 1 of the following methods:

(i) Electrostatic attraction.

(ii) Flow coat.

(iii) Dip coat.

(iv) Roll coater.

(v) High-Volume, Low-Pressure (HVLP) Spray.

(vi) Airless spray.

(vii) Air-assisted airless spray.

(viii) A person subject to this rule may request, in writing to the department, and the department may approve, other coating application methods that demonstrate the capability of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying.

(c) A miscellaneous plastic parts coating and pleasure craft coating operation must not cause or allow the emission of volatile organic compounds from the coating of metallic surfaces from any plastic parts or pleasure craft coating line in any of the 2015 ozone nonattainment areas in excess of the applicable content limits, expressed in terms of mass of volatile organic compound per volume of coating excluding water and exempt compounds, as applied, as specified in table 68 and table 68-a, or emission rates expressed in terms of mass of volatile organic compound per volume of solids as applied, as specified in table 68-b and table 68-c:

TABLE 68

Plastic Parts and Products Volatile Organic Compound Content Limits

Coating Category	lbs VOC/gal coating
General 1 Component	2.3
General Multi Component	3.5
Electric Dissipating Coatings and Shock-Free Coatings	6.7
Extreme Performance	3.5 (2-pack coatings)
Metallic	3.5
Military Specification	2.8 (1-pack) 3.5 (2-pack)
Mold-Seal	6.3
Multi-colored Coatings	5.7
Optical Coatings	6.7
Vacuum-Metalizing	6.7

TABLE 68-a

Pleasure Craft Surface Coating Volatile Organic Compound Content Limits

Coating Category	lbs VOC/gal coating Before January 1, 2026	lbs VOC/gal coating On or after January 1, 2026
Extreme High Gloss Topcoat	5.0	4.1
High Gloss Topcoat	3.5	3.5
Pretreatment Wash Primers	6.5	6.5
Finish Primer/Surfacer	5.0	3.5
High Build Primer Surfacer	2.8	2.8

Aluminum Substrate Antifoulant Coating	**4.7**	**4.7**
Other Substrate Antifoulant Coating	**3.4**	**2.8**
All other pleasure craft surface coatings for metal or plastic	**3.5**	**3.5**

TABLE 68-b

Plastic Parts and Products Volatile Organic Compound Emission Rate Limits

Coating Category	**lbs VOC/gal solids**
General 1 Component	**3.35**
General Multi Component	**6.67**
Electric Dissipating Coatings and Shock-Free Coatings	**74.7**
Extreme Performance	**6.67 (2-pack coatings)**
Metallic	**6.67**
Military Specification	**4.52 (1-pack)** **6.67 (2-pack)**
Mold-Seal	**43.7**
Multi-colored Coatings	**25.3**
Optical Coatings	**74.7**
Vacuum-Metalizing	**74.7**

TABLE 68-c

Volatile organic compound emissions limitations for existing pleasure craft surface coating lines.

Coating Category	**lbs VOC/gal solids** **Before January 01, 2026**	**lbs VOC/gal solids** **On or after January 01, 2026**
Extreme high gloss topcoat	**15.5**	**9.2**
High gloss topcoat	**6.7**	**6.7**
Pretreatment wash primers	**55.6**	**55.6**
Finish primer/surfacer	**15.5**	**6.7**
High build primer surfacer	**4.6**	**4.6**
Aluminum substrate antifoulant coating	**12.8**	**12.8**
Other substrate antifoulant coating	**6.3**	**4.4**
All other pleasure craft surface coatings for metal or plastic	**6.7**	**6.7**

(d) A miscellaneous plastic parts coating and pleasure craft coating operation applicable to this rule can choose to use an equivalent volatile organic compound emission rate limit based on the use of a combination of low-volatile organic compound coatings specified in table 68 to table 68-c, specified methods of application specified under subdivision (b) of this subrule, and add-on controls. The overall emission reduction efficiency needed to demonstrate compliance is determined each day as follows:

(i) Obtain the emission limitation from table 68 to table 68-c. If using the pound of volatile organic compound per gallon of coating, excluding water, as applied limit from table 68 or table 68-b, then calculate the emission limitation in a solids basis according to the following equation:

$$S = C / [1 – (C/7.36 \text{ lb/gal})]$$

Where:

S = The volatile organic compound emission limitation in terms of pound of volatile organic compound per gallon of coating solids.

C = The volatile organic compound emission limitation in terms of pound of volatile organic compound per gallon of coating, (excluding water) as applied.

(ii) Calculate the required overall emission reduction efficiency of the control system for the day according to the following equation:

$$E = [(VOC_a – S)/VOC_a] \times 100$$

Where:

E = The required overall emission reduction efficiency of the control system for the day.

VOC_a = The maximum VOC content of the coatings, as applied, used each day on the subject coating line, in units of lb VOC/gal coating solids, as determined by the applicable test methods and procedures specified in subdivision (h) of this subrule.

S = The volatile organic compound emission limitation in terms of pound of volatile organic compound per gallon of coating solids.

(e) Should product performance requirements or other needs dictate the use of higher-volatile organic compound materials than those that would meet the recommended emission limits, a facility can choose to use add-on control equipment that must have an overall control efficiency of 90% or higher instead of using low-volatile organic compound coatings and specified application methods.

(f) For each coating line, compliance with the emission limits specified in this rule is based upon all of the following:

(i) The volume-weighted average of all coatings that belong to the same coating category, and are used during each calendar day averaging period. The department may specifically authorize compliance, under R 336.1602(2), to be based upon a longer averaging period, not to exceed more than 1 calendar month.

(ii) If coatings belonging to more than 1 coating category are used on the same coating line during the specified averaging period, then compliance must be determined separately for each coating category.

(iii) The information and records as required by subrule (6) of this rule.

(g) Compliance with the emission limits specified in subrule (4) of this rule, must be determined using the method described in either R 336.2040(12)(a) if the coating line does not have an add-on emissions control device or R 336.2040(12)(b) if the coating line has 1 or more add-on emissions control devices.

(5) The following work practices are required for storage, mixing operations, and handling operations for coatings, thinners, cleaning, and coating-related waste materials. The person responsible for a miscellaneous plastic parts coating and pleasure craft coating operation shall develop written procedures for compliance with the following provisions:

(a) Store all volatile organic compound-containing coatings, thinners, coating-related waste, and cleaning materials in closed containers.

(b) Ensure that mixing and storage containers used for volatile organic compound-containing coatings, thinners, coating-related waste, and cleaning materials are kept closed at all times, except when depositing or removing these materials.

(c) Minimize spills of volatile organic compound-containing coatings, thinners, coating-related waste, and cleaning materials.

(d) Convey volatile organic compound-containing coatings, thinners, coating-related waste, and cleaning materials from 1 location to another in closed containers or pipes.

(e) Minimize volatile organic compound emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(6) A person that is responsible for the operation of a coating line that is subject to this rule shall obtain current information and maintain daily records necessary for the determination of compliance with the provisions of this rule, as required in R 336.2041.

R 336.1634 Emissions of volatile organic compounds from existing industrial solvent cleaning in 2015 ozone nonattainment areas.

Rule 634. (1) As used in this rule, "composite partial vapor pressure" means the sum of the partial pressures of the VOC compounds in a solvent.

(2) A person shall not cause or allow the emission of any volatile organic compound from the use of solvent materials in excess of the limitations of this rule in solvent cleaning operations, which are described as follows:

(a) Released during the production, repair, maintenance, or servicing of parts, products, tools, machinery, equipment or in general work areas including storage or disposal of these solvent materials.

(b) Located in the 2015 ozone nonattainment area.

(3) With the exception of subrule (6) of this rule, the provisions of this rule do not apply to the following activities:

(a) Janitorial cleaning.

(b) Stripping of cured coatings, cured ink, or cured adhesives.

(c) Cleaning operations in printing pre-press or graphic areas including lithographic, letterpress, flexographic, screen printing, and rotogravure printing operations.

(d) Cleaning operations associated with digital printing.

(e) Cleaning operations for which limits or work practice standards are contained within R 336.1610, R 336.1610a, R 336.1620, R 336.1620a, R 336.1621, R 336.1621a, R 336.1624, R 336.1624a, R 336.1632, R 336.1633, R 336.1635, R 336.1636, R 336.1637, R 336.1638, and R 336.1639.

(f) Cleaning operations at a facility with emissions less than 3 tons per rolling 12-month period for all cleaning activity, before consideration of controls. If the combined actual emission rate equals or is more than 3 tons per year on a 12-month rolling basis before consideration of controls, as determined in a subsequent month, then this rule permanently applies to the cleaning operations at that facility.

(4) A person that generates volatile organic compound from the use of industrial cleaning solvent shall meet the following provisions:

(a) The volatile organic compound emissions from the process must meet 1 of the following:

(i) The solvent or solvent solutions must have a volatile organic compound composite partial vapor pressure of less than or equal to 8 mm of Hg at 20 degrees Celsius.

(ii) The process must have an emission rate of 0.42 pounds of volatile organic compounds per gallon as applied, except as described for the solvent cleaning operations listed in table 68-d.

TABLE 68-d

Solvent Cleaning Operation	Pounds of volatile organic compounds allowed to be emitted per gallon as applied
(i.) Product cleaning during manufacturing process or surface preparation for coating, adhesive, or ink application:	
1. Electrical apparatus components and electronic components	**0.83**
2. Medical devices and pharmaceuticals	**6.7**
(ii.) Repair and maintenance cleaning:	
1. Electrical apparatus components and electronic components	**0.83**
2. Medical devices and pharmaceuticals:	
(i.) Tools, equipment, and machinery	**6.7**
(ii.) General work surfaces	**5.0**

(iii.) Cleaning of ink application equipment: **1. Publication gravure printing** **2. Screen printing** **3. Ultraviolet ink and electron beam ink application equipment, except screen printing** **4. Specialty flexographic printing**	 **0.83** **4.2** **5.4** **0.83**
(iv.) Exemptions from emissions limits in this subdivision: **1. Cleaning conducted as part of the following: performance laboratory tests on coatings, adhesives, or inks; research and development programs; and laboratory tests in quality assurance laboratories.** **2. Medical device and pharmaceutical facilities using up to 1.5 gallons per day of solvents.** **3. Cleaning with aerosol products if the source uses 1.25 gallons or less per day**	**N/A**

(b) A person subject to this rule shall utilize all of the following cleaning devices and methods as applicable:

(i) Wipe cleaning.

(ii) Closed containers or hand-held spray bottles from which solvents are applied without a propellant-induced force.

(iii) Cleaning equipment that has a solvent container that can be, and is closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during non-operation with the exception of maintenance and repair to the cleaning equipment itself.

(iv) Remote reservoir cleaner if the operator of the cleaner complies with all of the following:

(A) Prevents solvent vapors from escaping from the solvent container by using such devices as a cover or valve when the remote reservoir is not being used, cleaned, or repaired.

(B) Directs solvent flow in a manner that prevents liquid solvent from splashing outside of the remote reservoir cleaner.

(C) Does not clean porous or absorbent materials, such as cloth, leather, wood, or rope.

(D) Uses only solvent containers and auxiliary equipment free of all liquid leaks. visible tears, or cracks.

(v) Non-atomized solvent flow method where the cleaning solvent is collected in a container or a collection system that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container.

(vi) Solvent flushing method where the cleaning solvent is discharged into a container that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged

solvent from the equipment must be collected into containers without atomizing into the open air.

