February 14, 2020

Via Electronic E-Mail: Renae.Held@delaware.gov

Renae Held
DNREC Division of Air Quality
State Street Commons
100 West Water Street, Suite 6A
Dover, DE 19904

Re: Amendments to Section 33.0 "Solvent Cleaning and Drying"
7 DE Admin. Code 1124, Control of Volatile Organic Compound Emissions
Public Comment

Heritage-Crystal Clean, LLC ("HCC") appreciates the opportunity to comment on the proposed changes to the Delaware Division of Air Quality ("Agency") regulations regarding the adoption of certain provisions of the 2012 Ozone Transport Commission (OTC) Model Rule for solvent degreasing. HCC provides full-service solvent and aqueous parts cleaning, containerized waste management, used oil collection, vacuum truck services, wastewater treatment, antifreeze recycling for its customers and owns and operates a used oil re-refinery based in Indianapolis, IN.

Overall, HCC supports a policy to reduce air pollution caused by volatile organic compounds (VOC) emissions and finding sustainable alternatives is an aspiration that we strive to attain. HCC would like to apologize for missing the workshops that were provided by the Agency in January, as we have no record of receiving a notification.

As the second largest supplier of parts cleaning services, these changes will affect many of our customers including those in the automotive sales and service locations, machine, shops, mechanical, manufacturers and services of electronic, pharmaceutical and aerospace equipment industries. While we work closely with our customers, this regulation will provide challenges to implementation due to the requirements for new equipment and processes.

New stainless steel or plastic equipment must be ordered, manufactured and installed at our customer locations while changing out the old equipment. This replacement of equipment will result in additional costs to DE businesses. In addition, our customer base is a combination of owned and leased equipment. Businesses that may be depreciating the value of their equipment will be impacted financially and may resist an immediate switchover. There are a limited number of manufacturers that can produce the necessary equipment to complete the transition by the proposed deadline. As you may know, the New York Department of Environmental Conversation (NYDEC) recently passed similar regulations, as provided by the OTC, related to VOCs and cold cleaning machines with a deadline of December 1, 2020. Being able to supply enough equipment to the number of customers and impacted industries may not be possible.

Additionally, the transition to an aqueous based solution is not as simple as switching to a new solvent. Many DE businesses have supplier contracts in place that will need to be opened, rebid, reviewed and/or changed pursuant to the new regulations. These approvals could take months, or well over a year, to complete. Finding a correct cleaner for a particular application is often complex. Most solvents work similarly, but a water-based cleaner requires a formula or combination of chemistries to effectively clean pieces of equipment specific to a particular operation. As mentioned in your Start Action Notice #2019-05 signed on May 21, 2019 by David Fees, the Director of the Delaware Division of Air Quality, there are over 1000 locations in Delaware that will need to undergo this conversion. This is a significant endeavor of labor, research and time and may include laboratory trials of various cleaners on specific parts.

Further, some of our customers, such as printers, aerospace, military and poly resin industries may struggle to find an aqueous based solution that will be effective without damaging their components. As you know several South Coast Air Quality Districts in the State of California (SCAQD) adopted regulations concerning VOC emissions many years ago. Through a system of trial and error those Districts found it acceptable to exempt several industries. HCC requests the exemption of the industries consistent with the SCAQD.

A conflict could exist when a customer does not feel that an aqueous solution will adequately clean their parts. Some businesses may choose to purchase their own solvent, such as mineral spirits, gasoline or acetone or use handheld solvent cleaners to aid in their degreasing efforts. The resulting spent solvent could be combined with used oil and burned in on-site space heaters or mixed in an aqueous solution resulting in hazardous waste. In either case this could result in more VOC emissions to the environment than the proper use of a solvent based parts cleaner. SCAQD instituted bans on certain types of handheld solvent-based cleaners when their air regulations were passed so that this type of scenario could be avoided. HCC requests similar language consistent with the SCAQD.

For these reasons, HCC strongly recommends a 3-year extension to implement the transition to aqueous solutions necessary to keep our customers compliant. We also request that the Agency consider industry exemptions including aerospace, printers and medical equipment, and the restricted use of handheld solvent-based cleaners for parts cleaning purposes.

Thank you for allowing HCC to provide feedback on this proposed rule. HCC is committed to partnering with our customers to reach a sustainable future. If you have any questions regarding this response or need additional information, please do not hesitate to contact myself at (847) 836-5670 or through email at anita.decina@crystal-clean.com.

