VERMONT

Vermont Department of Environmental Conservation
Air Quality and Climate Division
Davis 2 – 2nd Floor
One National Life Drive [phone] 802-828-1288
Montpelier, VT 05620-3802 [fax] 802-828-1250

Agency of Natural Resources

September 6, 2018

David Conroy
EPA - New England, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: State Implementation Plan revision for the 2008 and 2015 ozone national ambient air quality standards

Dear Mr. Conroy:

Enclosed for your review is a revision to the Vermont State Implementation Plan (SIP) meeting the State's obligations outlined under Section 184(b) of the Clean Air Act and addressing requirements under Sections 182(b)(2) and 182(f) with respect to the 2008 and 2015 ozone national ambient air quality standards (NAAQS).

As part of the Ozone Transport Region, Vermont was required to submit reasonably available control technology (RACT) SIP revisions for the 2008 ozone NAAQS by July 20, 2014. On February 3, 2017, EPA published in the Federal Register a finding that Vermont had failed to submit certain SIP revisions required for the 2008 8-hour ozone NAAQS. Vermont is submitting the required SIP revisions for your review at this time. In addition to the SIP elements required under the 2008 standard, Vermont is certifying that currently required controls also meet RACT for the 2015 ozone NAAQS in Vermont.

This submittal completes the SIP-related administrative responsibility for the State of Vermont in defining RACT for stationary sources with respect to the 2008 and 2015 ozone NAAQS. This RACT SIP revision certifies the following with respect to Vermont stationary sources of ozone precursors:

1. All required RACT controls, both Control Techniques Guidelines (CTGs) and Major Sources, have been implemented, or will be implemented upon adoption of several CTG regulations, on all relevant stationary sources of VOC and NOx emissions;
2. All previously EPA-approved RACT controls, including CTGs and Single Source RACT applied to other Major Sources, have been certified by the Vermont Air Pollution Control Officer, based on EPA's guidance and standards, to represent RACT control levels under the 2008 and 2015 ozone NAAQS.
3. Vermont has no applicable sources for several CTG categories, for which Negative Declarations are listed in the SIP Technical Support Document.

In support of this submittal, please find enclosed the following documents:

(1) Compliance with 40 CFR § 51.102 & App. V of 40 CFR Part 51 regarding revisions to Vermont's State Implementation Plan (SIP);
(2) Evidence of adoption of submitted rules;

(3) Responsiveness summary; and
(4) SIP technical support document;

Exact duplicates of these documents may be found on the AQCD website at http://dec.vermont.gov/air-quality/planning/sip.

If you have any questions regarding this submittal, please contact Bennet Leon at (802) 249-4221.

Sincerely,

Heidi Hales
Director

Enclosures (4)

CC: Anne McWilliams, EPA Region 1

COMPLIANCE WITH 40 CFR § 51.102 & APP. V OF 40 CFR PART 51 REGARDING REVISIONS TO VERMONT'S STATE IMPLEMENTATION PLAN (SIP)

As required by 40 CFR § 51.102(f), the requirements of 40 CFR § 51.102(a)-(d) were met and the public notice and hearing procedure were followed consistent with the information provided in the public notice and the State's laws and constitution, as applicable. Public notice of the proposed revisions to Vermont's State Implementation Plan (SIP) was posted online on May 23, 2018 on the AQCD website (http://dec.vermont.gov/air-quality/planning/sip) and published on May 31, 2018 in a selection of the Vermont Secretary of State's designated newspapers of record. The public was provided with the opportunity to comment until July 16, 2018. The public notice included a notice of public hearing on July 9, 2018 at 11:00am in the Montpelier Room, in the Davis Building located at One National Life Drive in Montpelier, Vermont, which was held as noticed.

A copy of the public notice published online is provided below.

Proposed Rules Postings

A Service of the Office of the Secretary of State

Search Rules

Deadline For Public Comment

Deadline: Jul 16, 2018

Please submit comments to the agency or primary contact person listed below, before the deadline.

Rule Details

Rule Number:	18P018
Title:	Miscellaneous Amendments to the Vermont Air Pollution Control Regulations.
Type:	Standard
Status:	Proposed
Agency:	Agency of Natural Resources
Legal Authority:	10 V.S.A. §§ 554 and 558
Summary:	These amendments address updates to regulations pertaining to the control of emissions from sources of volatile organic compounds (VOCs), as prescribed by the Clean Air Act 2008 Ozone Standards and required to be included in Vermont's State Implementation Plan. The public comment period and hearing for this rule will also serve as the comment period and hearing required under 40 C.F.R. § 51.102 for corresponding revisions to Vermont's State Implementation Plan (SIP) in compliance with the Clean Air Act (CAA).
Persons Affected:	Any people, enterprises, or government entities (meeting certain size thresholds) performing any of the regulated activities covered in the VOC regulations, including those: - using industrial adhesives - engaged in lithographic printing - engaged in coating of flat wood paneling - engaged in coating of metal and plastic parts, and - using industrial cleaning solvents.
Economic Impact:	The VOC regulations are each federally required and similar to existing regulations in neighboring states. As a result, compliant materials are readily available and not expected to impose significant economic impacts.
Posting date:	May 23,2018

Hearing Information

Information for Hearing # 1

Hearing date:	07-09-2018 11:00 AM ADD TO YOUR CALENDAR
Location:	Vermont Department of Environmental Conservation
Address:	1 National Life Drive, Davis 2
City:	Montpelier
State:	VT
Zip:	05602
Hearing Notes:	

Contact Information

Information for Primary Contact

PRIMARY CONTACT PERSON - A PERSON WHO IS ABLE TO ANSWER QUESTIONS ABOUT THE CONTENT OF THE RULE.

Level:	Primary
Name:	Megan O'Toole
Agency:	Department of Environmental Conservation, Agency of Natural Resources
Address:	1 National Life Drive Davis 2
City:	Montpelier
State:	VT
Zip:	05620
Telephone:	802-828-1288
Fax:	802-282-1250
Email:	megan.otoole@vermont.gov SEND A COMMENT
Website Address:	http://dec.vermont.gov/air-quality VIEW WEBSITE

Information for Secondary Contact

SECONDARY CONTACT PERSON - A SPECIFIC PERSON FROM WHOM COPIES OF FILINGS MAY BE REQUESTED OR WHO MAY ANSWER QUESTIONS ABOUT FORMS SUBMITTED FOR FILING IF DIFFERENT FROM THE PRIMARY CONTACT PERSON.

Level:	Secondary
Name:	Doug Elliott
Agency:	Department of Environmental Conservation, Agency of Natural Resources
Address:	1 National Life Drive, Main 2
City:	Montpelier
State:	VT
Zip:	05620
Telephone:	802-828-1288
Fax:	802-828-1250
Email:	doug.elliott@vermont.gov SEND A COMMENT

Keyword Information

Keywords:

Volatile organic compounds (VOC)
Ozone
Air Pollution
Reasonable available control technology (RACT)

Back

A Vermont Government Website Copyright 2018 State of Vermont

Secured By Vermont.gov

(802) 828-2863

MEMORANDUM OFFICE OF THE SECRETARY OF STATE

Primary Contact: Megan O'Toole Agency of Natural Resources Vermont Department of Environmental Conservation 1 National Life Drive Davis 2, Montpelier VT 05620 Tel: 802-828-1288 Fax: 802-828-1250 Email: megan.otoole@vermont.gov.

Secondary Contact: Doug Elliott Agency of Natural Resources Vermont Department of Environmental Conservation 1 National Life Drive, Davis 2, Montpelier, VT 05620 Tel: 802-828-1288 Fax: 802-828-1250 Email: doug.elliott@vermont.gov.

URL: http://dec.vermont.gov/air-quality

From: Louise Corliss, APA Clerk

RE: Miscellaneous Amendments to the Vermont Air Pollution Control Regulations.

Date 08/31/2018

We received Proposed Rule on 05/16/2018
Final Proposed Rule on 08/03/2018
Adopted Rule on 08/31/2018

We have assigned the following rule number(s):
Proposed Rule Number: 18P018
Adopted Rule Number: 18-039

(Final Proposals are not assigned a new number; they retain the Proposed Rule Number.)

The following problems were taken care of by phone/should be taken care of immediately:

We cannot accept this filing until the following problems are taken care of:

The ad for this proposed rule appeared/will appear in newspapers of record on 05/31/2018 & / / .

This rule takes effect on 09/15/2018

Adoption Deadline: 01/16/2019

Please note: The word "compounds" was misspelled in the keywords and corrected in the databases by SOS staff.

If you have any questions, please call me at 828-2863. OR E-Mail me at: louise.corliss@vermont.gov

cc: Charlene Dindo

Responsiveness Summary

Summary of Verbal comments, Response to Comments, and Summary of Changes for Proposed 2018 Amendments to the Air Pollution Control Regulations, including new and amended regulations for Control of Volatile Organic Compounds and corresponding revisions to Vermont's State Implementation Plan (SIP).

Summary: The proposed regulatory amendments address updates to the Vermont Air Pollution Control Regulations pertaining to the control of emissions from sources of volatile organic compounds (VOCs). The new or amended VOC regulations are: 5-253.8 Industrial Adhesives, 5-253.9 Offset Lithographic and Letterpress Printing, 5-253.12 Coating of Flat Wood Paneling, 5-253.13 Coating of Miscellaneous Metal and Plastic Parts, and 5-253.17 Industrial Cleaning Solvents.

The public comment period and hearing for these regulatory amendments also serve as the comment period and hearing required under 40 C.F.R. § 51.102 for corresponding revisions to Vermont's State Implementation Plan (SIP) in compliance with the federal Clean Air Act (CAA).

Public Comment Period: The public comment period ended at close of business on Monday, July 16, 2018.

Public Meeting: A public meeting was held July 9, 2018 at 11:00 am at the Department of Environmental Conservation, Montpelier Conference Room, National Life Building, Montpelier, VT. The only attendees of the public or regulated community were those from the State of Vermont Military Department representing the Vermont Army National Guard facilities.

Comments Received and Response to Comments: Verbal and/or written comments were received from the Vermont Army National Guard, Mark Foley of Foley Services, Inc., Doug Warner of Churchill Coatings Corp., Paul Kaminski and Peter Vodola of Ethan Allen Inc., and the U.S. Environmental Protection Agency. The comments received are summarized below along with responses from the Vermont Air Quality and Climate Division ("the Agency").

Comments from Lee Ann Banks and Mathew Probosco, State of Vermont Military Department representing the Vermont Army National Guard (VTANG) facilities. Comments and questions were presented orally at the hearing and are summarized below.

Comment 1. The VTANG facilities are each currently below the 3 tons per year applicability threshold of the Coating of Miscellaneous Metal and Plastic Parts regulation. Will future applicability to this regulation have any effect on their permitting status?