(c) Instead of complying with subdivisions (a) and (b) of this subrule for a solvent cleaning operation, a person that is subject to this rule may comply by installing and operating volatile organic compound emission control equipment for the solvent cleaning operation. The volatile organic compound emission control equipment must have an overall control efficiency of 85%.

(d) Instead of complying with subdivisions (a) and (b) of this subrule, a manufacturer of coatings, inks, resins, or adhesives may comply with subdivision (e) of this subrule or the following:

(i) Clean portable tables or stationary mixing vats, high dispersion mills, grinding mills, tote tanks, and roller mills by 1 or more of the following methods:

(A) Use a cleaning solvent that either contains less than 1.67 pounds per gallon of volatile organic compound or has a composite vapor pressure no more than 8 mm of Hg at 20 degrees Celsius.

(B) Comply with the following work practices:

(1) Equipment being cleaned must be maintained leak free.

(2) Volatile organic compound-containing cleaning materials must be drained from the cleaned equipment upon completion of cleaning.

(3) Volatile organic compound-containing cleaning materials, including waste solvent, must not be stored or disposed of in a manner that causes or allows evaporation into the atmosphere.

(4) Store all volatile organic compound-containing cleaning materials in closed containers.

(C) Collect and vent the emissions from equipment cleaning to a volatile organic compound emission control system that has an overall capture and control efficiency of not less than 85%, by weight, for the volatile organic compound emissions. If such a reduction is achieved by incineration, not less than 90% of the organic carbon must be oxidized to carbon dioxide.

(D) Use organic solvents other than those allowed in subdivision (f)(i) of this subrule provided no more than 60 gallons of fresh solvent must be used per month. Organic solvent that is reused or recycled, either on-site or off-site, for further use in equipment cleaning or the manufacture of coating, ink, or adhesive must not be included in this limit. Also, store all volatile organic compound-containing cleaning materials in closed containers.

(ii) When using solvent for wipe cleaning, a person shall cover open containers used for the storage or disposal of cloth or paper impregnated with organic compounds that have been used for cleanup, or coating, ink, or adhesive removal.

(e) Work practices must be used to minimize volatile organic compound emissions from the use, handling, storage, and disposal of cleaning solvents and shop towels. Work practices must include, at a minimum, but not limited to, the following:

(i) All volatile organic compound-containing solvents used in solvent cleaning operations must be stored in non-absorbent, non-leaking containers which must be kept closed at all times except when filling or emptying.

(ii) Cloth and paper moistened with volatile organic compound-containing solvents must be stored in closed, non-absorbent, non-leaking containers.

(iii) Air circulation around cleaning operations must be minimized.

(f) Except as allowed by this subrule, a person shall not atomize any solvent unless the emissions are vented to volatile organic compound emission control equipment that meets subdivision (c) of this subrule. The following activities are allowed to atomize solvent without use of a control:

(i) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems.

(ii) Cleaning with spray bottles or containers described in subdivision (b)(ii) of this subrule.

(iii) Printing operations where the roller or blanket wash is applied automatically.

(5) Compliance with this rule must be determined as follows:

(a) For limits specified in subrule (4)(a) of this rule, compliance must be based upon all volatile organic containing compounds using manufacturers formulation data, United States Environmental Protection Agency method 24 analysis, safety data sheets, an alternate method, or combination of the methods stated within this subdivision, as approved by the department and in sufficient detail to demonstrate compliance with the limitations described in subrule (4) of this rule.

(b) If a person responsible for a solvent cleaning operation that is subject to this rule employs volatile organic compound emission control equipment to comply with this rule, pursuant to subrule (4)(c) of this rule:

(i) Compliance with required control efficiency limits must be determined by performing emission tests in accordance with a stack testing protocol approved by the department.

(ii) Additional testing of the volatile organic compound emission control equipment for a solvent cleaning operation in accordance with this rule may be required by the department to ensure continued compliance.

(c) As appropriate, the composite partial vapor pressure of solvents must be determined by using generally acceptable methods including, but not limited to, ASTM standards, commonly published materials and references, or standard chemical laws and calculations.

(6) A person operating a solvent cleaning operation shall obtain current information and maintain records for all requirements in sufficient detail to determine compliance and make the records available to the department upon request. The following methods must be used:

(a) The person operating a solvent cleaning operation that is subject to 1 or more of the volatile organic compound-content limitations or exemptions specified in subrule (4) of this rule shall collect and record the following information for each cleaning material subject to a volatile organic compound-content limitation as necessary to determine compliance with that limitation:

(i) The name and identification of each cleaning material and the associated solvent cleaning activity.

(ii) The volatile organic compound content, of each cleaning material, as determined in subrule (5) of this rule, in pounds per gallon of material, as employed

or the volatile organic compound composite partial vapor pressures of the solvents or solvent solutions used in the industrial cleaning operations.

(iii) The volume, in gallons, of each solvent employed in the solvent cleaning operation.

(iv) The total volume, in gallons, of all the solvents employed in the solvent cleaning operation.

(b) If a person operating a solvent cleaning operation employs a control device to achieve and maintain compliance, that person shall create and submit an approvable preventative maintenance and monitoring plan to the department which includes details about all appropriate parameters to be monitored and recordkeeping sufficient to determine compliance.

(c) A person exempting their solvent cleaning operations as allowed by subrule (3) of this rule shall maintain all information necessary to demonstrate, in sufficient detail, the applicability of those exemptions and must provide that information to the department upon request.

R 336.1635 Emission of volatile organic compounds from existing offset lithographic and letterpress printing lines in 2015 ozone nonattainment areas.

Rule 635. (1) As used in this rule:

(a) "Batch" means a supply of fountain solution that is prepared and used without alteration until completely used or removed from the printing process. Batch applies to solutions prepared in discrete batches or solutions that are continuously blended with automatic mixing units. A fountain solution that is continuously blended with an automatic mixing unit is considered to be the same batch until the recipe or mix ratio is changed.

(b) "Cleaning solution" means liquid solvents or solutions used to remove ink and debris from the operating surfaces of the printing press and its parts including blanket washes, roller washes, plate cleaners, metering roller cleaners, impression cylinder cleaners, rubber rejuvenators, and other cleaners used for cleaning a press, press parts, or to remove dried ink from the areas around a press. Cleaning solution does not include cleaners used on electronic components of a press, pre-press cleaning operations, post-press cleaning operations, cleaning supplies used to clean the floor of the area around a press, other than dried ink, or cleaning performed in parts washers or cold cleaners.

(c) "Letterpress printing line" means all operations of letterpress printing processes characterized by the image area being raised relative to the nonimage area and including, but not limited to, pre-press and post-press operations that support the activity. Varnishes, glues, and other coatings that are applied by an offset lithographic printing process are part of offset lithographic printing operations and are not considered as a separate process, for example, paper coating.

(d) "Non-heatset" means a lithographic printing process where the printing inks are set without the use of heat and dry by absorption or oxidation , or both. For the purposes of this rule, use of an infrared heater or printing conducted using ultraviolet-cured or electron beam-cured inks is considered non-heatset.

(e) "Offset lithographic printing line" means offset printing presses characterized by a planographic plate where the image and nonimage area are in the same geographical plane and the related processes necessary to directly support the operation of those offset lithographic printing processes including, but not limited to, pre-press and post-press operations. Varnishes, glues, and other coatings that are applied by an offset lithographic printing process are part of offset lithographic printing operations and are not considered as a separate process, for example, paper coating.

(f) "Printing process" means any equipment, operation, or system where printing ink or a combination of printing ink, surface coating, or adhesive is applied, dried, or cured. A printing process may include any equipment that applies, conveys, dries, or cures inks or surface coatings including, but not limited to, presses, digital output devices, fountain solutions, heaters, and dryers.

(2) A person shall not cause or allow the emission of any volatile organic compound from an offset lithographic and letterpress printing line located in the 2015 ozone nonattainment area, in excess of the applicable emission rates indicated in the following subrules, unless all of the applicable provisions of the following subrules are met.

(3) Except as provided in subrule (6) of this rule, the provisions of this rule do not apply to the following:

(a) All offset lithographic and letterpress printing operations, including cleaning activities, before consideration of controls, that have volatile organic compound emissions less than or equal to 3 tons per rolling 12-month period.

(b) In lieu of calculating emissions to establishing that the facility's total actual VOC emissions, before the application of control systems and devices, from all lithographic or letterpress printing operations (including emissions from cleaning solutions used on lithographic or letterpress printing presses and fountain solutions) are less than three tons of VOCs per rolling twelve-month period the owner or operator may monthly records of material usage demonstrating the following thresholds have not been exceeded:

Type of Letterpress or Offset Lithographic Printing Operation	12-Month Rolling Threshold
Sheet-fed only	768 gallons of cleaning solvent and fountain solution additives
Non-heatset Web only	768 gallons of cleaning solvent and fountain solution additives

Commented [GJ9]: It is not clear what this means so I suggest it should be deleted as it will cause confusion.

Commented [GJ10]: Please delete this once in always in provision as it is not supported by current EPA requirements. It is not in the CTG for offset lithographic printing or letterpress printing.

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Combination of Sheet-fed and Non-heatset Web	768 gallons of cleaning solvent and fountain solution additives.
Heatset Web only	5400 pounds of ink, cleaning solvent and fountain solution additives

A facility that employs a combination of printing technologies that includes a heatset web offset lithographic printing press may not use this option for demonstrating actual emissions are less than three tons of VOCs per rolling twelve-month period.

Commented [GJ11]: This allows smaller facilities to determine if the rule is applicable to them without having to perform complex emission calculations.

(b) One hundred and ten gallons of cleaning materials that do not meet either requirement in subrule (4)(e)(i) per rolling 12-month period used at the stationary source.

(c) The fountain solutions of sheet fed offset lithographic presses with a sheet size of 11 by 17 inches or smaller.

(d) The fountain solutions of any offset lithographic press with fountain solution reservoirs totaling less than 1 gallon.

(e) A person operating an offset lithographic and letter press printing line may exclude low-use inks or coatings that total 55 gallons or less per rolling 12-month period at a stationary source from the provisions of this rule, except for subrule (6) of this rule.

Commented [GJ12]: Exclude from what? The applicability determination?

(f) The following operations are exempt from add-on control requirements described in subrule (4) of this rule:

(i) Any heatset web offset lithographic press or heatset web letterpress with potential volatile organic compound emissions less than 25 tpy before control from the dryer.

In lieu of calculating emissions to establish that the heatset web offset lithographic or heatset web letterpress printing press potential VOC ink oil emissions, before control, from the press dryer of any heatset web offset lithographic printing press or heatset web letterpress printing press are less than twenty-five tons per year the owner or operator may maintain monthly records of material usage demonstrating the following threshold has not been exceeded:

Commented [GJ13]: This allows smaller facilities to determine if the rule is applicable to them without having to perform complex emission calculations.

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Threshold Heatset Only	12-Month Rolling Threshold
25 tons per press per year	62,500 pounds of ink and varnish

(ii) Any heatset web offset lithographic press or heatset web letterpress that is limited through a federally enforceable permit to actual volatile organic compound emissions from the dryer less than 25 tpy from the dryer.

(iii) Any heatset web offset lithographic or heatset letterpress press used for book printing with a web width of 22 inches or less.