Sincerely,

Anita Decina
Vice President, EHS & DOT

/mw

From:	Held, Renae (DNREC)
To:	Pettingill, Gene (DNREC); Gray, Valerie A. (DNREC); Coverdale, James (DNREC)
Subject:	FW: Public Comments on Delaware Amendments to Section 33.0 "Solvent Cleaning and Drying" of 7 DE Admin. Code 1124
Date:	Friday, February 14, 2020 12:26:26 PM
Attachments:	image001.png
Importance:	High

Comments from DuPont de Nemours, Inc. on Solvent Cleaning regulation.

Renae Held
Program Manager II
Airshed Planning & Inventory Program
Delaware Division of Air Quality
tel. (302) 739-9402, fax (302) 739-3106

My email address has changed; my new address is renae.held@delaware.gov

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From: Webster,Tom <Thomas.S.Webster-III@dupont.com>
Sent: Friday, February 14, 2020 12:21 PM
To: Held, Renae (DNREC) <Renae.Held@delaware.gov>
Subject: Public Comments on Delaware Amendments to Section 33.0 "Solvent Cleaning and Drying" of 7 DE Admin. Code 1124

Ms. Held,

Thank you for holding the public workshop that was held Tuesday, January28, 2020, for which I attended, concerning Delaware Amendments to Section 33.0 "Solvent Cleaning and Drying" of 7 DE Admin. Code 1124.

I would like to formally submit the following comments that pertain to the Slides that were presented in the public workshop and the Draft Section 33.0 "Solvent Cleaning and Drying" of 7 DE Admin. Code 1124:

1. Slide 5 of Handout - sentence "Amendments expected to reduce emissions by 2,000 pounds/day**" - Would like to understand the math behind this calculation - please show the math.**
2. **General Comment - With Regards to Replacing Solvent Parts Washer Replacement to Compliant Unit - Have you considered the Costs that would be incurred for the following examples:**
    a. **Cost of current Solvent Parts Washer Machine (example SafetyKleen Unit)**
    b. **Cost of current Solvent purchased**
    c. **Cost of current Solvent Disposed / Recycled (example SafetyKleen)**
    d. **Cost of New Compliant Parts Washer - Detergent Type**
    e. **Cost of New Compliant Detergent - gallons required - possibly more required to do the job of what was once**
    f. **Cost of Compliance Detergent being disposed of - (now considered Hazardous**

Waste)

3. Within the proposed regulation, please perform a word check and remove "Material" - where you currently have Material Safety Data Sheet. **Accepted practice is "Safety Data Sheet"**
4. During the meeting of 1/28/19, Tom Webster requested that the **Technical documents that were used to develop the regulation be posted on the DE-DNREC website to better understand the changes.**
5. Per 33.3.3.11 "Draining or filling of solvent containers or cold cleaning machine shall be performed beneath the solvent surface". **Comment - this sentence is not clear in what you are attempting the owners of these units to perform.**
6. Per 33.3 **-** "Standards to batch cold cleaning machines" **- The businesses in DE would greatly appreciate having an Example - Work Practice Suitable for Posting - describing 33.3.3. Suggest a placard, stating the requirements.**
7. Per 33.10.3 - which reads "Obtain from any person from whom they purchase or obtain any solvent containing VOC for use in a cold cleaning machine, a **signed** document specifying the following accurate information specific to all purchased or obtained product". **- Please remove the word "signed" as it is difficult to get a signature and should not a requirement.**

Please let me know if you have any questions or comments, with regards to the above stated.

Best Regards,

Tom
Thomas S. Webster, III
DuPont de Nemours, Inc.
Environment, Health & Safety (EHS) Center of Excellence
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NORA
AN ASSOCIATION OF RESPONSIBLE RECYCLERS

Comments from NORA, An Association of Responsible Recyclers to the Delaware Division of Air Quality Regarding Proposed Amendments to "Solvent Cleaning and Drying"

Thank you for the opportunity to comment on Delaware's proposed amendments to Regulation 1124, Section 33.0 "Solvent Cleaning and Drying".

NORA, An Association of Responsible Recyclers (formerly the National Oil Recyclers Association) is a non-profit trade organization that was founded in 1984. In 1999, the National Independent Parts Cleaning Association and NORA merged because the parts cleaning and oil recycling businesses had much in common. Today, NORA has a Parts Cleaning Council that meets regularly. In addition, many of the manufacturers of parts cleaning equipment are members of the group. NORA represents over 300 companies in this sector.