> Response 1. No. Applicability to the respective regulation will not directly alter the permit status of the VTANG facilities. The VTANG Colchester facility is currently subject to a Permit to Construct and Operate and the VTANG South Burlington facility is currently only subject to a Permit to Construct since its potential facility wide emissions do not cumulatively exceed the 10 tons per year threshold to require a Permit to Operate. However, if future applicability to the respective Coating of Miscellaneous Metal and Plastic Parts regulation is a result of a modification to the facility or an increase in potential emissions beyond those currently permitted, then an amendment of the respective permits would be required and applicability to the Permit to Operate could be triggered.

Comment 2. Why has the applicability of the revised Coating of Miscellaneous Metal and Plastic Parts regulation changed from 5 tons per year to 3 tons per year?

> Response 2. The US EPA recommended applicability threshold for most regulations for control of volatile organic compounds which are based on Control Technique Guidelines is 15 pounds per day. At continuous operation this equates to approximately 2.7 tons per year which has been round to 3 tons per year. Prior regulations which adopted the 5 ton per year threshold will likely be revised downward to 3 tons per year in the future.

Comment 3. The Coating of Miscellaneous Metal and Plastic Parts regulation states that if a source becomes subject to the regulation it will remain subject even if its emission levels later fall below the applicability threshold. The VTANG operations tend to be cyclical, thus the facilities may become subject in the future but then later fall below again. How will this affect future applicability?

> Response 3. The once subject, always subject provision is consistent with the prior regulation and most regulations for control of volatile organic compounds which are based on Control Technique Guidelines. If in the future any of the VTANG facilities exceed the 3 tons per year applicability threshold (only emissions from applicable coating operations are aggregated) then use of compliant coatings would be required from then on, even if emission later fall back below the 3 tons per year threshold.

Comment 4. The Coating of Miscellaneous Metal and Plastic Parts regulation table of coating limitations has a category for camouflage (3.5 lbs/gal) and military specifications (2.3 lbs/gal). Is this intended to apply to all coatings applied by a military facility?

> Response 4. No. The military specification limitation is intended to apply to coatings where a military specification applies. There are presumably coatings applied at military facilities that are not subject to rigid military specifications. Such coatings instead would be subject to other respective limitations for which the coating may be applicable. Note that 5-253.13(c)(3) of the regulation states that if more than one emission limit in paragraph (c)(1) or (c)(2) of this section applies to a specific coating, the least stringent emission limit shall apply. Thus in the case of a military specification camouflage coating the less stringent 3.5 lbs/gal limitation would apply.

Comment 5. Would the Coating of Miscellaneous Metal and Plastic Parts regulation apply to coatings applied to canvas, such as waterproofing materials?

> Response 5. No. The regulations do not apply to canvas or other non-metal or non-plastic components.

Comments from Mark Foley of Foley Services Inc., a commercial laundry facility in Rutland. Comments were provided in phone conversation June 15, 2018 and are summarized below.

Comment 6. Mr. Foley recalled an Air Program outreach effort from 2012 alerting commercial laundry facilities of potential volatile organic compound emission from their operations should they be laundering shop towels from various industries such as print shops, wood furniture finishing operations and other coating operations. Mr. Foley was wondering if any of the proposed regulations would impact his laundering operations.

> Response 6. No. None of the proposed regulations would directly impact a commercial laundry facility unless they also do one of the regulated activities. Industrial solvent cleaning does not

include commercial laundry operations since the cleaned products are not incorporated into or used exclusively in manufacturing a product.

Comments from Doug Warner, Churchill Coatings Corporation, a clapboard siding prestaining and painting operation in Springfield.

Comment 7. Churchill Coatings applies a coating to decking material that cannot reasonably achieve the proposed limitations of 5.253.12 Coating of Flat Wood Paneling and still maintain product quality.

Response 7. Decking materials are not subject to 5-253.12 Coating of Flat Wood Paneling since decking materials do not meet the definition of "flat wood paneling" since it is not an exterior wood siding.

Comment 8. Churchill Coatings applies oil-based primers to clapboards that cannot reasonably achieve the proposed limitations of 5.253.12 Coating of Flat Wood Paneling and still maintain product quality. Since many of our orders take more than a day to process the daily averaging is not achievable for several of our primary coatings. These coatings enable the product to be warrantied for many years and reduce the need for more frequent repainting with the associated VOC emissions. Our coatings can meet 2.9 lbs/gal as applied and maintain the warranty.

Response 8. The Agency acknowledges the longevity of these factory applied coatings and the corresponding decrease in future emissions from avoidance of more frequent repainting. In addition, the proposed regulation is being expanded to include this category of sources for the first time and thus subjecting them to limitations where none had previously existed. Further, the Agency is aware of only two facilities that are expected to seek this less stringent standard for solid wood exterior siding, limited to only those facilities with total VOC emissions less than 50 tons. Therefore the proposed regulation is being amended so the language in the table of 5-253.12(c)(1) will be revised as follows: "Solid wood exterior siding of cedar, hemlock, mahogany and redwood species at a stationary source whose actual emissions from all ~~flat wood paneling~~ coating lines within the source are less than 50 tons of volatile organic compounds per 12-month rolling period." This change will ensure a facility's entire VOC emissions from coating lines (including decking and line cleaning) are aggregated. Further, the limitation for this respective category in the table will be revised from 325 grams/liter (2.7 lbs/gal) to 350 grams/liter (2.9 lbs/gal). Any increase in VOC emissions from the applicable facilities due to increasing the limitation to 2.9 lbs/gal is expected to be minimal since the oil-based priming is only a subset of the coatings used at these facilities and most paints/topcoats are inherently substantially less than this limitation.

Comments from Paul Kaminski of Ethan Allen Inc., a wood furniture manufacturing company with facilities in Orleans and Beecher Falls. Comments were provided by phone conversation July 6, 2018 and are summarized below.

Comment 9. Given that both Ethan Allen facilities are regulated under 5-253.16 for wood furniture manufacturing, would the regulations for adhesives and flat wood paneling apply to their operations?

Response 9. Yes, with respect to the adhesives regulation to the extent any of their adhesive operations also meet the applicability of that regulation. No, with respect to the flat wood paneling regulation. There are no exemptions within the wood furniture regulation or the adhesive regulation that states compliance with one regulation exempts you from compliance with another. The wood furniture VOC regulation does not address adhesives at all. It is the

hazardous air pollutant component of that regulation that addresses adhesives and it does not establish a VOC limit. With respect to the flat wood paneling regulation, Ethan Allen and other wood furniture manufacturing operations were not intended to be regulated under flat wood paneling as that regulation is intended to be limited to products intended for wall coverings, not furniture. The applicability section of 5-253.12 Coating of Flat Wood Paneling is being revised to add section 5-253.12(a)(3) which states: *"This rule does not apply to surface coating of wood flat stock that is subsequently used in furniture or cabinetry."* As it was previously proposed, the flat wood paneling limitations with respect to wood furniture would have applied only to natural finish hardwood plywood. This is a very limited subset of wood furniture manufacturing but all wood furniture is now clearly being removed from applicability to flat wood paneling.

Comment 10: Would the proposed § 5-253.17 Industrial cleaning solvents apply to Ethan Allen wash coating operations that are dip tanks used to aid in removal of coatings from defective coated products?

Response 10: No. The US EPA CTG background guidance indicates that cleaning activities associated with wood furniture manufacturing are an allowed exemption. The Agency is adding language to section 5-253.17 to clarify this exemption. Section 5-253.17(a)(3)(i)(H) now reads: *"(H) cleaning activities at stationary sources which are engaged in: Aerospace coating; Paper, fabric, film, and foil coating; Metal furniture coating; Wood furniture coating; Flexible packaging printing; Offset lithographic and letterpress printing; Flat wood paneling coating; Miscellaneous metal products coating; Plastic parts coating; Fiberglass boat manufacturing materials; and Miscellaneous industrial adhesives, Electrical and electronic components; Precision optics; Numismatic dies; Stripping of cured inks, coatings, and adhesives; Cleaning of resin, coating, ink, and adhesive mixing, molding, manufacturing and application equipment,"*

Comment 11. Ethan Allen expressed initial concern with their ability to comply with the proposed 5-253.8 Industrial Adhesives regulation and subsequently requested an extension of the effective date of the regulation to 6 months after filing the final rule.

Response 11: Upon Ethan Allen's review of their adhesives usage it was indicated in a July 23rd phone conversation with Mr. Kaminski of Ethan Allen that they expected to remain below the 200-pound applicability threshold. The Agency is therefore not proposing to extend the effective date of the regulation and will continue to work with Ethan Allen should any issues arise.

Comments from Peter Vodola of Ethan Allen Inc., a wood furniture manufacturing company with facilities in Orleans and Beecher Falls. Comments were provided by letter and subsequent email communications are summarized below.

Comment 12. In several provisions, the proposed regulations do not set clear or reasonable limits that are linked to any established state or federal environmental health standards. No other state has adopted a set of regulations with the same set of limits, creating a potentially significant disincentive to continuing such operations in the State of Vermont. Other authorities establish more practicable, and equally-environmentally friendly, means of regulation. The proposed regulations could make continued operation of manufacturing facilities unaffordable or impractical, and compound the increased risks and costs of continuing to invest in, or do business in, the State of Vermont.

Response 12: As noted in the rulemaking forms, each of the VOC regulations are required per the federal Clean Air Act 2008 ozone standard. The requirements of these regulations are substantially similar to the federal minimum requirements and substantially similar to the regulations of each of the other states in the Ozone Transport Region extending along the

northeast coast from Virginia to Maine. While states outside of the ozone transport region have more flexibility in whether to adopt such regulations and the stringency of any such regulations, those states in the Ozone Transport Region are bound by the Clean Air Act to adopt at least the federal minimum requirements.

Comment 13: The proposed regulations contain applicability and exemptions that are seemingly inclusive of some industries while exclusive of others, and therefore may be seen as arbitrary, and/or under-inclusive, or otherwise not reasonably related to the purpose of the regulations and may create added burden on manufacturers even if just to show they are not applicable.