(4) A person shall not cause or allow the emission of any volatile organic compound from an existing offset lithographic or letterpress printing line, unless the following

provisions are met or unless an equivalent control method, as approved by the department under R 336.1602(2), is implemented:

(a) Except as described in subrule (3) of this rule, a control system is required for dryer operations of heatset web offset lithographic printing and heatset letterpress printing operations. Each dryer must meet 1 of the following control requirements:

(i) 90% control efficiency for dryers installed before the effective date of this rule.

(ii) 95% control efficiency for dryers installed after the effective date of this rule.

(iii) Maintain a maximum outlet concentration of volatile organic compounds of 20 ppmv as hexane on a dry basis.

(b) The fountain solution used in a heatset web offset lithographic printing line has a volatile organic compound content that meets 1 of the following requirements:

(i) The fountain solution, as applied, must be at or below 1.6% alcohol by weight.

(ii) If refrigerated to below 60 degrees Fahrenheit, the fountain solution, as applied, must be at or below 3% alcohol by weight.

(iii) The fountain solution, as applied, must contain 5% or less of alcohol substitute and no alcohol.

(iv) Where it can be demonstrated to the satisfaction of the director that a subject offset lithographic printing press cannot be operated with fountain solutions meeting the limits in paragraph (b)(i), (b)(ii), or (b)(iii) of this rule for reasons of technological or economic feasibility the permitting authority may establish site-specific limits based upon evidence of technological or economic infeasibility subject to approval by USEPA as a state implementation plan revision.

Commented [GJ14]: The provides the printing operation some flexibility if they are not able to meet the fountain solution limits.

(c) The fountain solution used in a sheet-fed offset lithographic printing line must have a volatile organic compound content that meets 1 of the following requirements:

(i) The fountain solution, as applied, must be at or below 5% alcohol by weight.

(ii) If refrigerated to below 60 degrees Fahrenheit, the fountain solution, as applied, must be at or below 8.5% alcohol by weight.

(iii) Where it can be demonstrated to the satisfaction of the director that a subject offset lithographic printing press cannot be operated with fountain solutions meeting the limits in paragraph (c)(i) or (c)(ii) of this rule for reasons of technological or economic feasibility the permitting authority may establish site-specific limits based upon evidence of technological or economic infeasibility subject to approval by USEPA as a state implementation plan revision.

Commented [GJ15]: The provides the printing operation some flexibility if they are not able to meet the fountain solution limits.

(d) Nonheatset web offset lithographic printing press must be less than 5% alcohol substitute by weight on press and no alcohol in the fountain solution. Where it can be demonstrated to the satisfaction of the director that a subject offset lithographic printing press cannot be operated with fountain solutions meeting the limits in paragraph (d) of this rule for reasons of technological or economic feasibility the permitting authority may establish site-specific limits based upon evidence of technological or economic infeasibility subject to approval by USEPA as a state implementation plan revision.

Commented [GJ16]: The provides the printing operation some flexibility if they are not able to meet the fountain solution limits.

(e) The cleaning solutions used with printing lines subject to this rule must meet 1 of the following requirements:

(i) The cleaning solutions must have a volatile composite vapor pressure of less than 10 mm Hg at 20 degrees Celsius or be less than 70% volatile organic compound by weight.

(ii) All cleaning materials and used shop towels must be kept in closed containers.

(5) Compliance with the emission limits specified in this rule must be based upon all of the following provisions, as applicable:

(a) Compliance with required control efficiency limits must be determined by performing emission tests in accordance with (Reference the appropriate section in 1040 or 1041 and a stack testing protocol approved by the department.

(b) Compliance with the emission limits specified in subrule (4) of this rule must be based upon all volatile organic containing compounds used during each calendar month by using manufacturers' formulation data, United States Environmental Protection Agency method 24 analysis, safety data sheets, an alternate method, or combination of the methods stated within this subdivision, as approvable by the department and in sufficient detail to demonstrate compliance with the limitations described in subrule (4) of this rule.

(c) If more than 1 control option or emission limit listed in subrule (4) of this rule is used on a printing line, then compliance must be determined separately for each option used and be based upon all materials used for each option during each period.

(6) For the purpose of this rule, recordkeeping for all requirements and applicability demonstrations must be maintained in sufficient detail to demonstrate compliance with all applicable standards of the rule. Records must include, but are not limited to, the following:

(a) The volume and volatile organic compound content of each alcohol and alcohol substitute added to make the batch of fountain solution, based upon the approvable method described in subrule (5)(b) of this rule.

(b) The calculated volatile organic compound content of the final, mixed batch of solution, as applied.

(c) All cleaning solutions employed in all the offset lithographic and letterpress printing operations and quantities for those subject to subrule (3)(b), either composite vapor pressure or volatile organic compound contents as necessary to demonstrate compliance with subrule (4) of this rule.

(d) Monthly volatile organic compound emissions and materials usage as needed to demonstrate the emissions are below the thresholds described in subrule (3) of this rule.

(e) Approvable retention factors must be utilized for volatile organic compound content in absorptive printed substrates and shop towels used in cleaning and used in emission calculations and control efficiencies. For purposes of determining VOC emissions from offset lithographic printing operations, the following retention factors and capture efficiencies shall be used:

(i) A portion of the VOC contained in inks and cleaning solution is retained in the printed substrate or in the shop towels used for cleaning. The following retention

Commented [GJ17]: The only instance where the CTG requires records of solvent consumption to be kept are for the 110 gallons per 12 month rolling period for the solvents that don't meet either the vapor pressure or VOC content limit.

Commented [GJ18]: Monthly emission records would only be required to show that the facility is exempt from the requirements. Once applicable, the CTG does not require monthly emission records to be kept.

factors shall be used:

(a) **A twenty per cent VOC retention factor shall be used for heatset inks printed on absorptive substrates, meaning eighty per cent of the VOC in the ink is emitted during the printing process and is available for capture and control by an add-on pollution control device.**

(b) **A ninety-five per cent VOC retention factor shall be used for sheet-fed and non-heatset web inks printed on absorptive substrates, meaning five per cent of the VOC in the ink is emitted during the printing process.**

(c) **A fifty per cent VOC retention factor shall be used for cleaning solution VOC in shop towels for cleaning solutions with a VOC composite vapor pressure of no more than ten mmHg at twenty degrees Celsius (sixty-eight degrees Fahrenheit) if the contaminated shop towels are kept in closed containers, meaning fifty per cent of the VOC used on the shop towels is emitted during the cleaning process.**

(ii) portion of the VOC contained in inks, fountain solutions, and automatic blanket washes on heatset web presses is captured in the press dryer for control by add- on pollution control devices. The following capture efficiencies shall be used:

(a) **A one hundred per cent VOC carry over efficiency shall be used for inks. All the VOC in the ink that is not retained is assumed to be volatilized in the press dryer. Capture efficiency testing for heatset dryers is not required if it is demonstrated that pressure in the dryer is negative relative to the surrounding press room and the airflow is into the dryer.**

(b) **A seventy per cent VOC carry over efficiency shall be used for fountain solutions containing alcohol substitutes.**

(c) **A forty per cent VOC carry over efficiency shall be used for automatic blanket wash solutions with a VOC composite vapor pressure of no more than ten mmHg at twenty degrees Celsius (sixty-eight degrees Fahrenheit).**

(7) Any offset lithographic or letter printing press line that utilizes control requirements to meet standards in subrule (4) of this rule must have an approvable operation and preventative maintenance plan. The plan must include, at a minimum, the following, as applicable:

(a) A continuous temperature monitoring and recording system.

(b) A maintenance schedule for all control equipment with spare part list.

(c) A malfunction abatement plan to be implemented in the event of abnormal situations involving the control equipment.

R 336.1636 Emission of volatile organic compounds from existing miscellaneous industrial adhesives operations in 2015 ozone nonattainment areas.

Rule 636. (1) As used in this rule:

(a) "Electrodeposition" means a water-borne dip coating process in which opposite electrical charges are applied to the substrate and the coating. The coating is attracted to the substrate due to the electrochemical potential difference that is created.

(b)"Flow coating" means a non-atomized technique of applying coating to a substrate with a fluid nozzle with no air supplied to the nozzle.

(2) A person shall not cause or allow the emission of any volatile organic compound from the use of adhesives in excess of the limitations of this rule in miscellaneous industrial adhesive operations from any existing source located within the 2015 ozone nonattainment area, in excess of the applicable emission rates provided in subrule (4) of this rule.

(3) The provisions of this rule do not apply to the following:

(a) Except as provided in subrule (7) of this rule, any miscellaneous industrial adhesive operations at a stationary source that has a total combined actual emission rate of volatile organic compounds equal to or less than 3 tons per 12-month rolling period, before consideration of control equipment. If the combined actual emission rate equals or is more than 3 tons per year on a 12-month rolling basis before consideration of controls, as determined in a subsequent month, then this rule permanently applies to the applicable operations at that facility.

(b) The portion of an adhesive process that is addressed in R 336.1610, R 336.1610a, R 336.1620, R 336.1620a, R 336.1624, R 336.1624a, R 336.1635, or R 336.1637.

(c) The provisions of subrule (4) of this rule do not apply to the following:

(i) Adhesive or adhesive primers being tested or evaluated in any research and development operation or quality assurance or analytical laboratory.

(ii) Adhesives or adhesive primers used in the assembly, repair, or manufacture of aerospace or undersea-based weapon systems.

(iii) Adhesives or adhesives primers used in medical equipment manufacturing operations.

(iv) Aerosol adhesive and aerosol adhesive primer application operations.

(v) Operations using adhesives and adhesive primers that are supplied to the manufacturer in containers with a net volume of 16 ounces, or a net weight of 1 pound or less.

(vi) Cyanoacrylate adhesive application operations.

(vii) Operations using polyester bonding putties to assemble fiberglass parts at fiberglass boat manufacturing facilities and at other reinforced plastic composite manufacturing facilities.

(viii) Digital printing operations.

(4) A person shall not cause or allow the emission of volatile organic compounds from miscellaneous industrial adhesive application operations, unless the following provisions are met:

(a) A person with a source subject to the requirements of this rule shall comply with the limitations in subdivision (b) or (c) of this subrule unless a demonstration is made to the satisfaction of the department under R 336.1602(2).

(b) A person with adhesive application operations listed in table 69 shall comply with the following volatile organic compound emission limitations, minus water and exempt compounds, as applied, using 1 or more of the application methods listed within this subdivision. If an adhesive is used to bond dissimilar substrates together, the substrate category with the highest volatile organic compound emission limitation applies:

(i) Electrostatic spray.

(ii) High volume low pressure (HVLP) spray.

(iii) Flow coating.

(iv) Roll coating or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application.

(v) Dip coating, including electrodeposition.

(vi) Airless spray.

(vii) Air-assisted airless spray.

(viii) An equivalent adhesive application method approved in writing by the department.

TABLE 69

Volatile organic compound emission limitations for existing general and specialty adhesive application operations.