NORA supports Delaware's efforts to optimize public health, welfare, and the environment. After reviewing the proposed changes with our members, we have identified multiple areas for the state to consider.

Some of the members of NORA that provide parts cleaning services in Delaware will also be providing comments related to this issue. Since those companies have significant technical and commercial expertise, their comments will provide more detailed comments on specific issues. NORA's comments are intended to provide the primary considerations the industry believes Delaware should consider.

One Size Does Not Fit All

A principle concern of NORA related to the proposed amendment is the impact it will have on customers of NORA members. These customers primarily consist of small businesses that service and repair automotive vehicles (such as service station dealers, automobile dealerships) and many various other industrial sectors (including aviation, military, manufacturing, etc.). The proposed amendments would dramatically alter current practices involving parts degreasing.

NORA members currently provide both solvent and aqueous parts cleaning services to their customers based on the needs of the individual business. Certain applications are best met by solvent where others are best met by aqueous.

One technology is not the right fit for every application. NORA encourages a more flexible approach for individual businesses to choose the right technology for their particular application. At a minimum, NORA suggests that Delaware include a more robust set of exemptions to the rule. There are many specific industry sectors not included in this rule that have various limitations that prevent their use of aqueous cleaning technologies. A thorough review of the industrial sectors and their cleaning requirements should be conducted prior to finalizing this amendment.

NORA, An Association of Responsible Recyclers
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Unintended Consequences

All forms of parts cleaning have various environmental impacts. NORA suggests reviewing the environmental impacts of all parts washing technologies to help drive decisions related to various industrial sector exemptions.

NORA would like to understand the proposed enforcement program that will be associated with this amendment. A lax enforcement program will create an uneven playing field where the law-abiding business entities are placed at a severe competitive disadvantage compared to the entities that defy the rule without any penalty.

NORA is aware that in California many small businesses discontinued their waste collection service related to parts washers. A strong enforcement mechanism should be in place to avoid severe negative environmental and health concerns. Without understanding the enforcement plan for this program, NORA is concerned that unregulated cleaning options (i.e. "black market" in illegal solvents, solvent spray cans, etc.) will limit the environmental benefits.

If there are geographic gaps in the adoption and enforcement of similar rules by nearby states, then this could create haphazard results. For example, stringent enforcement in Delaware but not in the neighboring states could mean a significant shift in parts cleaning operations, without creating any net environmental benefits. This may also create a negative economic impact on the state.

Timeline

NORA reviewed the proposed Compliance Date for Existing Sources of Summer 2021 with our members on a recent conference call. It was universally agreed that this is an inadequate amount of time for the proposed transition.

There are several limiting factors to prevent the industry from meeting the Summer of 2021 deadline.

- According to the documents provided, 1000 locations in Delaware will be affected by this amendment. The communication and servicing of this many customers will take a significant amount of time. Aqueous applications require testing of various chemistry for some customers that is frequently a time-consuming trial and error process.
- It is NORA's understanding that about half of the equipment in Delaware is owned by the customers and about half is leased. There may be businesses seeking to depreciate this equipment before it is phased out or discarded. In addition, there are current contracts and service agreements that will need to be redone.
- The capacity for the industry to manufacture and deliver new aqueous parts cleaning units is limited. The current equipment for solvent is not compatible with aqueous solutions. Parts cleaning equipment using an aqueous solution must be constructed of stainless steel and/or plastic.
- Other states, such as New York, are moving ahead with similar programs. This will further limit the industry's ability to meet the proposed deadline. If other states from the Ozone Transport Commission move on the Model Rule, this will add more time to meet the requirements of the proposed amendment.

For these reasons, NORA requests that an minimum extension of three years to the implementation period to allow for an orderly transition.

NORA looks forward to working with the Delaware Division of Air Quality and our members on this important initiative.

If you have any questions, please let me know.

Scott D. Parker, Executive Director
NORA
sparker@noranews.org
703-753-4277

Printpack
2800 OVERLOOK PARKWAY • ATLANTA, GA 30339 • PHONE 404-460-7000

VIA EMAIL (renae.held@delaware.gov)

February 13, 2020

Department of Natural Resources and Environmental Control
Division of Air Quality
7 DE Admin Code 1124 Section 33: Solvent Cleaning and Drying
100 West Water Street
Suite 6A
Dover, DE 19904
Attn: Renae Held

RE: Comments on Proposed Changes to Delaware Department of Natural Resources and Environmental Control, 7 DE Admin Code 1124 Section 33: Solvent Cleaning and Drying

Dear Ms. Held:

Printpack Inc. would like to submit the following comments regarding the proposed rule changes allowing the use of a control device as an Alternative Means of Control (AMOC) in lieu of solvent vapor pressure limits for cold solvent degreasing.