Response 13: The applicability and exemptions of each of the VOC regulations are based on the federal minimum requirements and the regulations of the other states in the Ozone Transport Region. The applicability and exemptions of the regulations are intended to focus the regulation on the larger emitting sources within the categories to assure effective and efficient use of regulatory resources with the goal of continued compliance with the ozone air quality standard. With that in mind, ANR has amended the applicability section of 5-253.17, Industrial Cleaning Solvents to address some of the commenters concerns. The changes to 5-253.17(a)(3) are as follows:

(3) The requirements of this section shall not apply to the following:

(i) The use or purchase of cleaning solvent in

(A) janitorial cleaning,

(B) research and development,

(C) quality control or laboratory testing of coatings, inks or adhesives,

(D) medical device manufacturing,

(E) pharmaceutical manufacturing,

(F) digital printing operation,

(G) cleaning of screen printing equipment, if the cleaning solvent used has an as-applied VOC content that does not exceed 500 grams per liter, equivalent to 4.2 pounds per gallon,

(H) cleaning activities at stationary sources which are engaged in: Aerospace coating; Paper, fabric, film, and foil coating; Metal furniture coating; Wood furniture coating; Flexible packaging printing; Offset lithographic and letterpress printing; Flat wood paneling coating; Miscellaneous metal products coating; Plastic parts coating; Fiberglass boat manufacturing materials; and Miscellaneous industrial adhesives, Electrical and electronic components; Precision optics; Numismatic dies; Stripping of cured inks, coatings, and adhesives; Cleaning of resin, coating, ink, and adhesive mixing, molding, manufacturing and application equipment,

(I) A cleaning activity, including surface preparation prior to coating, necessary to meet a standard or specification issued or approved by the

United States Department of Defense, Federal Aviation Administration or other federal government entity, provided that any person claiming exemption pursuant to this paragraph shall maintain records of the standard or specification,

(ii) Any owner or operator performing industrial solvent cleaning that exceeds the applicable limit of paragraph (c)(1)(i) of this section where the quantity used does not exceed 55 gallons per any twelve-month rolling aggregate. Any owner or operator claiming exemption pursuant to this clause shall record and maintain monthly records sufficient to demonstrate compliance with this exemption, or

(iii) Any owner or operator performing industrial solvent cleaning that exceeds the applicable limit of paragraph (c)(1)(i) of this section, if approved by the Air Pollution Control Officer and the EPA. Any request for approval shall be made in writing to the Air Pollution Control Officer and the EPA and shall include a description of the cleaning solvent and its VOC content, an explanation of why the cleaning solvent is necessary, quantification of the amount of the VOC that will be emitted as a result of the use of the noncompliant cleaning solvent and the time period over which the noncompliant solvent will be used.

Comment 14: Proposed § 5-253.8 also would establish an alternate compliance method by the use of "control devices" (§ 5-253.8(d)) and yet would also establish procedures for such devices that may be impractical, or that may result in the opposite of the intended result, by, e.g., requiring the use of combustion chamber temperatures that mandate such fuel amounts as to more than counteract the impacts of the reduction in emissions

Response 14: In the US EPA document that establishes the federal minimum regulatory requirements, EPA states “Although VOC emissions in spray booth exhaust can be controlled with add-on controls, it is generally not cost effective to do so because of the large volume of air that must be treated and the low concentration of VOC.” The preference and assumption is that compliant coatings are available and add on controls would not be necessary. The adhesive limits prescribed by EPA, including the adhesive limit for wood, have been if effect in most of the Ozone Transport Region states for several years.

Comments from Anne McWilliams and David Mackintosh, US EPA Region 1, July 11, 2018.

Comment 15: Vermont's proposed emission limits for miscellaneous metal and plastic parts product coating operations are consistent with EPA's 2008 MMPPC CTG. However, the proposed limits for certain specialty coatings are less stringent than Vermont's existing SIP-approved rule. Therefore, when Vermont submits the revised rule to the EPA as a State Implementation Plan (SIP) revision, the state should address the anti-backsliding provisions of Sections 110(l) of the Clean Air Act. For example, Vermont could point to the fact that the amendments also include emission limits for some large use categories (i.e., one component and multi-component general use coatings) that are more stringent than the SIP approved rule. These more stringent limits may off-set the relaxation in the specialty coatings. For more information, see the enclosed EPA memorandum, titled "Approving SIP Revisions Addressing VOC RACT Requirement for Certain Coatings Categories," dated March 17, 2011.

Response 15: For other CTGs issued by EPA with similar changes in the limits of general use coatings and specialty coatings, estimated reductions from the new CTGs were 30 to 35 percent

greater than from the older CTGs.[1] The Agency believes the volume usage distribution among general and specialty categories in Vermont for the miscellaneous and plastic parts product coating operations will result in a similar reduction in emissions from the collection of covered coatings. In other words, the stricter limits on general use coatings provide sufficient emissions reductions to entirely offset any emission increase caused by adopting the less stringent limits for specialty coatings. Furthermore, categories for plastics were not previously regulated and will therefore result in emissions reductions that offset any potential increase in emissions from specialty coatings with a higher emission limit than the prior general use limit. Therefore, the Agency believes that the revised rules do not interfere with any applicable requirement concerning attainment and reasonable further progress under Section 110(l) of the Clean Air Act.

Comment 16: Vermont's "Pleasure Craft Coating VOC Limits," for Extreme High Gloss Topcoat and Other Substrate Antifoulant Coating are less stringent than the EPA CTG for MMPPC operations. In addition, VT is proposing an Antifouling Sealer/Tie Coating category with a less stringent limit than the CTG Other Substrate Antifoulant category. Vermont should provide, in its SIP submittal to EPA, supporting technical information demonstrating that the proposed limits represent RACT for these three categories.

Response 16: The Agency believes the limits defined for Extreme High Gloss Topcoat, Other Substrate Antifoulant Coating, and Antifouling Sealer/Tie Coating in the "Pleasure Craft Coating VOC Limits" represent RACT for these three categories. The Agency carefully reviewed the suggestions received by EPA from the pleasure craft industry that demonstrate that the limits in the MMPPC CTG were not feasible due to the performance requirements of pleasure craft coatings.[2] Certain coatings with low VOC content have a reduced lifetime and may require more frequent recoating, resulting in greater overall VOC emissions.

Upon careful review of the pleasure craft coating limits recommended by the pleasure craft industry in EPA's memorandum cited above and the limits for these categories in other New England states based, in part, on demonstrations by the American Coatings Association (ACA) which have been approved by EPA as representing RACT in those states,[3] the Agency believes that these limits also represent RACT for Vermont. The limits are based on nationally distributed coatings and Vermont sources are not likely to have greater access to more advanced, lower VOC coatings with similar performance characteristics than sources in neighboring states with these EPA-approved limits.

The Agency inadvertently omitted from the proposal several definitions that related to pleasure crafts coatings. The following definitions are being added: Antifouling coating, Antifouling sealer or tie coat, Finish primer or surfacer, High build primer or surfacer, High gloss coating, Pleasure craft, Pleasure craft coating, and Pretreatment wash primer.

Comment 17: The definition of "VOC Content" on page 59 provides for testing by an "other method approved by the Air Pollution Control Office[r]." An open-ended provision like this will require EPA

[1] See memorandum titled, "Approving SIP Revisions Addressing VOC RACT Requirement for Certain Coatings Categories," from Scott Mathias to Regional Air Division Directors, March 17, 2011. See also, documents EPA-HQ-OAR-2007-0329-0009 and EPA-HQ-OAR-0334-0010 in EPA dockets EPA-HQ-OAR-2007-0329 and EPA-HQ-OAR-2007-0334, respectively.
[2] See memorandum, "Control Technique Guidelines for Miscellaneous Metal and Plastic Part Coatings – Industry Request for Reconsideration," from Stephen D. Page to Chief, Air Branch, Regions I-X, June 10, 2010.
[3] 77 FR 66921; 79 FR 32873

approval, so Vermont should revise this sentence to "other method approved by the Air Pollution Control Office[r] **and EPA**."

Response 17: The Agency acknowledges this comment and has added the suggested text to section 5-253.17(b).

Summary of other changes made: The following changes to the proposed rule reflect non-substantive changes to improve clarity and simplicity and to further ensure that the VOC rules are consistent with federal Clean Air Act and regional Ozone Transport Commission standards and model rules.

1. The URL on the APCR cover page was changed to reflect the agency's current website, http://dec.vermont.gov/air-quality.

2. The numbering of Section 5-253.12(c)(2)(vi) was corrected as it had been inadvertently numbered 5-253.12(c)(2)(i) in the proposed rule.

3. The numbering of Sections 5-253.13(e)(1)(i) through (vi) were corrected as they had been inadvertently numbered 5-253.13(e)(1)(vi)-(xi) in the proposed rule.

4. To clarify potentially confusing language, the wording of Section 5-253.8(a)(2)(iv) will be revised to the following: "(iv)~~Each stationary source may use u~~Up to a combined 55 gallons per calendar year of noncomplying adhesives, sealants, adhesive primers, sealant primers, cleanup solvents and surface preparation solvents at a stationary source ~~that are noncomplying~~."

5. To clarify and simplify language in 5-253.8(c)(7), ANR has consolidated (c)(7)(ii)-(vi) into one sub-section and renumbered (c)(7)(vii) as (c)(7)(iii). The new 5-253.8(c)(7)(ii) reads:

   (ii) Any person using adhesives, sealants, adhesive primers, sealant primers, surface preparation or clean-up solvents subject to this section shall:

   (A) store or dispose of all such materials and absorbent materials, such as cloth or paper, which are moistened with adhesives, sealants, primers or solvents subject to this section, in non-absorbent containers that shall be closed except when placing materials in or removing materials from the container;

   (B) Ensure that mixing and storage containers used for VOC-containing adhesives, adhesive primers, and process-related waste materials are kept closed at all times except when depositing or removing these materials;

   (C) Minimize spills of VOC-containing adhesives, adhesive primers, and process-related waste materials;

   (D) Convey VOC-containing adhesives, adhesive primers, and process-related waste materials from one location to another in closed containers or pipes; and

   (E) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and that all spent solvent is captured in closed containers.

6. To clarify language in 5-253.8(c)(7)(iii)(C), ANR has made the following changes: "For parts containing dried adhesive soaking ~~may be soaked~~ in a solvent where ~~if~~ the composite vapor pressure of the solvent, excluding water and exempt compounds, is less than or equal to 9.5 mm Hg at 20 degrees Celsius and the parts and solvent are in a closed container that remains closed except when adding parts to or removing parts from the container."

7. To clarify language in 5-253.12(c)(2)(iii), ANR has made the following changes: "Collecting all cleaning solvents into normally closed containers after cleaning and as appropriate reclaim for reuse as a cleaning solvent or as a thinner for coatings provided the as applied VOC contents of such coatings comply with the limitations in this section;"

8. Similarly, to clarify language in 5-253.13(e)(1)(iii), ANR has made the following changes: "Collecting all cleaning solvents into normally closed containers after cleaning and as appropriate reclaim for reuse as a cleaning solvent or as a thinner for coatings provided the as applied VOC contents of such coatings comply with the limitations in this section;"

STATE OF VERMONT
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

State Implementation Plan Revision
Supporting Compliance with Requirements for
REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT)
Under the 2008 and 2015 8-Hour Ozone National Ambient Air Quality Standards

Final Submittal
September 6, 2018

SIP Technical Support Document

Contents

Introduction 1
Background and Requirement 1
Intent of this RACT SIP revision 2
VOC CTG RACT 3
Major Source (>50 Tons per Year) Facility VOC RACT 17
Major Source (>100 Tons per Year) Facility NOx RACT 19
Appendix A: Negative Declarations for Twenty-nine VOC RACT CTG categories. 22
Appendix B: Vermont Air Pollution Control Regulations related to VOC CTG RACT for inclusion in the SIP 24
5-253.8 Industrial Adhesives 25
5-253.9 Offset Lithographic and Letterpress Printing 37
5-253.12 Coating of Flat Wood Paneling 40
5-253.13 Coating of Miscellaneous Metal and Plastic Parts 44
5-253.17 Industrial Solvent Cleaning 59
Appendix C: Annotated text of amended regulations 63
5-253.12 Coating of Flat Wood Paneling 64
5-253.13 Coating of Miscellaneous Metal and Plastic Parts 69
Appendix D: Isovolta 85
Appendix E: Killington/Pico Ski Resort Partners, LLC. 106
Appendix F: Okemo Limited Liability Company 129

Introduction

Background and Requirement

The federal Clean Air Act Amendments of 1990 (CAA) give the states primary responsibility for achieving the National Ambient Air Quality Standards (NAAQS). The NAAQS are established by the U.S. Environmental Protection Agency (EPA) as the maximum concentrations in the atmosphere for specific air contaminants to protect public health and welfare. The principal mechanism at the state level for complying with the CAA is the State Implementation Plan (SIP). A SIP outlines the programs, actions, and commitments a state will carry out to implement its responsibilities under the CAA. Once approved by the EPA, a SIP is a legally enforceable document under both state and federal law.