Substrate Category	Pounds of volatile organic compounds allowed to be emitted per gallon of coating (minus water) as applied.
General Adhesive Application Operations	
Reinforced plastic composite	1.7
Flexible vinyl	2.1
Metal	0.3
Porous material (except wood)	1.0
Rubber	2.1
Wood	0.3
Other substrates	2.1
Specialty Adhesive Application Operations	
Ceramic tile installation	1.1
Contact adhesive	2.1
Cover base installation	1.3

Floor covering installation (indoor)	**1.3**
Floor covering installation (outdoor)	**2.1**
Floor covering installation (perimeter bonded sheet vinyl)	**5.5**
Metal to urethane/rubber molding or casting	**7.1**
Motor vehicle adhesive	**2.1**
Motor vehicle weatherstrip adhesive	**6.3**
Multipurpose construction	**1.7**
Plastic solvent welding (ABS)	**3.3**
Plastic solvent welding (except ABS)	**4.2**
Sheet rubber lining installation	**7.1**
Single-ply roof membrane installation/repair (except EPDM)	**2.1**
Structural glazing	**0.8**
Thin metal laminating	**6.5**
Tire repair	**0.8**
Waterproof resorcinol glue	**1.4**
Adhesive primer application operations	
Motor vehicle glass bonding primer	**7.5**
Plastic solvent welding adhesive primer	**5.4**
Single-ply roof membrane adhesive primer	**2.1**
Other adhesive primer	**2.1**

(c) As an alternative to meeting subdivisions (a) and (b) of this subrule, a person with a source subject to this rule shall employ a capture system and control device that provides not less than 85% reduction in the overall emissions of volatile organic compound from the application operation. The adhesive operation would not have to limit the volatile organic compound content of the adhesive materials and would not need to use any particular adhesive application method.

(5) A person subject to this rule shall develop written procedures for compliance with the following work practices for each miscellaneous adhesive application operation at the source:

(a) Store all volatile organic matter-containing adhesives, adhesive primers, process-related waste materials, cleaning materials, and used shop towels in closed containers.

(b) Ensure that mixing and storage containers used for volatile organic compound-containing adhesives, adhesive primers, process-related waste materials, and

cleaning materials are kept closed at all times except when depositing or removing these materials.

(c) Minimize spills of volatile organic compound-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials.

(d) Convey volatile organic compound-containing adhesives, adhesive primers, process-related waste materials, and cleaning materials from 1 location to another in closed containers or pipes.

(e) Minimize volatile organic compound emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(6) Compliance with this rule is determined as follows:

(a) For the emission limits specified in this rule, use the following methods:

(i) For the emission limits specified in subrules (4)(b) of this rule, the method described in either R 336.2040(12)(a) if the adhesive line does not have an add-on emissions control device or R 336.2040(12)(b) if the adhesive line has 1 or more add-on emissions control devices.

(ii) For the overall control efficiency specified in subrule (4)(c) of this rule, the method described in R 336.2040(11).

(b) For each adhesive line, all of the following:

(i) The volume-weighted average of all adhesives that belong to the same adhesive category, and are used during each calendar day averaging period. The department may specifically authorize compliance, under R 336.1602(2), to be based upon a longer averaging period, not to exceed more than 1 calendar month.

(ii) If adhesives that belong to more than 1 adhesive category are used on the same adhesive line during the specified averaging period, then compliance must be determined separately for each coating category.

(iii) The information and records required by subrule (7) of this rule.

(c) The manufacturer's specifications for volatile organic compound content for adhesives may be used if the specifications are based on results of tests of the volatile organic compound content conducted in accordance with methods specified in subdivisions (a) or (b) of this subrule, as applicable.

(d) For reactive adhesives, an acceptable compliance procedure is described in "Determination of Weight Volatile Matter Content and Weight Solids Content of Reactive Adhesives," 40 CFR, part 63, subpart PPPP, appendix A, adopted by reference in R 336.1902.

(7) A person that is responsible for the operation of a miscellaneous industrial adhesive application operation that is subject to this rule shall obtain current information and keep records necessary for the determination of compliance with this rule, as required in R 336.2041.

R 336.1637 Emissions of volatile organic compounds from existing fiberglass boat manufacturing in 2015 ozone nonattainment areas.

Rule 637. (1) As used in this rule, "fiberglass boat manufacturing" means the manufacturing of hulls or decks of boats from fiberglass or build molds to make fiberglass boat hulls or decks.

(2) A person shall not cause or allow the emission of any volatile organic compound from an existing fiberglass boat manufacturing facility located in the 2015 ozone nonattainment areas unless all of the provisions of the following subrules are met.

(3) The provisions of this rule do not apply to the following:

(a) Except as provided in subrule (6) of this rule, any fiberglass boat manufacturing operations that have an actual emission rate of volatile organic compounds less than 2.7 tons per 12-month rolling period, before consideration of control equipment. If the combined actual emission rate equals or is more than 2.7 tons per year on a 12-month rolling basis before consideration of controls, as determined in a subsequent month, then this rule permanently applies to the fiberglass boat manufacturing operations at that facility.

(b) Miscellaneous industrial adhesives used in the assembly of fiberglass boats. Polyester resin putties used to assemble fiberglass parts are not considered industrial adhesives for the purposes of this exclusion and apply to this part.

(c) Surface coatings applied to fiberglass boats.

(d) Surface coating for fiberglass and metal recreational boats, for example, pleasure craft, addressed under R 336.1633.

(e) Facilities that manufacture solely parts of boats or boat trailers, but do not manufacture hulls or decks of boats from fiberglass or build molds to make fiberglass boat hulls or decks.

(f) Closed molding operations.

(g) Except as provided in subrule (6) of this rule, all of the following:

(i) Production resins that must meet specifications for use in military vessels or must be approved by the United States Coast Guard for use in the construction of lifeboats, rescue boats, and other life-saving appliances approved under 46 CFR subchapter Q, or the construction of small passenger vessels regulated by 46 CFR subchapter T.

(ii) Production and tooling resins, and pigmented, clear, and tooling gel coat used for part or mold repair and touch up. The total resin and gel coat materials that meet these criteria must not exceed 1% by weight of all resin and gel coat used at a facility on a 12-month rolling average basis.

(iii) Pure, 100% vinylester resin used for skin coats.

(4) A person shall not cause or allow the emission of any volatile organic compound from fiberglass boat manufacturing operations, unless the following provisions are met:

(a) A person with a source subject to the requirements of this rule shall comply with the limitations in subdivisions (b), (c), or (d) of this subrule. For sources complying pursuant to subdivision (b) or (c) of this subrule, if the non-monomer volatile organic compound content of a resin or gel coat exceeds 5%, by weight, the excess non-monomer volatile organic compound must be added to the monomer volatile organic compound of the resin or gel coat. The excess non-monomer volatile organic compound must be calculated in accordance with the following equation:

Excess Non-Monomer VOC = Non-monomer VOC Content – 5%, by weight

(b) A person shall not cause or allow the emission of volatile organic compounds from resin or gel coat from any existing source applicable to this rule in any of the 2015 ozone nonattainment areas as defined in R 336.1601, in excess of the applicable monomer requirements in table 69-a of this subrule.

TABLE 69-a

Alternative volatile organic compound content requirements for molding resin and gel coat operations.

Operation	Application Method	Weighted-Average Monomer VOC Content (weight percent)
Production resin	Atomized	28.0
Production resin	Nonatomized	35.0
Pigment gel coat	Any method	33.0
Clear gel coat	Any method	48.0
Tooling resin	Atomized	30.0
Tooling resin	Nonatomized	39.0
Tooling gel coat	Any method	40.0

(c) A person subject to the requirements of this rule may elect to include some or all of the subject resin and gel coat operations at the source in the emissions averaging alternative. All subject resin and gel coat operations that do not utilize the emissions averaging alternative must comply with the requirements in subdivision (b) or (d) of this subrule, as well as with all other applicable requirements in this rule. Resin and gel coat operations utilizing the emissions averaging alternative must comply with a source-specific monomer volatile organic compound mass emission limit on a 12-month rolling average basis, calculated at the end of each calendar month. using the following equations:

(i) A person subject to subdivision (c) of this subrule shall use equation 6-1 to determine the source-specific monomer volatile organic compound mass emission limit for resin and gel coats included in the emissions average:

Equation 6-1:

$$\text{Monomer VOC Limit} = 46(M_R)+159(M_{PG})+291(M_{CG})+54(M_{TR})+214(M_{TG})$$

Where:

Monomer = Total allowable monomer volatile organic compound that can VOC be emitted from the open molding operations included in the limit average, expressed in kilograms per 12-month period.

M_R = Mass of production resin used in the past 12 months, excluding any materials that are exempt, expressed in megagrams (Mg).

M_{PG} = Mass of pigmented gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg.

M_{CG} = Mass of clear gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg.

M_{TR} = Mass of tooling resin used in the past 12 months, excluding any materials that are exempt, expressed in Mg.

M_{TG} = Mass of tooling gel coat used in the past 12 months, excluding any materials that are exempt, expressed in Mg.

The numerical coefficients associated with each term on the righthand side of equation 6-1 are the allowable monomer volatile organic compound emission rates for that particular material in units of kg VOC/Mg of material used.

(ii) At the end of the first 12-month averaging period, and at the end of each subsequent month, the person with a source subject to this subdivision (c) shall use equation 6-2 to calculate the monomer volatile organic compound emissions from the resin and gel coat operations included in the emissions average. The monomer volatile organic compound emissions calculated using equation 6-2 must not exceed the monomer volatile organic compound limit calculated using equation 6-1.

EQUATION 6-2:

$$\text{Monomer VOC Emissions} = (PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})$$

Where:

Monomer VOC Emissions= Monomer volatile organic compound emissions calculated using the monomer volatile organic compound emission equations for each operation included in the average, expressed in kilograms.

PV_R = Weighted-average monomer volatile organic compound emission rate for production resin used in the past 12 months, expressed in kg/Mg, calculated in accordance with equation 6-3 in subdivision (c)(iii) of this subrule.

M_R = Mass of production resin used in the past 12 months, expressed in Mg.

PV_{PG} = Weighted-average monomer volatile organic compound emission rate for pigmented gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to equation 6-3.

M_{PG} = Mass of pigmented gel coat used in the past 12 months, expressed in Mg.

PV_{CG} = Weighted-average monomer volatile organic compound emission rate for clear gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to equation 6-3.

M_{CG} = Mass of clear gel coat used in the past 12 months, expressed in Mg.

PV_{TR} = Weighted-average monomer volatile organic compound emission rate for tooling resin used in the past 12 months, expressed in kg/Mg, calculated pursuant to equation 6-3.

M_{TR} = Mass of tooling resin used in the past 12 months, expressed in Mg.

PV_{TG} = Weighted-average monomer volatile organic compound emission rate for tooling gel coat used in the past 12 months, expressed in kg/Mg, calculated pursuant to equation 6-3.

M_{TG} = Mass of tooling gel coat used in the past 12 months, expressed in Mg.

(iii) For purposes of equation 6-2, the person with a source subject to this subdivision (c) shall use equation 6-3 to calculate the weighted-average monomer volatile organic compound emission rate for the previous 12 months for each resin and gel coat operation included in the emissions average, except as provided in subdivision (f) of this subrule.

EQUATION 6-3:

$$PV_{OP} = \frac{\sum_{i=1}^{n} M_i PV_i}{\sum_{i=1}^{n} M_i}$$

Where:

PV_{OP} = Weighted-average monomer volatile organic compound emission rate for each open molding operation (PVR, PVPG, PVCG, PVTR, and PVTG) included in the average, expressed in kg of monomer volatile organic compound per Mg of material applied.

M_i = Mass of resin or gel coat (i) used within an operation in the past 12 months, expressed in Mg.

n = Number of different open molding resins and gel coats used within an operation in the past 12 months.

PV_i = The monomer volatile organic compound emission rate for resin or gel coat (i) used within an operation in the past 12 months, expressed in kg of monomer volatile organic compound per Mg of material applied. The monomer volatile organic compound emission rate formulas in subdivision (c)(iv) of this rule must be used to compute PVi. If a source includes filled resins in the emissions average, the source must use the value of PVF, calculated using equation 6-4 in subdivision (f)(iii) of this rule, as the value of Pvi for those resins.