Printpack strongly supports the option of being able to use a control device to reduce VOC emissions from cold cleaning degreasers as an alternative to restricting the vapor pressure of the solvents used in those degreasers.

The use of commonly available control equipment, such as a Regenerative Thermal Oxidizer, with a prescribed destruction efficiency needs to be explicitly allowed in section 33 rather than SIP rule making and case-by-case approval

We respectfully request that DNREC amend the rule to allow cold cleaner degreasers to utilize a control device with a specified minimum overall control efficiency as an alternative to low vapor pressure solvents.

Printpack owns printing operations in Arizona, Georgia, Illinois, Indiana, North Carolina, Tennessee, Texas, Virginia and Wisconsin as well as plants outside of the US. Each one of those states allows the use of a control device, such as a Regenerative Thermal Oxidizer, as an alternative means of control to low vapor pressure solvents in cold solvent degreasing operations. Printpack knows from past experience and discussion with Trade Associations that the following states also allow the use of a control device, such as a Regenerative Thermal Oxidizer, as an alternative means of control to low vapor pressure solvents in cold solvent degreasing operations: California, Florida, Iowa, Kentucky, Minnesota, Missouri, New Jersey, New York, Ohio, Pennsylvania and South Carolina.

Printpack also owns a flexographic printing operation in Delaware. We support DNREC amending the rule to allow cold cleaner degreasers to utilize a control device as an alternative to low vapor pressure solvents because it reduces the cost of operating in Delaware versus operating in other states that allow AMOC, reduces the overall environmental footprint of those operations for better sustainability and reduces the risk of business disruption by ineffective cleaning and perturbation in the pricing and availability of low vapor pressure cleaners.

FINANCIAL

Printpack uses technology in factories outside the state of Delaware called solvent distillation in conjunction with automatic parts washers. Higher vapor pressure solvents from inks used in the printing process (alcohols and acetates) are recycled for reuse onsite in an enclosed automatic parts washer analogous to an industrial dish washer. The recycled solvent is also reused on cleaning the presses. In some instances, solvent recycled onsite is of sufficient purity to be reused in ink as part of the product. The emissions from the automatic parts washer are typically vented to a Regenerative Thermal Oxidizer (RTO) already employed to control printing press emissions.

The recycling lowers costs by reducing the amount of printing solvent that needs to be purchased. Recycling the solvents onsite also reduces the amount of hazardous waste generated which further lowers costs. Low vapor pressure solvents typically cost four times more to purchase than alcohols and acetates.

SUSTAINABILITY

Printpack, as well as Printpack's customers, are interested in reducing the overall environmental footprint of its operations. This extends beyond air emissions alone. Low vapor pressure solvents still require disposal. These solvents must be managed as a hazardous material and will be disposed of like a hazardous waste. Some other low vapor pressure cleaning options, such as caustic cleaners, must be disposed as hazardous waste. And the manufacture of those low pressure solvents in chemical factories generate pollution upstream prior to purchase, transport or usage. Some of these low vapor pressure solvents are reclaimed and reused in a parts washer. The love vapor pressure solvents are 100 percent VOC and cost four times the cost of other solvents. Reclaim these low vapor pressure solvents also requires dedicated solvent distillation and additional capital cost for an additional distillation unit.

Printing solvents will be purchased for printing independent of any consideration of solvent degreasing. Being able to reuse those same higher vapor pressure printing solvents for cleaning both at the press and in degreasing reduces the total amount of chemicals that need be manufactured as well as any air, water, and land emissions associated with that manufacture. Reusing higher vapor pressure printing solvents reduces the net hazardous waste generation from our printing operations. Venting the higher pressure printing solvents to an RTO helps supplement RTO fuel reducing energy usage and associated greenhouse gases. This is the environmentally superior approach from a global perspective.

DISCUSSION ON PROPOSED RULE CHANGE LANGUAGE (1124 Section 33)

(1) 7 DE Admin Code 1124 Section 33 prohibits the operation of a cold cleaner degreaser with a solvent that contains more than 25 g/l of VOC. The solvents used in the Printing industry (alcohols and acetates) are 100% VOC and therefore couldn't be recycled for reuse in an automatic parts washer under this Rule without a DNREC approved control device.