This document contains a SIP revision for meeting the 2008 and 2015 Ozone NAAQS including the Reasonably Available Control Technology (RACT) requirements set forth by the CAA relating to the 8-hour ozone NAAQS. The CAA requires that states achieve the NAAQS by specified dates, based on the severity of an area's air quality problem. Maintaining concentrations of ground-level ozone below the health-based standard is important because ozone is a serious human health threat and can cause damage to important food crops, forests, and wildlife. Repeated exposure to ozone pollution may cause a variety of adverse health effects for both healthy people and those with existing conditions including difficulty in breathing, chest pains, coughing, nausea, throat irritation, and congestion. It can worsen bronchitis, heart disease, emphysema, and asthma, and reduce lung capacity. Asthma is a significant and growing threat to children and adults. Although Vermont has not experienced violations of the 8-hour ozone NAAQS, the CAA identifies Vermont as a part of the Ozone Transport Region (OTR).

Certain stationary source control measures specified in the CAA as applicable to areas considered "moderate" ozone non-attainment also apply to states and portions of states located in the Ozone Transport Region (OTR) even though these areas are not designated as non-attainment areas. Stationary source control measures are techniques and equipment for reducing ozone precursor emissions, i.e. volatile organic compounds (VOC) and nitrogen oxides (NOx) from stationary sources in the state. For the purposes of regulating stationary sources therefore, the entire State of Vermont is considered a "moderate" ozone non-attainment area for the federal 2008 and 2015 8-hour ozone NAAQS because it is in the OTR established by operation of law under Section 184 of the CAA. Sections 182(b)(2) and 182(f) of the federal CAA require owners and operators of sources in ozone non-attainment areas to implement RACT for sources that are subject to Control Techniques Guidelines (CTG) issued by EPA and for "major sources" of VOC and NOx.

RACT is defined as the lowest emissions limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53762; September 17, 1979). RACT requirements are included in the CAA to assure that significant source categories at major sources of ozone precursor emissions (sources with potential emission of 50 tons per year or greater of VOC emissions and sources with potential emissions of 100 tons per year or greater of NOx emissions) are controlled to a "reasonable" extent, but not necessarily to the more stringent Best Available Control

Technology (BACT) or Maximum Achievable Control Technology (MACT) levels expected of new sources. Areas classified as "moderate" non-attainment or higher must submit a demonstration that their current rules fulfill ozone RACT requirements for all CTG categories and all major, non-CTG sources as a revision to their SIPs. Such demonstrations can be made with either a new RACT determination or a certification that previously-required RACT controls continue to be RACT. The certification should be accompanied by appropriate supporting information, such as consideration of information received during the public comment period.

Vermont was required to submit RACT SIP revisions for the 2008 ozone NAAQS by July 20, 2014 because it is part of the OTR. On February 3, 2017, EPA published in the Federal Register a finding that Vermont had failed to submit certain SIP revisions required for the 2008 8-hour ozone NAAQS. Vermont is submitting the required SIP revisions at this time. In addition to the SIP elements required under the 2008 standard, Vermont is certifying that currently required controls also meet RACT for the 2015 ozone NAAQS in Vermont.

During the proposal phase of this SIP revision, Vermont concurrently reviewed amendments to the state's Air Pollution Control Regulations (APCR) to address five VOC RACT CTGs. These rule revisions have been adopted as of August 31, 2018 and are included in this final submittal of this SIP revision. The public comment period and hearing for these rules also served as the comment period and hearing required under 40 C.F.R. § 51.102 for corresponding revisions to Vermont's SIP in compliance with the CAA.

Intent of this RACT SIP revision

This submittal completes the SIP-related administrative responsibility for the State of Vermont in defining RACT for stationary sources with respect to the 2008 and 2015 ozone NAAQS. This RACT SIP revision demonstrates and/or certifies the following with respect to Vermont stationary sources of ozone precursors:

1. All required RACT controls, both CTGs and Major Sources, have been implemented or will be implemented upon adoption of several CTG regulations, on all relevant stationary sources of VOC and NOx emissions;
2. All previously EPA-approved RACT controls, including CTGs, as well as Single Source RACT applied to other Major Sources have been certified by the Vermont Air Pollution Control Officer, based on EPA's guidance and standards, to represent RACT control levels under the 2008 and 2015 ozone NAAQS.
3. Negative declarations are included for CTGs for which Vermont has no applicable sources.

VOC CTG RACT

VOC RACT CTGs that Vermont examined with respect to this SIP submittal are shown below in Table 1a and 1b. Vermont identified 45 source categories for which CTGs were developed prior to submittal of this SIP revision and for which determinations of RACT with respect to the 2008 and 2015 ozone standard were required to be included in this current RACT SIP revision. Of these 45 CTG categories, 29 are for source categories for which Vermont has no applicable sources, and 16 have been determined to be categories for which Vermont has applicable sources. Vermont has previously submitted RACT rules that address nine CTGs for which the state has sources. The Vermont regulations associated with these may be found in the Vermont Air Pollution Control Regulations (see below Table 1b, column 2 for applicability and column 3 for VAPCR citation).

Regulations for CTG VOC RACT now being submitted for EPA approval are:

- 5-253.8 Industrial Adhesives
- 5-253.9 Offset Lithographic and Letterpress Printing
- 5-253.12 Coating of Flat Wood Paneling (amended regulation, previously no applicable operating sources)
- 5-253.13 Coating of Miscellaneous Metal and Plastic Parts (amended regulation superseding prior metal coating)
- 5-253.17 Industrial Solvent Cleaning

Each of the above regulations, with the exception of flat wood paneling, are based on the requirements of the CTG and are similar to those of other states. The regulations are not intended to be any more or less stringent than the CTG requirements. With respect to the regulation for flat wood paneling, Vermont has proposed to adopt a two-tier standard with the more stringent CTG based coating limit of 2.1 pounds per gallon reserved for sources with potential VOC emissions above 50 tons per year and a less stringent coating limit of 2.9 pounds per gallon for limited products and limited wood species for sources with potential VOC emissions less than 50 tons per year. Vermont currently has only three sources subject to the flat wood paneling CTG and two of those are expected to limit emissions to less than 50 tons of VOC per year. Vermont has determined that the potential increased emissions from the allowed use of the 2.9 pounds per gallon limit from these two sources, and the limited potential for new sources, will not have a measurable impact on Vermont's or neighboring states' attainment of the ozone standards. Further, there are potential benefits of the longer warranty and increased longevity of such machine applied coatings verses that of 2.1 pounds per gallon compliant coatings or field applied coatings that will mitigate future emissions. Vermont does not consider add-on emission controls for existing sources in this particular industry with potential emissions of less than 50 tons per year to be RACT at this time.

With respect to implementation of all Vermont regulations based on CTGs, Vermont commits to use only EPA-approved test methods and methodologies as stated or implied in the respective CTGs, without the prior approval of EPA. Vermont intends to adopt in a future rulemaking into the APCRs all the applicable test methods and methodologies for implementation of the

applicable CTGs, either in each respective CTG regulation or as a compilation of such test methods into an appendix of the VAPCRs.

It is the Vermont Air Pollution Control Officer's determination that the Vermont Air Pollution Control rules for all applicable CTG categories, represent RACT for the 2008 and 2015 8-Hr ozone standards. Certifications that there are no applicable sources in Vermont for 29 CTG categories (29 negative declarations) are included in Appendix A.

Vermont utilized several different sources to verify that there were no applicable sources within the CTG categories for which we are making negative declarations. The Permitting database, the annual emission registration database, the Field Enforcement database, permitting and field enforcement staff as well as other programs within the Department were consulted in our efforts to determine applicable sources to the CTG categories. These databases themselves are constantly being updated to ensure they are accurate and complete based on new initiatives and new information.

Table 1a: VOC RACT CTG list relevant for purposes of the 2008 and 2015 ozone NAAQS, listed alphabetically.

VOC RACT CTG	**Corresponding row number in Table 1b**
Aerospace	34
Auto and Light-Duty Truck Assembly Coatings (2008)	45
Bulk Gasoline Plants	13
Equipment Leaks from Natural Gas/Gasoline Processing Plants	28
Factory Surface Coating of Flat Wood Paneling	17
Fiberglass Boat Manufacturing Materials (2008)	44
Flat Wood Paneling Coatings (2006)	35
Flexible Packaging Printing Materials (2006)	38
Fugitive Emissions from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment	29
Graphic Arts - Rotogravure and Flexography	22
Industrial Cleaning Solvents (2006)	36
Large Appliance Coatings (2007)	41
Large Petroleum Dry Cleaners	26
Leaks from Gasoline Tank Trucks and Vapor Collection Systems	24
Leaks from Petroleum Refinery Equipment	18
Lithographic Printing Materials and Letterpress Printing Materials (2006)	37
Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins	27
Manufacture of Pneumatic Rubber Tires	21
Manufacture of Synthesized Pharmaceutical Products	20
Metal Furniture Coatings (2007)	40
Miscellaneous Industrial Adhesives (2008)	42
Miscellaneous Metal Products Coatings (2008)	43

VOC RACT CTG	**Corresponding row number in Table 1b**
Oil and Natural Gas Industry (2016)	46
Paper, Film, and Foil Coatings (2007)	39
Petroleum Liquid Storage in External Floating Roof Tanks	23
Plastic Parts Coatings (2008)	43
Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds	7
SOCMI Air Oxidation Processes	30
SOCMI Distillation and Reactor Processes	31
Shipbuilding/repair	32
Solvent Metal Cleaning	8
Stage I Vapor Control Systems - Gasoline Service Stations	1
Storage of Petroleum Liquids in Fixed Roof Tanks	14
Surface Coating for Insulation of Magnet Wire	11
Surface Coating of Automobiles and Light-Duty Trucks	6
Surface Coating of Cans	2
Surface Coating of Coils	3
Surface Coating of Fabrics	5
Surface Coating of Large Appliances	12
Surface Coating of Metal Furniture	10
Surface Coating of Miscellaneous Metal Parts and Products	16
Surface Coating of Paper	4
Tank Truck Gasoline Loading Terminals	9
Use of Cutback Asphalt	15
Wood Furniture	33

Table 1b: VOC RACT CTG list and corresponding Vermont compliance measures. Listed chronologically by CTG issuance.