$_i$ = Subscript denoting a specific open molding resin or gel coat applied.

(iv) For purposes of equation 6-3 and subdivision (f)(iii) of this subrule, the following monomer volatile organic compound emission rate formulas applies. The formulas calculate monomer volatile organic compound emission rates in terms of kg of monomer volatile organic compound per Mg of resin or gel coat applied. "VOC%" means the monomer volatile organic compound content as supplied, expressed as a weight percent value between 0 and 100%.

TABLE 69-b

Monomer volatile organic compound emission rate formulas for molding operations.

Operation	Application Method	Formula to calculate the monomer VOC emission rate.
Production resin, tooling resin	Atomized	0.014 x (Resin VOC%)$^{2.425}$
Production resin, tooling resin	Atomized, plus vacuum bagging with roll-out	0.01185 x (Resin VOC%)$^{2.425}$
Production resin, tooling resin	Atomized, plus vacuum bagging without roll-out	0.00945 x (Resin VOC%)$^{2.425}$
Production resin, tooling resin	Nonatomized	0.014 x (Resin VOC%)$^{2.275}$
Production resin, tooling resin	Nonatomized, plus vacuum bagging with roll-out	0.0110 x (Resin VOC%)$^{2.275}$
Production resin, tooling resin	Nonatomized, plus vacuum bagging without roll-out	0.0076 x (Resin VOC%)$^{2.275}$
Pigmented gel coat, clear gel coat, tooling gel coat	All methods	0.445 x (Gel coat VOC%)$^{1.675}$

(d) A person subject to the requirements of this rule may elect to employ an add-on control device with a minimum overall control efficiency that meets the monomer volatile organic compound emission limitations specified in table 69-a of this rule. All subject resin and gel coat operations that do not utilize the add-on control alternative must comply with the requirements in subdivision (b) or (c) of this subrule, as well as with all other applicable requirements in this rule.

(e) A person subject to subdivision (d) of this subrule shall meet the volatile organic compound emission limit determined using equation 6-1 in subdivision (c)(i) of this subrule. In equation 6-1, however, instead of using the mass of each material used over the past 12 months to determine the emission limitation, the person shall use the mass of each material used during the applicable control device performance test. If the measured emissions at the outlet of the control device are less than the emission limit, then the facility is considered to have achieved compliance with the emission limit.

(f) For all filled production and tooling resins, the person subject to this subrule shall adjust the monomer volatile organic compound emission rates determined pursuant to subdivisions (b) and (c) of this subrule using equation 6-4 in paragraph (iii) of this subdivision. If complying pursuant to subdivision (c) of this subrule, the value of PV_F, calculated using equation 6-4, must be used as the value of PV_i in equation 6-3, as set forth in subdivision (c)(iii) of this subrule. If the non-monomer volatile organic compound content of a filled resin exceeds 5%, by weight, based on the unfilled resin, the excess non-monomer VOC must be added to the monomer volatile organic compound content in accordance with the equation set forth in subdivision (a) of this subrule. If complying pursuant to subdivision (b) of this subrule, the emission rate determined by equation 6-4 must not exceed any of the following limitations:

(i) Tooling Resin: 119.1 lbs monomer VOC/Mg filled resin applied.

(ii) Production Resin: 101.4 lbs monomer VOC/Mg filled resin applied.

(iii) Equation 6-4.

PVF = (PVU)(100 - percent filler) / 100

Where:

PVF = The as-applied monomer volatile organic compound emission rate for a filled production resin or tooling resin, pounds of monomer volatile organic compound per ton of filled material.

PVU = The monomer volatile organic compound emission rate for the neat (unfilled) resin, before filler is added, as calculated using the formulas in table 69-b of this rule.

Percent filler = The weight-percent of filler in the as-applied filled resin system.

(5) A person subject to this rule, shall develop written procedures for compliance with the following work practices for each fiberglass boating manufacturing operation at the source:

(a) All resin or gel coat mixing containers with a capacity equal or greater than 55 gallons, including those used for on-site mixing of putties and polyputties, must have a cover with no visible gaps in place at all times. This subdivision does not apply when material is being manually added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.

(b) No person subject to this rule shall use volatile organic compound-containing cleaning solutions to remove cured resins and gel coats from fiberglass boat manufacturing application equipment. Additionally, a person shall not use volatile organic compound-containing solutions for routine cleaning of application equipment unless 1 of the following applies:

(i) The volatile organic compound content of the cleaning solution is less than or equal to 5%, by weight.

(ii) The composite vapor pressure of the cleaning solution is less than or equal to 0.50 mmHg at 68 degrees Fahrenheit.

(6) A person that is responsible for the operation of a fiberglass boat manufacturing facility that is subject to this rule shall obtain current information, and keep records necessary, for a determination of compliance with this rule, including, but not limited to, all of the following:

(a) The total amounts, in pounds, of atomized molding production operations listed in table 69-a and table 69-b used per month and the weighted-average volatile organic compound contents for each operation, expressed as weight percent.

(b) All calculations performed pursuant to this rule.

(c) The volatile organic compound content of each non-monomer resin and gel coat employed.

(d) For each cleaning material employed for routine application equipment cleaning, either the volatile organic compound content, by weight percent or the composite vapor pressure, in mmHg, whichever is the applicable requirement selected to comply with the cleaning solvent requirements of subrule (5)(b) of this rule.

R 336.1638 Emissions of volatile organic compounds from existing wood furniture manufacturing in 2015 ozone nonattainment areas.

Rule 638. (1) As used in this rule:

(a) "Wood furniture" means any product made of wood, a wood product such as rattan or wicker, or an engineered wood product, such as particleboard.

(b) "Wood furniture component" means any part that is used in the manufacture of wood furniture, including, but not limited to, drawer sides, cabinet doors, seat cushions, and laminated tops. Wood furniture component does not include foam seat cushions manufactured and fabricated at a facility that does not engage in other wood furniture or wood furniture component manufacturing operations.

(c) "Wood furniture manufacturing operations" means the finishing, gluing, cleaning, and washoff operations associated with the production of wood furniture or wood furniture components.

(2) A person shall not cause or allow the emission of any volatile organic compound from an existing wood furniture manufacturing facility located in the 2015 ozone nonattainment areas unless all of the provisions of the following subrules are met.

(3) Except as provided in subrule (6) of this rule, the provisions of this rule do not apply to any wood furniture manufacturing operations that have a potential to emit for volatile organic compounds from all wood furniture finishing operations at the facility, including any related cleaning activities, of less than 25 tons per year. If the potential to emit equals or is more than 25 tons per year on a 12-month rolling basis before consideration of controls, as determined in a subsequent month, then this rule permanently applies to the wood furniture finishing operations at that facility.

(4) A person shall not cause or allow the emission of any volatile organic compound from wood furniture manufacturing operations, unless the following provisions are met:

(a) A person with a source subject to the requirements of this rule shall comply with the limitations in subdivision (b), (c), (d), or (e) of this subrule.

(b) A person shall not cause or allow the emission of volatile organic compounds from any existing source applicable to this rule in any of the 2015 ozone nonattainment areas, in excess of the applicable requirements in table 69-c of this subrule.

TABLE 69-c

Volatile organic compound emission limitations for existing wood furniture manufacturing coating operations.

Coating Category	lb of VOC per lb of solids, as applied
Topcoat only	0.8
Topcoat (in combination with sealer)	1.8
Sealer (in combination with topcoat)	1.9
Acid-cured alkyd amino vinyl sealer	2.3
Acid-cured alkyd amino conversion varnish topcoat	2.0
Strippable spray booth coatings	0.8

(c) Using finishing materials where actual emissions are less than or equal to allowable emissions using 1 of the following averaging equations:

Equation 6-5:

$$0.9\ (\Sigma_{i=1\rightarrow N}(0.8)(TC_i)) \geq \Sigma_{i=1\rightarrow N}\ ER_{TCi}\ (TC_i)$$

Equation 6-6:

$$0.9\ (\Sigma_{i=1\rightarrow N}(1.8)(TC_i) + (1.9)(SE_i) + (9.0)(WC_i) + (1.2)(Bc_i) + (0.791)\ (ST_i)) \geq \Sigma_{i=1\rightarrow N}\ ER_{TCi}(TC_i) + ER_{SEi}(SE_i) + ER_{WCi}(WC_i) + ER_{BCi}(BC_i) + ER_{STi}(ST_i)$$

Where:

N = number of finishing materials participating in averaging.
TC_i = kilograms of solids of topcoat "i" used.
SE_i = kilograms of solids of sealer "i" used.
WC_i = kilograms of solids of washcoat "i" used.
BC_i = kilograms of solids of basecoat "i" used.
ST_i = liters of stain "i" used.
ER_{TCi} = VOC content of topcoat "i" in kg VOC/kg solids, as-applied.
ER_{SEi} = VOC content of sealer "i" in kg VOC/kg solids, as-applied.
ER_{WCi} = VOC content of washcoat "i" in kg VOC/kg solids, as-applied.
ER_{BCi} = VOC content of basecoat "i" in kg VOC/kg solids, as-applied.
ER_{STi} = VOC content of stain "i" in kg VOC/liter (kg/l), as-applied.

(d) Using a control system that achieves an equivalent reduction in emissions as the requirements of table 69-c, according to the following provisions:

(i) Determine the overall control efficiency needed to demonstrate compliance using the following equation:

$$O = ((V - E)/V)(100)$$

Where:

O = overall control efficiency of the capture system and control device as percentage.
V = actual volatile organic compound content of the finishing system material as-applied to the substrate in pounds of volatile organic compound per pound of solids (lbs VOC/lb solids), or, if multiple finishing materials are used, the daily weighted average.
E = equivalent volatile organic compound emission limits in lbs VOC/lb solids.

(ii) Document that the value of "V" in the equation under paragraph (i) of this subdivision is obtained from the volatile organic compounds and solids content of the as-applied finishing material.

(iii) Calculate the overall efficiency of the capture system and control device, using the procedures in R 336.2040.

(e) Using a combination of the methods presented in subdivisions (b), (c), and (d) of this subrule.

(5) A person subject to this rule, shall develop written procedures for compliance with the following work practices for each wood furniture manufacturing operation at the source:

(a) Use cleaning materials containing no more than 8.0% by weight volatile organic compound for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal or plastic filters.

(b) Store volatile organic compound-containing cleaning materials in closed containers.

(c) Collect all volatile organic compound-containing cleaning material used to clean spray guns and spray gun lines in a container and keep the container covered except when adding or removing material.

(d) Control emissions of volatile organic compound-containing cleaning material from washoff operations by doing both of the following:

(i) Equipping the tank used for washoff operations with a cover and keeping the cover closed when the tank is not being used.

(ii) Minimizing dripping by tilting or rotating the part to drain as much cleaning material as possible into the tank.

(e) Use strippable spray booth materials containing no more than 0.8 pound of volatile organic compound per pound of solids, as applied.

(f) Use of conventional air spray to apply finishing materials only under any of the following conditions:

(i) When applying finishing materials that have an as applied volatile organic compound content no greater than 1.0 pound per pound of solids.

(ii) When applying final touch-up and repair finishing materials.

(iii) When using a control device to meet the applicable requirements of this rule.