Delaware Rule 7 DE Admin Code 1124 Section 33.3.7.3 does allow a petition for a site-specific reasonable available control technology (RACT) as an alternative to the 25 g/l VOC limit. This petition could conceivably grant the use of solvents containing 100% VOC; however, we are concerned whether the petition could be granted by the DNREC in a timely manner. Furthermore, clarity is needed on whether existing control equipment (RTOs) would qualify for approval or would have to be replaced. This potential cost must be known and budgeted prior to the start of a project with no uncertainty of DNREC approval.

The speed at which a petition could be granted would factor heavily into a decision to bring additional business to Delaware that required solvent distillation support in conjunction with automatic parts washing. The expectation that site-specific RACT could potentially take a year to obtain in Delaware, and the uncertainty of what control equipment would qualify, factors into decisions to invest in other states that already have rules listing acceptable control efficiencies and would not include these additional delays.

Several other State RACT rules include a provision in which a facility can opt to achieve an overall control efficiency of at least 85% through control equipment as an alternative to specified control techniques. Indiana has recently proposed a rule to go final later this Spring to add a similar provision to 7 DE Admin Code 1124 Section 33.3.7.3 thereby allowing industry the use of automatic parts washers controlled by RTOs or equivalent without case by case site-specific RACT determination delays.

Printpack respectfully requests that an acceptable overall control efficiency and control device be defined in the rule itself to both expedite permitting and to remove uncertainty as to what control efficiency and control device may be required.

The existing rule allows the use of low vapor pressure solvent as a control option. Other industry may lack the scale to justify a Regenerative Thermal Oxidizer or other control device. The use of low vapor pressure solvent should also be available as an alternative to a control device.

Printpack recommends the following conditions be added. The new language would read as follows:

33.3.7.3 A cold cleaning machine may use greater than the VOC content for cold cleaning machines as specified above (25 g/ or 150 g/l) **when controlled by one of the following methods.**

a) **Flame, thermal or catalytic oxidation so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of VOCs to carbon dioxide and water; or**

b) **A vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled VOCs that would otherwise be emitted to the atmosphere; or,**

c) **Any other air pollution control equipment approved by DNREC and approved by the US EPA as a SIP revision capable of reducing by 85 percent or more the uncontrolled VOCs that would be otherwise emitted to the atmosphere; or,**

d) **The use of a low vapor pressure solvent with a vapor pressure of less than 1.0 millimeters of mercury (mm Hg), measured at 20 °C (68 °F).**

(2) 7 DE Admin Code 1124 Section 33.2 does not adequately define whether a solvent based automatic parts washer typically used in the flexographic printing industry would be defined as an airtight cleaning system or as a cold cleaning system.

An automatic parts washer is analogous to an industrial dish washer. The cleaning occurs in a sealed chamber with no solvent immersion. Press parts are loaded onto a cart that is pushed into the chamber. The door to the chamber is sealed prior to initiating a wash cycle. Solvent from a remote reservoir (process holding tank) is sprayed at high pressure through heads throughout the chamber. The solvent drains through a floor drain where it is pumped back to the remote reservoir (process holding tank) for reuse in successive wash cycles. The chamber is typically exhausted to a control device, such as an RTO, at the end of the drying cycle. There are no emissions as other times during its operation. The parts washer door automatically locks prior to initiating a wash cycle. The drying cycle must be complete and the chamber vented to the control device prior to the door unlocking.

Please specifically list automatic parts washer such as described above under the appropriate category in the definitions

(3) 7 DE Admin Code 1124 Section 33.3.3.10 states – "Cold cleaning machine container or containers shall be free of all liquid leaks. Auxiliary equipment such as pumps, water separators, steam traps or distillation units, shall not have any liquid leaks, visible tears, or cracks. In addition, any liquid leak, visible tear, or crack detected shall be repaired within 48 hours, or the cleaner shall be drained of all solvent and shutdown until replaced or repaired".

Automatic parts washers have multiple, pumps, filters, pipes and other components. Draining all the solvent from the automatic parts washer (cleaner) will lead to evaporative emissions. Fugitive emissions would be much lower if a small section of leaking pipe could be isolated via closed valves rather than the entirety of the equipment be drained of all solvent.