CTG Source Category and Applicability Summary	**Applicable Sources in Vermont**	**VAPCR Citation**	**Date of Reg. Adoption and Amendments**	**Date of Federal Register Approval**
CTGs from 1977 and earlier				
1. Design Criteria for **Stage I** Vapor Control Systems - Gasoline Service Stations (November 1975, no EPA number) and Hydrocarbon Control Strategies for Gasoline Marketing Operations (April 1978, EPA 450/3-78-017) Applicability: Applies to all gasoline dispensing facilities and appurtenant equipment necessary to a gasoline dispensing facility including filling of gasoline dispensing facility storage tanks from gasoline tanker trucks.	Yes	§ 5-253.5	Eff. 11/13/92	04/22/98
2. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume I: Surface Coating Operations (November 1976, EPA-450-2-76-028) and Volume II: Surface Coating of **Cans**, Coils, Paper, Fabrics, Automobiles and Light Duty Trucks (May 1977, EPA-450/2-77-008) Applicability: Applies to sheet basecoat and overvarnish, two-piece can exterior basecoat and overvarnish, two and three-piece can interior body spray, two-piece can exterior end spray or roll coat, three-piece can side seam spray, and end sealing compound. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
3. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume I: Surface Coating Operations (November 1976, EPA-450-2-76-028) and Volume II: Surface Coating of Cans, **Coils**, Paper, Fabrics, Automobiles and Light Duty Trucks (May 1977, EPA-450/2-77-008) Applicability: Applies to coil prime and/or topcoat operations. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-

4. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume I: Surface Coating Operations (November 1976, EPA-450-2-76-028) and Volume II: Surface Coating of Cans, Coils, **Paper**, Fabrics, Automobiles and Light Duty Trucks (May 1977, EPA-450/2-77-008) Applicability: Applies to all coatings put on paper (except starch or water-based clays applied as part of the papermaking process), pressure sensitive tapes regardless of substrate (e.g. paper fabric or plastic film), and related web coating processes on plastic film such as typewriter ribbons, photographic film, or magnetic tape. Also includes decorative coatings on metal foil such as gift wrap and packaging. As a result of the starch and water-based clay exclusion, Vermont no longer has any applicable sources. Note: EPA updated this CTG in September 2007 (see row 39 below for update). Since Vermont no longer has any applicable sources, we do not intend to update this regulation to incorporate the revised CTG requirements at this time.	No	§5-253.10	Renumbered and amended eff. 11/13/92	04/22/98
5. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume I: Surface Coating Operations (November 1976, EPA-450-2-76-028) and Volume II: Surface Coating of Cans, Coils, Paper, **Fabrics**, Automobiles and Light Duty Trucks (May 1977, EPA-450/2-77-008) Applicability: Applies to web coating lines where coatings are applied to fabrics. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
6. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume I: Surface Coating Operations (November 1976, EPA-450-2-76-028) and Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, **Automobiles and Light Duty Trucks** (May 1977, EPA-450/2-77-008) Applicability: Applies to coating operations in an automobile or light-duty truck assembly plant. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
7. Control of **Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds** (October 1977, EPA-450/2-77-025) Applicability: Applies to vacuum producing systems, wastewater separators, and process unit turnarounds at petroleum refinery sources. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
8. Control of Volatile Organic Emissions from **Solvent Metal Cleaning** (November 1977, EPA-450/2-77-022) Applicability: Applies to all solvent metal cleaning sources including cold cleaners, open-top vapor degreasers, and conveyorized degreasers. Note: The U.S. EPA issued a related CTG in September 2006 for Industrial Cleaning Solvents (see row 36 below for update). Vermont is adopting and submitting a separate regulation to address the 2006 CTG under No. 36 below.	Yes	§5-253.14	Eff. 08/13/93	04/22/98

9. Control of Hydrocarbons from Tank Truck **Gasoline Loading Terminals** (December 1977, EPA-450/2-77-026) Applicability: Applies to loading racks that deliver liquid products into gasoline tank trucks at a bulk gasoline terminal. Bulk gasoline terminal means a gasoline storage facility which receives gasoline from refineries and delivers gasoline to bulk gasoline plants or to commercial or retail accounts and has a daily throughput of more than 20,000 gallons (76,000 liters) of gasoline.	Yes	§5-253.2	Renumbered and amended eff. 11/13/92	04/22/98; 04/20/16
10. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume III: Surface Coating of **Metal Furniture** (December 1977, EPA-450/2-77-032) Applicability: Applies to any metal furniture coating unit where a protective, decorative, or functional coating is applied onto the surface of metal furniture such as tables, chairs, waste baskets, beds, desks, lockers, benches, shelving, file cabinets and room dividers. Vermont has no applicable sources. Note: The U.S. EPA updated this CTG in September 2007 (see below for update). Since Vermont still has no applicable sources, we do not intend to adopt a regulation for this CTG at this time.	No	-NA-	-NA-	-NA-
11. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume IV: Surface Coating for Insulation of **Magnet Wire** (December 1977, EPA-450/2-77-033) Applicability: Applies to any magnet wire coating unit where an electrically insulating varnish or enamel is applied to the surface of the wire for use in electrical machinery. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
12. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume V: Surface Coating of **Large Appliances** (December 1977, EPA-450/2-77-034) Applicability: Applies to any large appliance coating unit where a protective, decorative, or functional coating is applied to the surface of large appliance parts such as doors, cases, lids, panels and interior parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dish washers, trash compactors, air conditioners, and similar products. Vermont has no applicable sources. Note: The U.S. EPA updated this CTG in September 2007 (see No. 41 below for update). Since Vermont still has no applicable sources, we do not intend to adopt a regulation for this CTG at this time.	No	-NA-	-NA-	-NA-

13. Control of Volatile Organic Emissions from **Bulk Gasoline Plants** (December 1977, EPA-450/2-77-035) Applicability: Applies to any bulk gasoline plant with an average daily throughput of 3,000 gallons or greater. Bulk gasoline plant means a gasoline storage and distribution facility with an average daily throughput of 20,000 gallons (76,000 liters) of gasoline or less. The rule amendments effective 4/20/01 clarified several requirements in the rule related to vapor balance but did not substantively change the requirements of the rule.	Yes	§5-253.3	Eff. 11/13/92; Amended eff. 4/20/01	04/22/98; 04/20/16
14. Control of Volatile Organic Emissions from **Storage of Petroleum Liquids in Fixed-Roof Tanks** (December 1977, EPA-450/2-77-036) Applicability: Applies to any above ground fixed roof storage tank with a capacity greater than 40,000 gallons (151,417 liters) used to store petroleum liquids having a true vapor pressure equal to or greater than 1.52 psi (10.5 KPa).	Yes	§5-253.1	Renumbered eff. 11/13/92	04/22/98
15. Control of Volatile Organic Compounds from Use of **Cutback Asphalt** (December 1977, EPA-450/2-77-037) Applicability: Applies to the manufacture, mixing, storage, and use of cutback asphalts and emulsified asphalts used for roadway paving.	Yes	§5-253.15	Eff. 08/17/94	04/22/98
CTGs from 1978				
16. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VI: Surface Coating of **Miscellaneous Metal Parts and Products** (June 1978, EPA-450/2-78-015) Applicability: Applies to any miscellaneous metal parts and products coating unit (except automobile, light-duty and heavy-duty truck refinishing) where coatings are applied to metal parts and products that are not regulated by a separate CTG. Note: The U.S. EPA updated this CTG in September 2008 (see No. 43 below for update) to include revised limits for coating of metal parts and products and new limits for coating of plastic parts and products. Vermont has adopted amendments to the VAPCRs to address the requirements of the revised CTG as noted under listing No.43 below.	Yes	§5-253.13	Eff. 08/13/93	04/22/98
17. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VII: **Factory Surface Coating of Flat Wood Paneling** (June 1978, EPA-450/2-78-032) Applicability: Applies to any flat wood paneling coating line used to apply and dry or cure coatings applied to printed interior panels made of hardwood plywood and thin particle board, natural finish hardwood plywood panels, and hardwood paneling with Class II finishes. Vermont has applicable sources. Note: The U.S. EPA updated this CTG in September 2006 to include coating of clapboards. Vermont has adopted amendments to the VAPCRs to address the requirements of the revised CTG as noted under listing No.35 below.	Yes	§5-253.12	Eff. 11/13/92	04/22/98

18. Control of Volatile Organic Compound Leaks from **Petroleum Refinery Equipment** (June 1978, EPA-450/2-78-036) Applicability: Applies to leaks from all equipment in volatile organic compound service in any process unit a petroleum refinery such as pumps, compressors, flanges, valves, and pressure relief devices. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
19. Control of Volatile Organic Emissions from Manufacture of **Vegetable Oils** (June 1978, EPA-450/2-78-035) Applicability: This CTG was withdrawn by EPA. It was to apply to soybean, cottonseed, peanut and corn oil manufacturing and refining processes including extractor, desolventizer-toaster, dryer, cooler and pneumatic conveyor. Vermont has no applicable sources.	-NA-	-NA-	-NA-	-NA-
20. Control of Volatile Organic Emissions from Manufacture of **Synthesized Pharmaceutical Products** (December 1978, EPA-450/2-78-029) Applicability: Applies to the following sources of VOC at all synthesized pharmaceutical manufacturing facilities: reactors, distillation operations, crystallizers, centrifuges, vacuum dryers, air dryers, production equipment exhaust systems, rotary vacuum filters and other filters, in-process tanks, and leaks. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
21. Control of Volatile Organic Emissions from Manufacture of **Pneumatic Rubber Tires** (December 1978, EPA-450/2-78-030) Applicability: Applies to the following operations in all pneumatic rubber tire manufacturing facilities: undertread cementing, tread-end cementing, bead cementing, and green tire spraying. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
22. Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VIII: **Graphic Arts** - Rotogravure and Flexography (December 1978, EPA-450/2-78-033) Applicability: Applies to any packaging rotogravure, publication rotogravure, or flexographic printing press at a facility with uncontrolled emissions of equal to or greater than 100 tons per year. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
23. Control of Volatile Organic Emissions from **Petroleum Liquid Storage in External Floating Roof Tanks** (December 1978, EPA-450/2-78-047) Applicability: Applies to any petroleum liquid storage tank that is equipped with an external floating roof and that has a capacity greater than 150,000 liters (~40,000 gal.). Vermont has no applicable sources.	No	-NA-	-NA-	-NA-