(6) For the purpose of this rule, recordkeeping for all requirements and applicability demonstrations must be maintained in sufficient detail to demonstrate compliance with all applicable standards of the rule. Records must include, but are not limited, to the following:

(a) All calculations performed pursuant to this rule.

(b) Monthly volatile organic compound emissions and materials usage as needed to meet thresholds described in subrule (3) of this rule.

(c) For each cleaning material employed for routine application equipment cleaning, either the volatile organic compound content, by weight percent or the composite vapor pressure, in mmHg, whichever is the applicable requirement selected to comply with the cleaning solvent requirements of subrule (5)(a) of this rule.

R 336.1639 Emission of volatile organic compounds from existing aerospace manufacturing and rework operations in 2015 ozone nonattainment areas.

Rule 639. (1) As used in this rule:

(a) "Aerospace vehicle or component" means any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and

space vehicles.

(b) "Aqueous cleaning solvents" means a solvent in which water is not less than 80% of the solvent as applied.

(2) A person shall not cause or allow the emission of any volatile organic compounds from any existing aerospace manufacturing or reworking sources located within the 2015 ozone nonattainment areas, in excess of the applicable emission rates provided in subrule (4) of this rule.

(3) With the exception of subrule (6) of this rule, any of the following aerospace manufacturing or reworking operations at a stationary source where aerospace components and vehicles are cleaned or coated is exempt from the limits established in this rule:

(a) Facilities with total potential to emit volatile organic compound of less than 25 tons per year for all operations combined.

(b) Facilities that use separate formulations in volumes of less than 50 gallons per year up to a maximum of 200 gallons total for formulations applied annually.

(c) Research and development operations.

(d) Quality control operations.

(e) Laboratory testing facilities.

(f) Electronic parts and assembly processes, except for cleaning and coating of completed assemblies.

(g) Rework operations performed on space vehicles or antique aerospace vehicles and components.

(h) Touchup, aerosol, and United States Department of Defense classified coating applications.

(4) A person shall not cause or allow the emission of volatile organic compounds from aerospace manufacture and rework operations, unless the following provisions are met:

(a) Except as allowed by subdivision (b) of this subrule, a person that applies specialty coatings to aerospace vehicles or components, including any volatile organic compound-containing materials added to the original coating supplied by the manufacturer, shall comply with the following volatile organic compound emission limitations, minus water and exempt compounds, as applied using1 or more of the coating types listed within table 69-d.

TABLE 69-d

Volatile organic compound content limits for aerospace manufacturing and rework (lbs of VOC/gallon coating)

Coating Type	Limit	Coating Type	Limit
Ablative coating	5.0	Flight-test coatings:	
Adhesion promoter	7.4	Missile or single use aircraft	3.5
Adhesive bonding primers:		All other	7.0
Cured at 250 degrees Fahrenheit or below	7.1	Fuel-tank coating	6.0
Cured above 250 degrees Fahrenheit	8.6	High-temperature coating	7.1

Adhesives:		**Insulation covering**	**6.2**
Commercial interior adhesive	**6.3**	**Intermediate release coating**	**6.3**
Cyanoacrylate adhesive	**8.5**	**Lacquer**	**6.9**
Fuel tank adhesive	**5.2**	**Maskants:**	
Nonstructural adhesive	**3**	**Bonding maskant**	**10.3**
Rocket motor bonding adhesive	**7.4**	**Critical use and line sealer maskant**	**8.5**
Rubber-based adhesive	**7.1**	**Seal coat maskant**	**10.3**
Structural autoclavable adhesive	**0.5**	**Metallized epoxy coating**	**6.2**
Structural nonautoclavable adhesive	**7.1**	**Mold release**	**6.5**
Antichafe coating	5.5	**Optical anti-reflective coating**	**6.3**
Bearing coating	**5.2**	**Part marking coating**	**7.1**
Caulking and smoothing compounds	**7.1**	**Pretreatment coating**	**6.5**
Chemical agent-resistant coating	**4.6**	**Primer**	**2.9**
Chemical milling maskant, type I	**5.2**	**Primer for general aviation rework facility**	**4.5**
Chemical milling maskant, type II	**1.3**	**Rain erosion-resistant coating**	**7.1**
Clear coating	**6.0**	**Rocket motor nozzle coating**	**5.5**
Commercial exterior aerodynamic structure primer	**5.4**	**Scale inhibitor**	**7.3**
		Screen print ink	**7.0**
Compatible substrate primer	**6.5**	**Sealants:**	
Corrosion prevention compound	**5.9**	**Extrudable/rollable/brushable sealant**	**2.3**
Cryogenic flexible primer	**5.4**	**Sprayable sealant**	**5.0**
Dry lubricative material	**7.3**	**Silicone insulation material**	**7.1**
Cryoprotective coating	**5.0**	**Solid film lubricant**	**7.3**
Electric or radiation-effect coating	**6.7**	**Specialized function coating**	**7.4**
Electrostatic discharge and electromagnetic	**6.7**	**Temporary protective coating**	**2.7**
		Thermal control coating	**6.7**
Elevated-temperature skydrol-resistant commercial primer	**6.2**	**Topcoat (incl self priming)**	**3.5**
		Topcoat for general aviation rework facility (incl self priming)	**4.5**
Epoxy polyamide topcoat	**5.5**	**Wet fastener installation coating**	**5.6**
Exterior primer for large commercial aircraft (components or assembled)	**5.4**	**Wing coating**	**7.1**
Fire-resistant (interior) coating	**6.7**		
Flexible primer	**5.3**		

(b) The content limits described in table 69-d can be met by using approved air pollution control equipment if the control system has combined volatile organic compound emissions capture and control equipment efficiency of not less than 81% by weight.

(c) A person shall use 1 or more of the following application techniques in applying any primer or topcoat to aerospace vehicles or components, except as allowed by subdivision (d) of this subrule:

(i) Flow/curtain coat.

(ii) Dip coat.

(iii) Roll coating.

(iv) Brush coating.

(v) Cotton-tipped swab applications.

(vi) Electrodeposition coating.

(vii) High volume low pressure (HVLP) spraying.

(viii) Electrostatic spray.

(ix) Other coating application methods equivalent to HVLP or electrostatic spray applications that are equivalent to HVLP.

(d) A person is not required to meet application techniques listed in subdivision (c) of this subrule in the following situations:

(i) Airbrush or extension on the spray gun to properly reach limited access spaces.

(ii) Application of specialty coatings.

(iii) Application of coating that contain fillers that adversely affect atomization with HVLP spray guns and cannot be applied by other means required in subdivision (c) of this subrule.

(iv) Application of coatings that normally have a dried film thickness of less than 0.0013 centimeters and cannot be applied by other means required in subdivision (c) of this subrule.

(v) Airbrush methods for stenciling, lettering, and other identification markings.

(vi) Hand-held spray can application methods.

(vii) Touch-up and repair operations.

(e) Cleaning using hand wiping must use an aqueous cleaning solvent or have a volatile organic compound composite vapor pressure less than or equal to 45 millimeters of mercury at 20 degrees Celsius except in the following situations:

(i) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to breathing oxygen.

(ii) Cleaning during the manufacture. assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers.

(iii) Cleaning and surface activation before adhesive bonding.

(iv) Cleaning of electronics parts and assemblies containing electronics parts.

(v) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air exchangers and hydraulic fluid systems.

(vi) Cleaning of fuel cells, fuel tanks, and confined spaces.

(vii) Surface cleaning of solar cells, coated optics, and thermal control surfaces.

(viii) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used on the interior of aircraft.

(ix) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components.

(x) Cleaning of aircraft transparencies, polycarbonate, or glass substrates.

(xi) Cleaning and solvent usage associated with research and development, quality control, or laboratory testing.

(xii) Cleaning operations, using nonflammable liquids, conducted within 5 feet of energized electrical systems.

(xiii) Cleaning operations identified as essential under the Montreal Protocol for which the administrator has allocated essential use allowances or exemptions in 40 CFR section 82.4.

(f) For cleaning solvents used in the flush cleaning of parts, assemblies, and coating unit components, the used cleaning solvent, except for semiaqueous cleaning solvents, must be emptied into an enclosed container or collection system that is kept closed when not in use or captured with wipers, provided they comply with the housekeeping requirements of subdivision (g) of this subrule. Aqueous cleaning solvents are exempt from these requirements.

(g) All spray guns must be cleaned by 1 or more of the following methods:

(i) Enclosed spray gun cleaning system if it is kept closed when not in use and leaks are repaired within 14 days after the leak is first discovered, or the enclosed cleaner must be shut down until the leak is repaired.

(ii) Unatomized discharge of solvent into a waste container that is kept closed when not in use.

(iii) Disassembly of the spray gun and cleaning in a vat that is kept closed when not in use.

(iv) Atomized spray into a waste container that is fitted with a device designed to capture atomized solvent emissions.

(h) All fresh and used cleaning solvents, except aqueous and semiaqueous cleaning solvents, used in solvent cleaning operations must be stored in containers that are kept closed at all times except when filling or emptying. This includes cloth and paper, or other absorbent applicators, moistened with cleaning solvents except for cotton-tipped swabs used for very small cleaning operations.

(i) A person shall implement handling and transfer procedures to minimize spills during filling and transferring the cleaning solvent to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or used cleaning solvents. Aqueous cleaning solvents are exempt from these requirements.

(5) Compliance with this rule must be determined as follows:

(a) Each person operating a control device for compliance with this rule shall submit a monitoring plan that specifies the applicable operating parameter value, or range of values, to ensure ongoing compliance with subrule (4)(b) of this rule. The monitoring device must be installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications, or an equivalent plan approvable by the department.

(b) Each person using an enclosed spray gun cleaner shall visually inspect the seals and all other potential sources of leaks at least once per month in any calendar year in which it is used. Each inspection must occur while the spray gun cleaner is in operation.

(c) For coatings and cleaning solvents that are not waterborne or water-reducible, the volatile organic compound content of each formulation must be determined, less water and less exempt solvents, as applied using manufacturer's supplied data or method 24 of 40 CFR part 60, appendix A. If there is a discrepancy between the

manufacturer's formulation data and the results of the method 24 analysis, compliance must be based on the results from the method 24 analysis. For water-borne, or water-reducible, coatings, and aqueous and semiaqueous cleaning solvents, manufacturer's supplied data alone can be used to determine the volatile organic compound content of each formulation.

(d) For hand-wipe cleaning solvents required in subrule (4)(e) of this rule, manufacturers' supplied data or standard engineering reference texts or other equivalent methods must be used to determine the vapor pressure or volatile organic compound composite vapor pressure for blended cleaning solvents.

(6) A person subject to this rule shall obtain current information and maintain records for all requirements in sufficient detail to determine compliance, and must be made available to the department upon request. These records must include the following, as applicable:

(a) A list of coatings and usages as described in table 69-d must be maintained with category and volatile organic compound content as applied on a monthly basis.

(b) Each owner or operator using cleaning solvents as described in this rule shall maintain on a monthly basis a list of the following:

(i) For aqueous and semi aqueous hand-wipe cleaning solvents, materials used with corresponding water contents.

(ii) For vapor pressure compliant hand-wipe cleaning solvents, cleaning solvents with their respective vapor pressures or, for blended solvents, volatile organic compound composite vapor pressures.

(iii) For cleaning solvents with a vapor pressure greater than 45 mm Hg, a list of exempt hand-wipe cleaning processes.

(c) Each owner or operator using control equipment under subrule (4)(b) of this rule shall record monitoring parameters as specified in the monitoring plan required under subrule (5)(a) of this rule.