Printpack recommends this condition be modified as follows:

> Cold cleaning machine container or containers shall be free of all liquid leaks. Auxiliary equipment such as pumps, water separators, steam traps or distillation units, shall not have any liquid leaks, visible tears, or cracks. In addition, any liquid leak, visible tear, or crack detected shall be repaired within 48 hours, **or isolated such that no further leak can occur,** or the cleaner shall be drained of all solvent and shutdown until replaced or repaired".

(4) 7 DE Admin Code 1124 Section 33.3.3. states – Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaning machine. The solvent flushing shall be a solid fluid stream, not an atomized or shower spray, at a pressure that does not exceed 10 pounds per square inch gauge (psig).

This requirement would forbid the use of an automatic parts washer which uses high pressure spray in a sealed chamber in the 65-80 PSI range depending on the solvent blend being used.

Printpack recommends this condition be modified as follows to allow for the use of automatic parts washers.

> Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaning machine. The solvent flushing shall be a solid fluid stream, not an atomized or shower spray, at a pressure that does not exceed 10 pounds per square inch gauge (psig). **Parts washing performed in a sealed chamber, such as with an automatic parts washer, are exempt from this requirement.**

(5) 7 DE Admin Code 1124 Section 33.3 Applies standards to batch cold cleaning machines. Batch vapor cleaning machines are defined in the definitions. Batch cold cleaning machines are not defined. Please add a definition for Batch Cold Cleaning Machines since section 33.3 requirements are specific to batch cold cleaning machines

(6) 7 DE Admin Code 1124 Section 33.3.3.9 requires that heated solvent cleaning machines continuously record the temperature of the cleaning solution; however, a temperature record does not prevent boiling or excess emissions. Delaware would be better protected from excess emissions if instead of temperature monitoring a high temp shut down were required along with documentation showing the high temp shut down is tested annually. If the heated solvent is in a closed unit the temperature will not have an effect on the emissions in the parts washers used in this type of industry. The solvent is condensed at the end of the cycle to reduce emissions after the drying cycle. It would be good to add an exemption for high temperature if it is done in a closed system and does not increase emissions from the source.

(7) 7 DE Admin Code 1124 Section 33.1.3 requires facilities subject to the revised regulations to update their permits; however, no time frame is specified. Please allow 90 days from site specific notice by DNREC to amend existing Title V permits.

Please contact me at 404-460-7448 or via e-mail @ scarpenter@printpack.com if you have any questions regarding these comments.

Sincerely,

Stephen L Carpenter
Sr. Corporate Environmental Engineer

safety-kleen.
PROTECTION·CHOICES·PEOPLE
MAKE GREEN WORK

February 13, 2020

Renae Held, Program Manager II
Division of Air Quality
100 West Water St.
Suite 6A
Dover, DE 19904

RE: Delaware Regulation 1124, Section 33.0 "Solvent Cleaning and Drying".

Dear Ms. Held:

Safety-Kleen appreciates the opportunity to provide comments on the proposed Delaware Regulation 1124, Section 33.0 "Solvent Cleaning and Drying". We ask the Department to consider and balance the environmental and economic harms that are expected to arise from the suggested changes. Safety-Kleen supports efforts to protect human health and the environment. However, in this case, the standards contained in the proposed rules will result in substantial monetary and environmental costs. Safety-Kleen requests the Department takes into consideration the following comments when evaluating the efficacy and implementation of the proposed rules.

33.1.1 The applicable provisions of section 33.0 apply to any person who owns or operates a solvent cleaning machine that contains any amount of volatile organic compound (VOC) material.

Comment 1. Requirements within 33.1.1 and 33.8 of the proposed rule refer to "the owner or operator". A large portion of the parts washer industry involves leasing parts washers to users. There are several requirements in the rules that cannot be applicable to the owner of a leased parts washer while it is under the control of a leaser and must be only applicable to the operator of the unit. For example, an owner of a parts washer is not able to complete monthly inspections of the cover of the unit as required by 33.8.3 when the unit is located at location of the operator. In an effort to prevent ambiguity and prevent confusion the references to "owner" should be revised to clearly list the responsible operator or owner of the operating entity.