24. Control of Volatile Organic Compound Leaks from **Gasoline Tank Trucks** and Vapor Collection Systems (December 1978, EPA-450/2-78-051) Applicability: Applies to gasoline tank trucks to ensure they are vapor-tight, maintained with hatches closed and employs vapor balance during loading and unloading of gasoline. Gasoline tank truck means a delivery tank truck with a capacity of 4,000 gallons or greater used at bulk gasoline plants, bulk gasoline terminals or gasoline dispensing facilities that is loading or unloading gasoline.	Yes	§5-253.4	Eff. 11/13/92	04/22/98
25. Control of Volatile Organic Emissions from **Perchloroethylene Dry Cleaning** Systems (December 1978, EPA-450/2-78-050) Applicability: Applies to all dry cleaning systems that use perchloroethylene (Perc). Perc was delisted as a VOC February 7, 1996, so this CTG is no longer relevant. The Vermont regulation was never submitted for SIP approval. The regulation remains in effect due to toxic concerns with perchloroethylene.	-NA-	§5-253.11	Eff. 11/13/92	-NA-
CTGs from 1980s				
26. Control of Volatile Organic Compound Emissions from Large **Petroleum Dry Cleaners** (September 1982, EPA-450/3-82-009) Applicability: Applies to petroleum solvent dry cleaning facilities that consume greater than 32,500 gallons per year of petroleum solvent. Vermont does have a couple petroleum dry cleaners but each is well below the 32,500 gallon applicability threshold. Thus, Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
27. Control of Volatile Organic Compound Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene **Resins** (November 1983, EPA-450/3-83-008) Applicability: Applies to the manufacturing of high-density polyethylene, polypropylene, and polystyrene resins. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
28. Control of Volatile Organic Compound **Equipment Leaks from Natural Gas/Gasoline Processing Plants** (December 1983, EPA-450/2-83-007) Applicability: Applies to all equipment in VOC service in any process unit at any onshore natural gas/gasoline processing facility (except equipment in vacuum service, equipment in heavy liquid service, and wet gas reciprocating compressors in plants without a VOC control device). Vermont has no applicable sources.	No	-NA-	-NA-	-NA-

29. Control of Volatile Organic Compound **Leaks from Synthetic Organic Chemical** and Polymer Manufacturing Equipment (March 1984, EPA-450/3-83-006) Applicability: Applies to leaks of process fluids (gaseous or liquid) from plant equipment such as pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, and cooling towers. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
30. Control of Volatile Organic Compound Emissions from **Air Oxidation Processes in Synthetic Organic Chemical** Manufacturing Industry (December 1984, EPA-450/3-84-015) Applicability: Applies to air oxidation processes used in the synthetic organic chemical manufacturing industry. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
CTGs from 1990s				
31. Control of Volatile Organic Compound Emissions from **Reactor Processes and Distillation Operations Processes in the Synthetic Organic Chemical** Manufacturing Industry (August 1993, EPA-450/4-91-031) Applicability: Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
32. Control Techniques Guidelines for **Shipbuilding and Ship Repair** Operations (Surface Coating) in August 1996 (Based on Alternative Control Techniques Document: Surface Coating Operations at Shipbuilding and Ship Repair Facilities - April 1994, EPA 453/R-94-032) Applicability: Applies only to major sources. Applies to any marine or fresh-water metal hulled vessel used for military or commercial operations, including self-propelled vessels and those towed by other craft. This definition includes, but is not limited to, all military vessels, commercial cargo and passenger ships, ferries, barges, tankers, container ships, patrol and pilot boats, and dredges. Pleasure craft, such as recreational boats and yachts, are not included. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-

33. Control of Volatile Organic Compound Emissions from **Wood Furniture** Manufacturing Operations (April 1996, EPA-453/R-96-007) Applicability: Applies to all stationary sources that are engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components with 25 tpy or greater of VOC emissions. Applicable wood furniture manufacturing operations include finishing, gluing, cleaning, and/or washoff operations associated with the production of wood furniture or wood furniture components. Vermont has applicable sources. Note: The rule amendments effective 03/28/07 were limited to corrections to citation references as a result of amendments to the state air toxic rule. The amendments did not result in any substantive changes to the rule and had no effect on the VOC CTG requirements of the rule and were not submitted for SIP approval.	Yes	§5-253.16	Eff. 03/01/04; Amended Eff. 03/28/07	07/19/11
34. Control of Volatile Organic Compound Emissions from Coating Operations at **Aerospace Manufacturing and Rework** Operations (December 1997, EPA-453/R-97-004) Applicability: Applies to aerospace coatings and cleaning solvents use at aerospace manufacturing and rework operations including contractors and subcontractors. Applies to facilities with 25 tpy or great of VOC emissions. Vermont has several aerospace facilities but each are less than the applicability threshold. Thus Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
CTGs from 2000 and after				
35. Control Techniques Guidelines for **Flat Wood Paneling** Coatings (September 2006, EPA 453/R-06-004). This CTG is listed separately from the original 1978 CTG for the similar source category No. 17 above. Applicability: This CTG is an update to the June 1978 CTG. Applies to facilities that apply flat wood paneling coatings that emit at least 15 lb/day of VOC before consideration of controls. Flat wood paneling coatings means wood paneling products that are any interior, exterior or tileboard (class I hardboard) panel to which a protective, decorative, or functional material or layer has been applied. The revised CTG now includes coating of clapboards, for which Vermont has several applicable facilities. Vermont is adopting an amended regulation to address the requirements of the revised CTG.	Yes	§5-253.12	Original rule eff. 11/13/92; Amended Eff. 9/15/18	Rule submitted to EPA 9/6/18 for SIP approval
36. Control Techniques Guidelines: **Industrial Cleaning Solvents** (September 2006, EPA 453/R-06-001). This CTG is listed separately from the original 1978 CTG for the similar source category No. 8 above. Applicability: Applies to industries that use organic solvent for cleaning unit operations such as mixing vessels (tanks), spray booths, and parts cleaners, where a facility emits at least 15 lb/day of VOC. The cleaning activities include actions (activities) such as wiping, flushing, or spraying. Vermont does have applicable sources. Vermont is adopting a new regulation to address the requirements of the revised CTG.	Yes	§5-253.17	Eff. 9/15/18	Rule submitted to EPA 9/6/18 for SIP approval

37. Control Techniques Guidelines for **Offset Lithographic Printing and Letterpress Printing** (September 2006, EPA-453/R-06-002) Applicability: Applies to graphic arts operations that use the offset lithographic printing process. Threshold applicability 15 lbs/day for fountain solutions and cleaning materials, 25 tpy for heat-set dryers. Vermont does have applicable sources to the fountain solution and cleaning materials requirements and may have applicable sources to the heat-set dryer requirements. Vermont is adopting a new regulation to address the requirements of this CTG.	Yes	§5-253.9	Eff. 9/15/18	Rule Submitted to EPA 9/6/18 for SIP approval
38. Control Techniques Guidelines for **Flexible Package Printing** (September 2006, EPA 453/R-06-003) Applicability: Applies to the use of inks, coatings, adhesives and cleaning supplies in flexible packaging printing operations. Requirements for cleaning supplies apply at 15 lbs/day. Requirement for inks, coatings and adhesives apply only to those presses with potential to emit from the dryer, prior to controls, of at least 25 tpy of VOC (petroleum ink oil) from inks, coatings and adhesives combined. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
39. Control Techniques Guidelines for **Paper, Film, and Foil Coatings** (September 2007, EPA 453/R-07-003) Applicability: This CTG is an update of the November 1976 CTG. Applies to cleaning activities and the use of coatings for paper, film, and foil surface coating operations. Requirements for cleaning activities apply at 15 lbs/day. Requirements for coatings apply only to individual paper, film and foil surface coating lines with the potential to emit, prior to controls, of at least 25 tpy of VOC from coatings. Does not apply to offset lithography or paper making on-machine starch or water-based clay applications. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
40. Control Techniques Guidelines for **Metal Furniture Coatings** (September 2007, EPA 453/R-07-005) Applicability: This CTG is an update of the December 1977 CTG. Applies to any metal furniture coating unit where a protective, decorative, or functional coating is applied onto the surface of metal furniture such as tables, chairs, waste baskets, beds, desks, lockers, benches, shelving, file cabinets and room dividers. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
41. Control Techniques Guidelines for **Large Appliance Coatings** (September 2007, EPA 453/R-07-004) Applicability: This CTG is an update of the December 1977 CTG. Applies to any large appliance coating unit where a protective, decorative, or functional coating is applied to the surface of large appliance parts such as doors, cases, lids, panels and interior parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dish washers, trash compactors, air conditioners, and similar products. Vermont has no applicable sources.	No	-NA-	-NA-	-NA-

42. Control Techniques Guidelines for **Miscellaneous Industrial Adhesives** CTG (September 2008, EPA 453/R-08-005). Applicability: Vermont does have applicable sources and is adopting a new regulation to address the requirements of this CTG.	Yes	5-253.8 new reg.	Eff. 9/15/18	Rule submitted to EPA 9/6/18 for SIP approval
43. Control Techniques Guidelines for **Miscellaneous Metal and Plastic Parts Coatings** CTG (September 2008, EPA 453/R-08-003). This CTG is listed separately from the original 1978 CTG for the similar source category No. 16 above. Applicability: Vermont is adopting an amended regulation to address the requirements of the revised CTG.	Yes	5-253.13 amended reg.	Eff. 9/15/18	Rule submitted to EPA 9/6/18 for SIP approval
44. Control Techniques Guidelines for **Fiberglass Boat Manufacturing Materials** (September 2008, EPA 453/R-08-004) Applicability: Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
45. Control Techniques Guidelines for **Auto and Light Duty Truck Assembly Coatings** (September 2008, EPA 453/R-08-006) Applicability: Vermont has no applicable sources.	No	-NA-	-NA-	-NA-
46. Control Techniques Guidelines for **Oil and Gas Sector** (October 2016, EPA 453/B-16-001) Applicability: Vermont has no applicable sources.	No	-NA-	-NA-	-NA-

Major Source (>50 Tons per Year) Facility VOC RACT

In addition to the CTG-specific categories of VOC sources, the Clean Air Act requires RACT be evaluated and applied to any major existing stationary source of VOC in the Ozone Transport Region, applicable to sources with the potential to emit 50 tons or greater per year of VOC on or after the 2008 ozone NAAQS implementation rule year of 2011. Vermont's Air Pollution Control Regulation 5-253.20 applies to all sources with potential VOC emissions of 50 tpy or greater that are not regulated under a CTG specific regulation. This regulation was approved in the Vermont SIP on 4/9/97.

In reviewing potentially subject existing stationary sources in Vermont, it has been determined that Vermont has only four operating sources with the potential to emit greater than 50 tons per year of VOCs and none of these sources are subject to re-evaluation of RACT under 5-253.20 (see Table 2, below). Two of these sources (Ethan Allen Orleans and Ethan Allen Beecher Falls) are subject to the wood furniture CTG RACT rule 5-253.16. The other two sources (Churchill Coatings Corporation and HBH Holdings LLC) were previously subject to RACT but are now subject to the revised Flat Wood Paneling CTG RACT rule 5-253.12. The Agency requests that EPA withdraw the prior RACT determinations for these two facilities.