(d) Except for specialty coatings, any source that complies with the recordkeeping requirements of the Aerospace NESHAP, 40 CFR 63.752, complies with the requirements of this subrule.

R 336.1640 Emission of volatile organic compounds from existing storage vessels in the oil and natural gas industry located in the 2015 ozone nonattainment areas.

Rule 640. (1) As used in this rule, "storage vessel" means a tank or other vessel that contains an accumulation of oil and gas related liquids, and that is constructed primarily of non-earthen materials, such as wood, concrete, steel, fiberglass, or plastic that provide structural support.

(2) A person shall not cause or allow the emission of any volatile organic compound in excess of the limitations of this rule from the use of existing storage vessels utilized in the oil and natural gas production, natural gas processing, and natural gas transmission and storage segments of the oil and natural gas industry that meet both of the following criteria:

(a) A storage vessel located in the 2015 ozone nonattainment area.

(b) A storage vessel used for the storage of crude oil or condensates, intermediate hydrocarbon liquids, or produced water.

(3) Except as provided in subrule (6) of this rule, the provisions of this rule do not apply to the following:

(a) Storage vessels with a potential to emit volatile organic compounds of less than 6 tons per year. This potential to emit can be limited by a federally enforceable permit or order.

(b) Storage vessels with uncontrolled actual volatile organic compound emissions of less than 4 tons per 12-month rolling average. If the combined actual emission rate equals or is more than 4 tons per year on a 12-month rolling basis before consideration of controls, as determined in a subsequent month, then this rule permanently applies to the storage vessel.

(c) Vessels that are skid-mounted or permanently attached to a mobile source, such as trucks, railcars, barges, or ships, and are intended to be located at a site for less than 180 consecutive days.

(d) Process vessels, such as surge control vessels, bottoms receivers, or knockout vessels.

(e) Pressure vessels designed to operate in excess of 204.9 kilopascals (29.7 pounds per square inch) and that are not expected to have emissions to the atmosphere during normal operation.

(f) A storage vessel with a capacity greater than 100,000 gallons used to recycle water that has been passed through 2 stage separation.

(g) VOC emission control requirements do not apply to storage vessels subject and controlled in accordance with the requirements for storage vessels in "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984" 40 CFR part 60, "National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater" 40 CFR part 63, subpart G, "National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries" 40 CFR part 63, subpart CC, "National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities" 40 CFR part 63, subpart HH, or "National Emission Standards for Storage Vessels (Tanks) – Control Level 2" 40 CFR part 63, subpart WW. All regulations stated within this subdivision are adopted by reference in R 336.1902.

(4) A person subject to the requirements of this rule shall not cause or allow the emission of any volatile organic compound from storage vessels, unless emissions are reduced by 95% by weight or greater as determined by subrule (5) of this rule and the following provisions are met, as applicable:

(a) If utilized, an enclosed combustion control device for the volatile organic compound emissions from material storage must meet 1 of the following:

(i) Emissions must be less than 275 ppm by volume as propane on a wet basis corrected to 3% oxygen.

(ii) The control must be operated at a minimum temperature of 760 degrees Celsius, provided a valid performance test as required in subrule (5) of this rule is

on file that demonstrated the combustion zone temperature is an indicator of sufficient destruction efficiency.

(iii) The vent stream must be introduced into the flame zone of the boiler or process heater.

(b) A person using a control device to reduce emissions shall meet the following requirements:

(i) Covers must satisfy all of the following:

(A) The covers and all openings on the cover must form a continuous impermeable barrier over the entire surface area of the liquid in the vessel.

(B) Each cover opening must be secured in a closed sealed position when material is in the unit except during time necessary to use the opening, such as adding, removing, sampling, or inspecting material in the unit, maintaining equipment, or venting through a closed vent system.

(C) Each storage vessel thief hatch must be maintained and operated with a mechanism to ensure that the lid remains properly seated and sealed under normal operating conditions.

(ii) Closed vent systems must satisfy all of the following, unless routed to a process:

(A) The closed vent system must route all gases, vapors, and fumes to the control device.

(B) The closed vent system must have no detectable emissions when using, at a minimum, olfactory, visual, and auditory inspections.

(C) Any bypass must have a properly operated and maintained flow indictor at the inlet with an alarm that is recorded when activated. Low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines and safety devices are not considered bypasses.

(D) The closed vent system must be properly designed and operated, as described in subrule (5) of this rule.

(iii) Control devices must satisfy all of the following, if applicable:

(A) The control device must be operated and maintained properly as described in subrule (5) of this rule.

(B) When using a combustion control device, it must have a continuous burning pilot flame or alternative approved by the department.

(C) When using a flare as a control device, it must be designed and operated in accordance with the requirements of 40 CFR 60.18(b), adopted by reference in R 336.1902.

(D) When using carbon absorption as a control device, the carbon must be regenerated or reactivated.

(c) If a floating roof is used to reduce emissions, the storage vessel must meet all relevant requirements of "Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984," 40 CFR 60.112b(a)(1) or (2), and all relevant monitoring, inspection, recordkeeping, and reporting requirements in "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction,

Reconstruction, or Modification Commenced After July 23, 1984." 40 CFR part 60, subpart Kb~~,~~. Both are adopted by reference in R336.1902.

(5) Compliance with this rule must be determined as follows:

(a) Initial performance and compliance testing must be conducted in accordance with a stack testing protocol approved by the department.

(b) All control devices must have an approvable operation and maintenance plan that contains, at a minimum, the following:

(i) A schedule of maintenance for the control devices in use.

(ii) An inspection schedule at least once every calendar month.

(iii) Written instructions from the manufacturer.

(c) An analysis must be performed, documented, and maintained that the closed vent system is of sufficient design and capacity to ensure all emissions from the storage vessel is routed to the control device or process and that the control device is of sufficient design and capacity to accommodate all emissions from the storage vessel.

(d) The person subject to this rule for a closed vent system shall conduct and maintain records of annual visual inspections for defects that could result in air emissions.

(6) A person operating a storage vessel subject to this rule shall obtain current information and maintain records for all applicability and requirements in sufficient detail to determine compliance. The records must be made available to the department upon request. The records must include the following, as applicable:

(a) Records of each volatile organic compound emission determination for each storage vessel.

(b) Records of deviations in cases where the storage vessel was not operated in compliance with requirements.

(c) Records of the identification and location of each storage vessel subject to emission control requirements.

R 336.1641 Emission of volatile organic compounds from existing pneumatic controllers in the oil and natural gas industry located in the 2015 ozone nonattainment areas.

Rule 641. (1) As used in this rule:

(a) "Bleed rate" means the rate in standard cubic feet per hour at which natural gas is continuously vented, or bleeds, from a pneumatic controller.

(b) "Pneumatic controller" means an automated instrument used to maintain a process condition, such as liquid level, pressure, delta pressure and temperature.

(2) A person shall not cause or allow the emission of any volatile organic compound associated with the oil and natural gas production and natural gas processing segments of the oil and natural gas industry, in excess of the limitations of this rule from the use of existing single continuous bleed natural gas-driven pneumatic controllers, when the controllers are both of the following:

(a) Located inside the 2015 ozone nonattainment areas.

(b) Utilized at a natural gas processing plant or with equipment located from either the wellhead to the natural gas processing plant or to the point of custody transfer to an oil pipeline.

(3) Except as described in subrule (6) of this rule, the provisions of this rule do not apply to a pneumatic controller if there is a functional need for a bleed rate greater than the requirements as described in subrule (4) of this rule and it is properly tagged. A functional need includes, but is not limited to, response time, safety, and positive actuation.

(4) Except as allowed in subrule (3) of this rule, a person subject to the requirements of this rule shall not allow either of the following:

(a) Any continuous venting for any pneumatic controllers located at a natural gas processing plant.

(b) A bleed rate greater than 6 standard cubic feet per hour from equipment from the wellhead to the natural gas processing plant or point of custody transfer to an oil pipeline.

(5) Compliance with this rule must be determined by maintaining records as described in subrule (6) of this rule which includes, at a minimum, tagging all pneumatic controllers with an identifying number and the installation date, to allow traceability to the records for that controller.

(6) A person operating a pneumatic controller shall obtain current information and maintain records for all requirements in sufficient detail to determine compliance. The records must be made available to the department upon request. This includes records and all other information needed to establish both of the following for each pneumatic controller, as applicable:

(a) The bleed rates.

(b) A description of its functional need if exempting the equipment from requirements in subrule (4) of this rule.

R 336.1642 Emission of volatile organic compounds from existing pneumatic pumps in the oil and natural gas industry located in the 2015 ozone nonattainment areas.

Rule 642. (1) As used in this rule, "pneumatic pump" means a positive displacement reciprocating unit driven by natural gas used for injecting precise amounts of chemicals into a process stream or for freeze protection glycol circulation.

(2) A person shall not cause or allow the emission of any volatile organic compound associated with oil and natural gas production and natural gas processing segments of the oil and natural gas industry in excess of the limitations of this rule from the use of existing single natural gas driven pneumatic pumps when the pumps are both of the following:

(a) Located inside the 2015 ozone nonattainment area.

(b) Utilized at a natural gas processing plant or well site.

(3) Except as required in subrule (6), the provisions of this rule do not apply to a pneumatic pump that is either of the following:

(a) If it is determined through an engineering assessment that routing a pneumatic pump to a control device or a process is technically infeasible due to insufficient gas pressure or control device capacity, including the event in which there is no control device or in which the control device or process is removed from the site, the following provisions must be met:

(i) An assessment of technical infeasibility must be conducted and must include, but is not limited to, safety considerations, distance from the control device, pressure losses and differentials in the closed vent system, and the ability of the control device to handle the pneumatic pump emissions which are routed to them. This assessment must be prepared under supervision of a qualified professional engineer.

(ii) The professional engineer shall sign and certify this prepared assessment.

(b) In operation less than 90 days per calendar year. For purposes of this rule, any period of operation during a calendar day counts toward the 90-day annual threshold.

(4) A person shall not cause or allow the emission of any volatile organic compound from pneumatic pumps, unless the following provisions are met:

(a) At natural gas processing plants, zero emissions or 100% control from each diaphragm pump by use of a control device or instrument air system in place of the natural gas-driven pump.

(b) At a well site, emissions from each existing diaphragm pump with control devices, must be reduced by 95% by weight or greater as determined by subrule (5) of this rule, or, if 95% control is not achievable, by the maximum control efficiency possible as described in subrule (6) of this rule.

(c) At a well site that installs a control device after March 1, 2023, the emissions from the pneumatic pump must be captured and routed to the control device.

(d) If reducing emissions by use of a control device or by routing to a process, the pneumatic pump must connect emissions through a closed vent system meeting the requirements of R 336.1640(4)(b)(ii).

(5) Compliance with this rule must be determined as follows:

(a) All pneumatic pumps must be tagged with an identifying marker to allow tracking for reporting as described in subrule (6) of this rule.

(b) Initial performance and compliance testing must be conducted in accordance with a stack testing protocol approved by the department.

(c) All control devices must have an approvable operation and maintenance plan that contains, at a minimum, the following:

(i) A schedule of maintenance for the control devices in use.

(ii) An inspection schedule at least once every calendar month.

(iii) Written instructions from the manufacturer.