Comment 2. Safety-Kleen requests the previous de minimus VOC concentration threshold of 5% by weight for cleaning solvents be reduced to 2.5% by weight rather than being removed from the applicability reference in 33.1.1. By removing the 5% VOC threshold, some aqueous products that already comply with the Department's new 25 g/l VOC requirement will now be regulated when they were not before. This change will add regulatory burden to existing aqueous users and goes above and beyond most if not all other states' degreasing requirements. The existing aqueous users who will be impacted are likely not aware of the proposed changes nor the changes they will have to make to their < 25 g/l VOC solution parts cleaning operation. It is not clear in the documentation provided by the DNREC that these additional regulatory

requirements on de minimus (<2.5% VOC by weight) aqueous solutions are needed to accomplish the VOC emission reductions goals established.

33.3.4 On and after November 11, 2002, and before xx/xx/2021, no person shall use, sell, or offer for sale for use in a cold cleaning machine any solvent with a vapor pressure of 1.0 millimeters of mercury (mm Hg) or greater, measured at 20°C (68°F) that contains volatile organic compounds.

Comment 3. The current language would have the effect of banning aqueous cleaning solvent because the vapor pressure of water at 20°C is approximately 17.5 mm Hg. Suggested new language which would not restrict aqueous cleaners is as follows: *"On and after November 11, 2002 and before xx/xx/2021, no person shall use, sell, or offer for sale for use in a cold cleaning machine any solvent where the composite vapor pressure of regulated VOCs is 1.0 millimeters of mercury (mm Hg) or greater, measure at 20°C (68°F)."*

33.3.3.9 If heated, the cold cleaning machine shall have a temperature control device that will avoid overheating, prevent boiling of the cleaning solution, and provide a continuous temperature record.

33.8.9 The owner or operator of a heated cold cleaning machine described in subsection 3.3.3.9 shall use a continuous temperature recorder, or equivalent to indicate machine operating temperature during processing.

Comment 4. (applicable to both 33.3.3.9 and 33.8.9) Most standard aqueous parts washers have a temperature control device to avoid and prevent overheating and boiling. However, the parts washers typically do not have the ability to provide a "temperature record" as required in the proposed rules. For example, Safety-Kleen's heated aqueous remote reservoir parts washer (i.e., sink on a drum) utilizes an immersion heater with a factory set temperature of 120°F that **can't** be adjusted by the end user. Aqueous parts washer operators would not be able to comply with this requirement unless they were to add a temperature recording device that is compatible with both the solution and the equipment, and is also safe to use. Such an addition is not necessary if there is a functioning temperature control device within the unit.

33.3.7.2 Solvent to clean post-solder printed circuit boards as well as critical adjunct processes, including the cleaning of raw solder paste and adhesives from hard surfaces, such as stencils and misprinted boards during the printing process, and bakes on fluxes (polymerized fluxes) from reflow and wave solder oven components, such as conveyor fingers and condensation traps, may contain no more than 150 grams VOC per liter of solution and all other applicable provisions of Section 33.0 must be followed.

Comment 5. Safety-Kleen asks the Department to consider expanding the exemption noted in 33.3.7.2 to include the exemptions and thresholds adopted from the Bay Area and South Coast AQMD Industrial Cleaning Rules 1171 (c), 1122 (k), and 1124 (l). These South Coast rules have been effective at implementing the VOC solvent reductions in the industry while

accommodating the special needs of specific industry sectors without debilitating businesses and the economy.

33.3.7.1 On and after (insert compliance date) no person shall use, sell, or offer for sale for use in a cold cleaning machine any solvent containing more than 25 grams of VOC per liter in a cold cleaning machine, except as noted in subsections 33.3.7.2 or 33.3.7.3. See subsection 33.10.3 for more details.

Comment 6. Safety-Kleen requests the Department consider the tremendous undertaking it will be to transition all solvent based parts washers within the state when setting an implementation date. A three year implementation period is suggested for a change of this magnitude. Some of the factors to consider include the following:

1) Petroleum based (higher VOC) solvent parts washers are not compatible with the aqueous solutions. Due to the mild steel components, pump incompatibilities, and need for a heater, these units have to be replaced with parts washers specifically designed for aqueous solutions. Distributers likely do not have the inventory readily available to swap all of the petroleum solvent based units within the state and will have to manufacture additional units. Sourcing of parts and increasing production at manufacturing facilities will easily take over one year to produce the needed inventory. The available inventory issues are amplified by the recent implementation of a similar solvent VOC reduction regulation in New York which further reduces any availability of aqueous parts washers.

2) Adding to the challenges for a service provider and user are existing contracts with government, municipalities, and large corporations which will require renegotiation to change any agreed upon products or pricing.