While there are no sources subject to reevaluation, one source previously subject to RACT, but no longer a major source and thus not subject to reevaluation, will continue to be subject to the prior RACT determination. This source is Isovolta, Inc.

RACT for Isovolta, Inc. (formerly US Samica Corporation) had previously been incorporated into the Vermont SIP through an administrative order signed by the Secretary of the Vermont Agency of Natural Resources on 1/4/95, submitted to EPA as a single-source RACT SIP, and approved by EPA on 4/9/97. That administrative order was subsequently changed slightly and then incorporated into an operating permit issued to the Isovolta Inc. Plant on January 6, 2006 (OP-95-040). Since the order which was in the Vermont SIP differed slightly from the operative "Permit to Operate", the SIP submittal for the 1997 ozone NAAQS included the January 6, 2006 Permit to Operate OP-95-040 to supersede the prior order. Since that permit has since been superseded by Permit to Operate AOP-14-037 issued September 20, 2017, this SIP submittal includes, as APPENDIX D, the relevant conditions from the current operating permit for Isovolta Incorporated's plant in Rutland, Vt. (AOP-14-037). The State of Vermont requests that EPA incorporate the relevant portions of the Operating Permit related to VOC RACT (equivalent to the original administrative order) into the Vermont SIP. Any subsequent change to the operating permit would be treated as a single-source SIP revision in the future.

Table 2: VOC RACT Major Source Facilities

VOC RACT Regulation § 5-253.20 Other Sources That Emit Volatile Organic Compounds.	**Applicable Sources in Vermont**	**VAPCR Citation**	**Date of Reg. Adoption and Amendments**	**Date of Federal Register Approval**
Major Source VOC RACT - § 5-253.20 Other Sources that Emit Volatile Organic Compounds. Applicability: Applies to all sources with potential VOC emissions of 50 tpy or greater that are not regulated under a CTG/Regulation listed above. Vermont currently has the following applicable sources:	Yes	§ 5-253.20	Eff. 8/13/93	4/09/97
Single Source VOC RACT SIP Additions			**Date of Federal Register Approval**	
ISOVOLTA, Inc. (Rutland) formerly US Samica Corporation. January 4, 1995 original RACT Order issued to US Samica Corporation. RACT: 81% overall reduction in VOC emissions from Wolverine (thermal incinerator/dryer) and Midland Ross (regenerative incinerator) coaters and required the uncontrolled Phase II unit to cease operation by May 31, 1995. August 14, 1995 amended RACT Order issued to US Samica Corporation. RACT amended to allow uncontrolled Phase II unit to continue operating until November 6, 1995. January 6, 2006 Permit to Operate (initial OP) OP-95-040 issued to Isovolta/U.S. Samica, Inc. RACT order incorporated into Permit to Operate unchanged. September 20, 2017 Permit to Construct and Operate AOP-14-037 issued to Isovolta/U.S. Samica, Inc. RACT order incorporated into Permit to Operate unchanged			4/09/97 (1/4/95 Admin Order only) AOP-14-037 submitted herein to supersede the previously approved Admin Order and Permit	
Other Major Sources Not Subject				
Ethan Allen, Inc. (Beecher Falls) **Ethan Allen, Inc. (Orleans)**	These two facilities are not subject since they are each subject to the § 5-253.16 wood furniture regulation.			
Churchill Coatings Corporation **HBH Holdings, LLC**	These two facilities are no longer subject since they are each subject to the § 5-253.12 coating of flat wood paneling. Vermont requests that the prior RACT determinations for these two facilities be withdrawn.			

Major Source (>100 Tons per Year) Facility NOx RACT

In addition to the VOC RACT requirements, the Clean Air Act requires RACT be evaluated and applied to any major existing stationary source of NOx in the Ozone Transport Region, applicable to sources with the potential to emit 100 tons or greater per year of NOx on or after the 2008 ozone NAAQS implementation rule year of 2011. Vermont's Air Pollution Control Regulation 5-251(2) applies to all sources with potential NOx emissions of 100 tpy or greater whose NOx emissions have not been subject to the most stringent emission rate (MSER, Vermont's functional equivalent to federal BACT) under 5-502(3) (see Table 3a, below). This regulation was approved in the Vermont SIP on 4/9/97.

In reviewing potentially subject existing stationary sources in Vermont, it has been determined that Vermont has only three operating sources with the potential to emit greater than 100 tons per year of NOx and none of these sources are subject to re-evaluation of RACT under 5-251(2). All three of these sources (McNeil, OMYA, and Ryegate) were subject to the most stringent emission rate under 5-502(3) and thus not subject to 5-251(2).

While there are no sources subject to re-evaluation, two sources previously subject to RACT under 5-251(2), but no longer major sources and thus not subject to re-evaluation, will continue to be subject to their prior RACT determinations (Table 3b, below). These two sources are Killington/Pico Ski Resort Partners, LLC and Okemo Mountain Resort. While not subject to RACT under 5-251(2), Vermont has subject both facilities to further NOx reductions under the authority of 5-1010. Since the prior permits for these two facilities currently in the SIP have been superseded by new permits with lower NOx emission limits, this SIP submittal includes, as APPENDIX E and F, the relevant conditions from the current permits for Killington/Pico Ski Resort Partners, LLC and Okemo Mountain Resort, respectively. The State of Vermont requests that EPA incorporate the relevant portions of these permits related to NOx RACT (equivalent or more stringent to the original administrative order) into the Vermont SIP. Any subsequent change to these permits would be treated as a single-source SIP revision in the future.

Table 3a: NOx RACT Major Source Facilities

NOx RACT Regulation § 5-251(3) Control of Nitrogen Oxides Emissions - Reasonably available control technology for stationary sources.	**Applicable Sources in Vermont**	**VAPCR Citation**	**Date of Reg. Adoption and Amendments**	**Date of Federal Register Approval**
Major Source NOx RACT - § 5-251(2) Reasonably available control technology for stationary sources. Applicability: Applies to all sources with potential NOx emissions of 100 tpy or greater. Note: § 5-251(2) was originally added to § 5-251 effective 08/13/93 as § 5-251(2) and submitted for SIP approval. This regulation was later amended and renumbered § 5-251(3) as an amendment effective 11/30/95 before amendment again back to 5-251(2) on February 8, 2011. No other changes were made to this RACT regulation other than renumbering. Vermont currently has the following applicable sources:	Yes	§ 5-251(3)	Amended eff. 08/13/93; Renumbered eff. 11/30/95	04/09/97; amended rule submitted 11/14/08 herein
Single Source NOx RACT SIP Additions			**Date of Federal Register Approval**	
Killington/Pico Ski Resort Partners, LLC (Killington) September 2, 2004 Permit to Operate (initial Title V) AOP-04-025 issued to Killington Ltd. RACT: SCR on one 1,485 bhp diesel engine to achieve 70% reduction; Replace all other engines by July 1, 2007 with Tier II, or better if available, for all engines installed/replaced after July 1, 2002; Tier III, or better if available, for all engines installed/replaced after July 1, 2006. June 14, 2007 Permit to Operate (name change only) AOP-04-025a issued to Killington/Pico Ski Resort Partners, LLC. RACT: unchanged. February 15, 2018 Permit to Construct and Operate AOP-14-003 issued to Killington-Pico Ski Resort Partners, LLC. RACT: Under state only authority the RACT NOx emission limits were further reduced.			AOP-14-003 submitted herein to supersede the previously approved Permit	
Okemo Limited Liability Company (Ludlow) September 5, 2000 Permit to Operate (initial Title V) OP-99-013 issued to Okemo Mountain, Inc. RACT: SCR on 1,480 bhp diesel engine to achieve 90% reduction; Replace all other engines by November 1, 2005 with Tier I or better for all engines installed/replaced prior to November 1, 2001 and Tier II or better for all engines installed/replaced after November 1, 2001. February 28, 2006 Permit to Operate (amendment/renewal) AOP-04-029 issued to Okemo Ltd. Liability Co. RACT: SCR on 1,480 bhp diesel engine to achieve 90% reduction; all other engines must meet Tier II or better. Annual fuel cap of 876,000 gallons per year and engine capacity cap of 15,807 bhp. February 15, 2018 Permit to Construct and Operate AOP-14-034 issued to Okemo Mountain Resort. RACT: Under state only authority the RACT NOx emission limits were further reduced.			AOP-14-034 submitted herein to supersede the previously approved Permit	

Table 3b: Major sources not subject to NOx RACT

Other Major Sources Not Subject	
Joseph C. McNeil Generating Station (Burlington) **OMYA, Inc. Vermont Marble Power Division** (Florence) **Ryegate Power Station** (Ryegate)	While these three facilities have potential NOx emissions greater than 100 tpy, they were each subjected to major NSR permitting under § 5-502 of the APCR and as such were subject to a Most Stringent Emission Rate (MSER) limitation. Pursuant to § 5-251(3)(d), facilities subject to MSER are exempt from RACT. Therefore, these three facilities need not be submitted for SIP approval.

Appendix A: Negative Declarations for Twenty-nine VOC RACT CTG categories.

NEGATIVE DECLARATIONS for 29 CTG Categories

Relative to the requirements for 2008 and 2015 ozone RACT

The State of Vermont Air Quality and Climate Division has determined that there are no applicable stationary sources of VOC in Vermont nor are there expected to be any applicable sources for which RACT would apply in the future for the following CTG categories identified by EPA in CTG documents issued prior to 2018.

1. Aerospace
2. Auto and Light-Duty Truck Assembly Coatings (2008)
3. Equipment Leaks from Natural Gas/Gasoline Processing Plants
4. Fiberglass Boat Manufacturing Materials (2008)
5. Flexible Packaging Printing Materials (2006)
6. Fugitive Emissions from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment
7. Graphic Arts - Rotogravure and Flexography
8. Large Appliance Coatings (2007)
9. Large Petroleum Dry Cleaners
10. Leaks from Petroleum Refinery Equipment
11. Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins
12. Manufacture of Pneumatic Rubber Tires
13. Manufacture of Synthesized Pharmaceutical Products
14. Metal Furniture Coatings (2007)
15. Oil and Natural Gas Industry (2016)
16. Paper, Film, and Foil Coatings (2007)
17. Petroleum Liquid Storage in External Floating Roof Tanks
18. Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds
19. SOCMI Air Oxidation Processes
20. SOCMI Distillation and Reactor Processes
21. Shipbuilding/repair
22. Surface Coating for Insulation of Magnet Wire
23. Surface Coating of Automobiles and Light-Duty Trucks
24. Surface Coating of Cans
25. Surface Coating of Coils
26. Surface Coating of Fabrics
27. Surface Coating of Large Appliances
28. Surface Coating of Metal Furniture
29. Surface Coating of Paper

Appendix B: Vermont Air Pollution Control Regulations related to VOC CTG RACT for inclusion in the SIP

Three rules, 5-253.8 Industrial Adhesives, 5-253.9 Offset Lithographic and Letterpress Printing, and 5-253.17 Industrial Solvent Cleaning, are new Vermont regulations and are included herein for incorporation into the Vermont SIP in their entirety. A fourth rule, Section 5-253.12 Coating of Flat Wood Paneling was amended to address the 2006 Flat Wood Paneling Coatings CTG. A fifth rule, Section 5-253.13 Coating of Miscellaneous Metal and Plastic Parts, was amended to supersede the prior rule with the same number, Coating of Miscellaneous Metal Parts, and to now include coating of plastic parts. Sections 5-253.12 and 5-253.13, as amended, are included herein to replace the existing SIP rules with the same numbers in their entirety. Annotated text of 5-253.12 and 5-253.13 is included in Appendix C to clearly mark changes made. All five rules are being submitted with this SIP revision for EPA approval.