(6) A person operating a pneumatic pump subject to this rule shall obtain current information and maintain records for all requirements in sufficient detail to determine compliance. The records must be made available to the department upon request and must include the following, as appropriate:

(a) Notes of all pumps with control, and the respective control efficiencies, as determined by a stack test.

(b) For all pumps with a control efficiency less than the control efficiency required by subrule (4) of this rule, infeasibility of meeting applicable criteria for capture and control for any uncontrolled pump which may include factors such as safety, distance, pressure losses and differentials, and the capacity of any available existing control device, to show that subrule (4) of this rule is not attainable.

(c) For all pumps at well sites without controls, a statement of confirmation that no control device has been installed.

(d) Before March 1, 2023, an initial report must be submitted to the department describing initial compliance.

(e) A report must be submitted to the department if a control device is installed on site after March 1, 2023.

R 336.1643 Emission of volatile organic compounds from existing compressors in the oil and natural gas industry located in the 2015 ozone nonattainment areas.

Rule 643. (1) As used in this rule:

(a) "Centrifugal compressor" means any machine for raising the pressure of a natural gas by drawing in low-pressure natural gas and discharging significantly higher-pressure natural gas by means of mechanical rotating vanes or impellers. Screw, sliding vane, and liquid ring compressors are not centrifugal compressors for the purposes of this rule.

(b) "Reciprocating compressor" means a piece of equipment that increases the pressure of a process gas by positive displacement, employing linear movement of the driveshaft.

(2) A person shall not cause or allow the emission of any volatile organic compound from the use of existing compressors utilized in oil and natural gas production and natural gas processing segments of the oil and natural gas industry, in excess of the limitations of this rule that are both:

(a) Located in the 2015 ozone nonattainment areas.

(b) Located between the wellhead and point of custody transfer to the natural gas transmission and storage segment, and are either of the following:

(i) A single centrifugal compressor using wet seals.

(ii) A reciprocating compressor.

(3) The provisions of this rule do not apply to the following:

(a) Individual reciprocating compressor, or an individual centrifugal compressor using wet seals located at a well site, or an adjacent well site, and is servicing more than 1 well site.

(b) Individual centrifugal compressor using dry seals.

(4) A person shall not cause or allow the emission of any volatile organic compound from the centrifugal compressors, unless the following provisions are met:

(a) Emissions from a centrifugal compressor wet seal fluid degassing system must be reduced by 95%.

(b) When emissions from a centrifugal compressor are controlled by a control device, the following requirements must be met:

(i) The wet seal fluid degassing system must be equipped with a cover that meets the following requirements:

(A) The cover and all openings on the cover must form a continuous impermeable barrier over the entire surface area of the liquid in the wet seal fluid degassing system.

(B) Each cover opening must be secured in a closed, sealed position, for example, covered by a gasketed lid or cap, except during those times when it is necessary to use an opening as follows:

(1) To inspect, maintain, repair, or replace equipment.

(2) To vent gases or fumes from the unit through a closed vent collection system that meets the cover requirements and closed vent system requirements of R 336.1640.

(ii) The closed vent system must be routed to a process or a control device that is designed to route all gases, vapors, and fumes emitted from the volatile organic compound emissions source to a control device or to a process.

(iii) A continuous parameter monitoring system must be properly installed and operated to monitor all relevant control device operational variables.

(5) A person shall not cause or allow the emission of any volatile organic compound from reciprocating compressors, unless the following provisions are met:

(a) Compressor rod packing must be replaced within 36 months from the date of the most recent rod packing.

(b) Rod packing emissions must be routed to a process by using a closed vent collection system that operates under negative pressure and meets the cover requirements and closed vent system requirements of R 336.1640. The closed vent system must be designed to route all volatile organic compound containing gases, vapors, and fumes to the process.

(6) A person operating a compressor shall obtain current information and maintain records for all requirements in sufficient detail to determine compliance , which must be made available to the department upon request. The following methods must be used:

(a) An identification of each existing centrifugal compressor using a wet seal system.

(b) Records of deviations where the centrifugal or reciprocating compressor was not operated in compliance with requirements.

(c) Inlet gas flow rate.

(d) Records of the maintenance and repair log.

(e) Records of the visible emissions test following return to operation from a maintenance or repair activity.

(f) Records of the cumulative number of hours of operation or number of months since the previous replacement of the reciprocating compressor rod packing.

(g) Records of any control device operational variables monitored as part of the required continuous parameter monitoring system.

R 336.1644 Emission of volatile organic compounds from fugitive emissions from the oil and natural gas industry located in the 2015 ozone nonattainment areas.

Rule 644. (1) A person shall not cause or allow the emission of any volatile organic compound from existing fugitive emissions in the oil and natural gas production and natural gas processing segments of the oil and natural gas industry, in excess of the limitations of this rule that are both:

(a) Located in the 2015 ozone nonattainment area.

(b) Either of the following:

(i) Well sites.

(ii) Gathering and boosting station located from the wellhead to the point of custody transfer to the natural gas transmission and storage segment or an oil pipeline.

(2) The provisions of this rule do not apply to well sites that meet any of the following:

(a) Produce on average, less than or equal to 15-barrel equivalents per day.

(b) Have gas to oil ratios of less than 300 standard cubic foot of gas per barrel of oil produced, except as described in subrule (4) of this rule.

(c) Only contain well heads.

(3) A person shall not cause or allow the emission of any volatile organic compound from fugitive emissions unless a leak detection and repair program is implemented, as described in subrule (4) of this rule.

(4) A leak detection and repair program must be developed and implemented for compliance with this rule and must contain the following components:

(a) For well sites the program must include the following:

(i) Semiannual monitoring using optical gas imaging (OGI) and repair of components that are found to be leaking.

(ii) Each fugitive emissions component repaired or replaced be resurveyed to ensure there is no leak after repair or replacement by the use of either 40 CFR, part 60, appendix A, method 21, adopted by reference in R 336.1902, or OGI, no later than 30 days after finding fugitive emissions.

(b) For gathering and boosting stations in the production segment the program must include the following:

(i) Quarterly monitoring using OGI and repair of components that are found to be leaking.

(ii) Each fugitive emissions component repaired or replaced be resurveyed to ensure there is no leak after repair or replacement by the use of either 40 CFR, part 60, appendix A, method 21, adopted by reference in R 336.1902, or OGI no later than 30 days after finding fugitive emissions.

(c) The department can allow 40 CFR, part 60, appendix A, method 21, adopted by reference in R 336.1902, with a repair threshold of 500 ppm as an alternative compliance means to OGI.

(5) A person operating a compressor shall obtain current information and maintain records for all requirements in sufficient detail to determine compliance, which must be made available to the department, upon request. These records must include the following, as applicable:

(a) To demonstrate continuous compliance with the fugitive emission standards the following provisions must be met, as applicable:

(i) A monitoring survey of each collection of fugitive emissions components at a well site must be conducted at least semiannually, not less than 4 months apart, after the initial survey.

(ii) A monitoring survey of the collection of fugitive emissions components at a gathering and boosting station must be conducted at least quarterly, not less than 60 days apart, after the initial survey.

(iii) A written plan must be developed to include the identification and location of each fugitive emissions component designated as difficult-to-monitor, an explanation of why each are designated as difficult to monitor, and a schedule for monitoring at least once per calendar year for the following:

(A) Fugitive emission components designated as difficult-to-monitor, meaning monitoring cannot occur without elevating the monitoring personnel more than 2 meters above the surface.

(B) Fugitive emissions components designated as unsafe-to-monitor, meaning monitoring cannot be completed without exposing the monitoring personnel to immediate danger while conducting a monitoring.

(b) Records maintained of the fugitive emissions monitoring plan as required under subrule (4) of this rule.

R 336.1660 Standards for volatile organic compounds emissions from consumer products.

Rule 660. **(1) Except as provided in subrule (2) of this rule, t**~~T~~he **following** provisions **are adopted by reference in R 336.1902**:

(a) Before January 1, 2023, ~~in~~ the ozone transport commission's "**OTC** Model Rule for Consumer Products," **2006 (ver2006).**

(b) After April 30, 2023, the ozone transport commission's "OTC Model Rule for Consumer Products," dated May 10, 2012, (ver2012).

(c) After December 31, 2022, the "Technical amendment to the Ozone Transport Commission Consumer Products Model Rule," dated May 21, 2013. ~~are adopted by reference in R 336.1902,~~

(2) ~~with~~ **T**~~t~~he following exceptions **apply to the adoptions by reference in subrule (1)(a) and (b) of this rule**:

(a) Section (8)**(b)**, variances.

(b) All references to public hearings in section (8)(d) and (f).

~~(b) Section (10), severability.~~

~~(c) Section (11)(f), violations.~~

(**c**~~d~~) **In ver2006, w**~~W~~here the date "January 1, 2005" appears in the **section (3)(a), table of standards, (f)(1)(i), and (g)(3),** ~~the following sections,~~ the department shall instead recognize January 29, 2007:

~~(i) Section (1), applicability.~~

~~(ii) Section (3) (a), table, (f)(1)(i), and (g)(3) standards.~~

~~(iii) Section (6)(d)(1), administrative requirements.~~

(**d**~~e~~) **In ver2006, section 7(d)(2) and (3), where** the date "2005" appears ~~in section 7(d)(2) and (3),~~ the department shall instead recognize 2007~~.~~ **and** ~~W~~**w**~~W~~**here** the date "March 1, 2006" appears ~~in section 7(d)(2) and (3),~~ the department shall instead recognize March 1, 2008.

(e) In ver2012, where the date "January 1, 2005", "January 1, 2009", or "January 1, 2014" appears in the section (3)(a) table of standards, (f)(1)(i), and (g)(3), the department shall instead recognize January 1, 2023.

(f) In ver2012, the volatile organic compound limit in section (3) table of standards for solid toilet/urinal care as it applies to products containing not less than 98% para-dichlorobenzene.

(3) As used in the model rule:

(a) "OTC state" means this state.

(b) "Volatile organic compound" or "VOC" means a compound as defined in 40 CFR 51.100. For the purpose of clarifying the definition, the provisions of 40 CFR 51.100 are adopted by reference in R 336.1902.

R 336.1661 ~~Definitions for consumer products.~~ **Rescinded.**

~~Rule 661. As used in R 336.1660:~~

~~(a) The "OTC state" means state of Michigan.~~

~~(b) "Volatile organic compound" or "VOC" means a compound as defined in 40 C.F.R. §51.100, (2006). For the purpose of clarifying the definition, the provisions of 40 C.F.R. §51.100 (2006) are adopted by reference in R 336.1902.~~

R 336.1662 Standards for volatile organic compounds emissions from architectural and industrial maintenance coatings.

Rule 662. (1) After December 31, 2022, the provisions in the ozone transport commission's "Model Rule for Architectural and Industrial Maintenance (AIM) Coatings," are adopted by reference in R 336.1902, with the following exceptions:

(a) Where the date "December 31, 2013" appears in "Table 1: VOC Content Limits for Architectural and Industrial Maintenance Coatings," the department shall instead recognize December 31, 2022.

(b) Where the date "January 1, 2014" appears in the following sections, the department shall instead recognize "January 1, 2023":

(i) Section (2), Definitions.

(ii) Section (3), Standards.

(iii) Section (4), Container Labeling Requirements, Table 1: VOC Content Limits for Architectural and Industrial Maintenance Coatings.

(2) As used in the model rule:

(a) "Jurisdiction of the state or local air pollution control agency" means the department.

(b) "Volatile Organic Compound" means the definition as promulgated in R 336.1122(f).