3) The DNREC needs to consider the economic impact of the proposed solvent cleaning rules. Based on our experience, the manufactured cost differential between a petroleum solvent parts washer and the "equivalent" aqueous parts washer can be 100+%. These added costs will ultimately be passed on to the end user. We estimate the average cost for an aqueous parts washer service (where the spent aqueous cleaner is RCRA non-haz) can be 10+% higher than that of a petroleum based service in today's market. Why? Spent petroleum solvent is bulked and recycled within the Safety-Kleen recycling network and used over and over. Pricing for petroleum based parts washer services are based on Safety-Kleen's ability to control costs by bulking the spent solution and transport the material in bulk to a recycling center where the spent solution is recycled and made back into new product.

All aqueous cleaning solutions have a onetime use and must be disposed after they become spent and new product must replace the used material. If an aqueous solution is contaminated by hazardous constituents after use and becomes a hazardous waste this material may need to be incinerated at a significant cost to the end user ($100s per drum). In addition, the average aqueous service term is approximately 10 weeks per year, while

an average petroleum solvent service term is typically 13 weeks per year, resulting in 1 to 2 more services per year (est. 30% increase in costs).

Aqueous solutions also require heat to clean effectively which will increase energy usage and electrical costs to the users.

If the Department moves forward with these regulations, regardless of the size of a business, the cost to install new equipment and the increased operation and disposal costs will need to be planned and budgeted for within the regulated community.

33.10.3 Obtain from any person from whom they purchase or obtain any solvent containing VOC for use in a cold cleaning machine, a signed document specifying the following accurate information specific to all purchased or obtained product.

33.10.3.1 The name and address of the solvent supplier.

33.10.3.2 The type of solvent including the product or vendor identification number.

33.10.3.3 The VOC content of the solvent as determined by test method in subsection 33.11.1

Comment 7. Distributers of products are required by OSHA to provide a Safety Data Sheet which contains the VOC content of the solvent to the user. In addition, suppliers already provide users a record such as an invoice, service document or shipping document with the name, address of the solvent supplier and the identity of the solvent. These typical documents already required provide the needed information to the user and the Department. Requiring an additional, redundant, signed form adds unnecessary regulatory burden to the user and the distributer of the cleaning solution and does not add any additional environmental benefit. We ask the Department to remove this requirement or provide vast flexibility in what records can be used to meet the documentation requirements.

Unintended Consequences:

Comment 8. Small businesses that view the costs as too onerous may discontinue waste collection and disposal service. When customers discontinue this service they still continue to operate and may not dispose of generated waste properly. In this situation, the increased cost burdens result in environmental health and safety consequences that should be considered in this rule proposal.

Comment 9. While aqueous cleaners may have low VOC emissions, aqueous cleaners are not as effective in cleaning in certain situations. Under these circumstances operators may opt to use unregulated high VOC solvents in order to get an effective cleaning completed. For example, some operations may rely on unsafe solvents, such as gasoline, diesel, methyl ethyl ketone, perchloroethylene, or acetone instead of using an aqueous cleaner where they perceive aqueous solutions as less effective. These chemical substitutes may pose greater worker exposure and fire/explosion hazards. Safety-Kleen clean parts washers are not rated for acetone use and would not meet NFPA or UL requirements and will result in a fire hazard.

Additionally, our experience has shown that there is an increase in the use of solvent spray cans after a parts cleaner user switches to aqueous cleaners. Aerosols disperse directly into the air when used and, in addition to VOCs, may contain ozone depleting compounds, and hazardous air pollutants. This is vastly different than current mineral spirits used in degreasing operations, which are recirculated and allow for multiple cleanings. More information or studies may be needed to determine the effects of unregulated high VOC solvents, aerosol can sprays and cleaning supplements used in conjunction with aqueous cleaners, as well as health and environmental hazards.

Comment 10. Aqueous cleaners use heat and typically have a "rinse" cycle to avoid residue. The environmental consequences of increased energy and water usage should be considered when evaluating the environmental goals of the Department.

Safety-Kleen looks forward to working cooperatively with the Department to protect human health and the environment and appreciates the Department's time and consideration.

If you have any questions concerning our comments or require clarification, please contact me at (734) 516-0291 or maggie.tenant@safety-kleen.com.

Sincerely,

Maggie Tenant Digitally signed by Maggie Tenant
Date: 2020.02.13 11:13:37 -05'00'

Maggie Tenant
Vice President of Environmental Compliance