Vermont regulations included in this appendix for incorporation with the Vermont SIP:

- 5-253.8 Industrial Adhesives
- 5-253.9 Offset Lithographic and Letterpress Printing
- 5-253.12 Coating of Flat Wood Paneling
- 5-253.13 Coating of Miscellaneous Metal and Plastic Parts
- 5-253.17 Industrial Solvent Cleaning

5-253.8 Industrial Adhesives

(a) Applicability.

(1) Except as provided below, this section applies to any person who uses, applies, sells, supplies, offers for sale or manufactures for sale any adhesive, sealant, adhesive primer or sealant primer for use in Vermont.

(2) Exemptions. This section shall not apply to the following:

(i) Any adhesive, sealant, adhesive primer or sealant primer that is sold, supplied or offered for sale by any person to a retail outlet outside of Vermont.

(ii) Any of the following compounds or operations:

(A) Adhesives, sealants, adhesive primers or sealant primers being tested or evaluated in any research and development, quality assurance or analytical laboratory.
(B) Adhesives and sealants that contain less than 20 grams of VOC per liter of adhesive or sealant, less water and less exempt compounds, as applied.
(C) Cyanoacrylate adhesives.
(D) Adhesives, sealants, adhesive primers or sealant primers that are sold or supplied by the manufacturer or supplier in containers with a net volume of 16 fluid ounces or less, or a net weight of one pound or less, except plastic cement welding adhesives and contact adhesives.
(E) Contact adhesives that are sold or supplied by the manufacturer or supplier in containers with a net volume of one gallon or less.
(F) Tire repair operations, provided the label of the adhesive states "For tire repair only”.
(G) In the assembly, repair and manufacture of aerospace or undersea-based weapon systems.
(H) In the manufacture of medical equipment.
(I) Plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992. Any person claiming such exemption shall maintain monthly operational records sufficient to demonstrate compliance.

(iii) Any stationary source whose total VOC emissions from all adhesives, sealants, adhesive primers and sealant primers used at the source are less than 200 pounds per 12 month rolling period. Any person claiming such exemption shall maintain monthly operational records sufficient to demonstrate compliance.

(iv) Up to a combined 55 gallons per calendar year of noncomplying adhesives, sealants, adhesive primers, sealant primers, cleanup solvents and surface preparation solvents at a

stationary source. Any person claiming such exemption shall maintain monthly operational records sufficient to demonstrate compliance.

(b) Definitions. For the purpose of this section, the following definitions apply, in addition to those of Section 5-101 of this chapter.

"Acrylonitrile-butadiene-styrene or ABS welding adhesive" means any adhesive intended by the manufacturer to weld acrylonitrile-butadiene-styrene pipe, which is made by reacting monomers of acrylonitrile, butadiene and styrene.

"Adhesive" means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

"Adhesive primer" means any product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to provide a bonding surface.

"Aerospace component" means for the purposes of this section, the fabricated part, assembly of parts or completed unit of any aircraft, helicopter, missile, or space vehicle, including passenger safety equipment.

"Aerosol adhesive" means an adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment.

"Architectural sealant or primer" means any sealant or sealant primer intended by the manufacturer to be applied to stationary structures, including mobile homes, and their appurtenances. Appurtenances to an architectural structure include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.

"Automotive glass adhesive primer" means an adhesive primer labeled by the manufacturer to be applied to automotive glass prior to installation of the glass using an adhesive/sealant. This primer improves the adhesion to pinch weld and blocks ultraviolet light.

"CARB" means the California Air Resources Board.

"Ceramic tile installation adhesive" means any adhesive intended by the manufacturer for use in the installation of ceramic tiles.

"Chlorinated polyvinyl chloride plastic" or "CPVC plastic" means a polymer of the vinyl chloride monomer that contains 67% chlorine and is normally identified with a CPVC marking.

"Chlorinated polyvinyl chloride welding adhesive" or "CPVC welding adhesive" means an adhesive labeled for welding of chlorinated polyvinyl chloride plastic.

"Cleanup solvent" means a VOC-containing material used to remove a loosely held uncured (i.e., not dry to the touch) adhesive or sealant from a substrate, or clean equipment used in applying a material.

"Computer diskette jacket manufacturing adhesive" means any adhesive intended by the manufacturer to glue the fold-over flaps to the body of a vinyl computer diskette jacket.

"Contact bond adhesive" means an adhesive that: (i) is designed for application to both surfaces to be bonded together, and (ii) is allowed to dry before the two surfaces are placed in contact with each other, and (iii) forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other, and (iv) does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces. "Contact Adhesive" does not include rubber cements that are primarily intended for use on paper substrates. "Contact Adhesive" also does not include vulcanizing fluids that are designed and labeled for tire repair only.

"Cove base" means a flooring trim unit, generally made of vinyl or rubber, having a concave radius on one edge and a convex radius on the opposite edge that is used in forming a junction between the bottom wall course and the floor or to form an inside corner.

"Cove base installation adhesive" means any adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.

"Cyanoacrylate adhesive" means any adhesive with a cyanoacrylate content of at least 95% by weight.

"Dry wall installation" means the installation of gypsum dry wall to studs or solid surfaces using an adhesive formulated for that purpose.

"Flexible vinyl" means non-rigid polyvinyl chloride plastic with at five percent by weight plasticizer content.

"Fiberglass" means a material consisting of extremely fine glass fibers.

"Indoor floor covering installation adhesive" means any adhesive intended by the manufacturer for use in the installation of wood flooring, carpet, resilient tile, vinyl tile, vinyl backed carpet, resilient sheet and roll or artificial grass. Adhesives used to install ceramic tile and perimeter bonded sheet flooring with vinyl backing onto a non-porous substrate, such as flexible vinyl, are excluded from this category.

"Laminate" means a product made by bonding together two or more layers of material.

"Low-solids adhesive, sealant or primer" means any product that contains 120 grams or less of solids per liter of material.

"Marine deck sealant" or "marine deck sealant primer" means any sealant or sealant primer labeled for application to wooden marine decks.

"Medical equipment manufacturing" means the manufacture of medical devices, such as, but not limited to, catheters, heart valves, blood

cardioplegia machines, tracheostomy tubes, blood oxygenators, and cardiatory reservoirs.

"Metal to urethane/rubber molding or casting adhesive" means any adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded rubber materials, in heater molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.
"Motor vehicle adhesive" means an adhesive, including glass bonding adhesive, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.

"Motor vehicle weatherstrip adhesive" means an adhesive, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to weatherstripping materials for the purpose of bonding the weatherstrip material to the surface of the vehicle.

"Multipurpose construction adhesive" means any adhesive intended by the manufacturer for use in the installation or repair of various construction materials, including but not limited to drywall, subfloor, panel, fiberglass reinforced plastic (FRP), ceiling tile and acoustical tile.

"Nonmembrane roof installation/repair adhesive" means any adhesive intended by the manufacturer for use in the installation or repair of nonmembrane roofs and that is not intended for the installation of prefabricated single-ply flexible roofing membrane, including, but not limited to, plastic or asphalt roof cement, asphalt roof coating and cold application cement.

"Outdoor floor covering installation adhesive" means any adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use.

"Panel installation" means the installation of plywood, pre-decorated hardboard (or tileboard), fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces using an adhesive formulated for that purpose.

"Perimeter bonded sheet flooring installation" means the installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches wide around the perimeter of the sheet flooring.

"Plastic cement welding adhesive" means any adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces.

"Plastic cement welding adhesive primer" means any primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.

"Plastic foam" means foam constructed of plastics.

"Plasticizer" means a material, such as a high boiling point organic solvent, that is incorporated into a vinyl to increase its flexibility, workability, or distensibility, as determined by ASTM Method E-260-96.

"Plastics" means synthetic materials chemically formed by the polymerization of organic (carbon-based) substances. Plastics are usually compounded with modifiers, extenders, and/or reinforcers and are capable of being molded, extruded, cast into various shapes and films or drawn into filaments.

"Polyvinyl chloride plastic" or "PVC plastic" means a polymer of the chlorinated vinyl monomer that contains 57% chlorine.

"Polyvinyl chloride welding adhesive" or "PVC welding adhesive" means any adhesive intended by the manufacturer for use in the welding of PVC plastic pipe.

"Porous material" means a substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, wood, paper and corrugated paperboard.

"Propellant" means a fluid under pressure that expels the contents of a container when a valve is opened.

"Reactive diluent" means a liquid that is a reactive organic compound during application and one in that, through chemical and/or physical reactions, such as polymerization, twenty (20) percent or more of the reactive organic compound becomes an integral part of a finished material.

"Roadway sealant" means any sealant intended by the manufacturer for application to public streets, highways and other surfaces, including but not limited to curbs, berms, driveways and parking lots.

"Rubber" means any natural or manmade rubber substrate, including but not limited to, styrene-butadiene rubber, polychloroprene (neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene and ethylene propylene diene terpolymer.

"SCAQMD" means the South Coast Air Quality Management District, a part of the California Air Resources Board, which is responsible for the regulation of air quality in the State of California.

"Sealant primer" means any product intended by the manufacturer for application to a substrate, prior to the application of a sealant, to enhance the bonding surface.

"Sealant" means any material with adhesive properties that is formulated primarily to fill, seal, waterproof or weatherproof gaps or joints between two surfaces. Sealants include sealant primers and caulks.

"Sheet-applied rubber installation" means the process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.

"Single-ply roof membrane" means a prefabricated single sheet of rubber, normally ethylene-propylenediene terpolymer, that is field applied to a building roof using one layer of membrane material.

"Single-ply roof membrane installation and repair adhesive" means any adhesive labeled for use in the installation or repair of single-ply roof membrane. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes and ducts that protrude through the membrane. Repair includes gluing the edges of torn membrane together, attaching a patch over a hole and reapplying flashings to vents, pipes or ducts installed through the membrane.

"Single-ply roof membrane adhesive primer" means any primer labeled for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.

"Single-ply roof membrane sealant" means any sealant labeled for application to single-ply roof membrane.

"Solvent" means organic compounds that are used as diluents, thinners, dissolvers, viscosity reducers, cleaning agents or other related uses.

"Structural glazing adhesive" means any adhesive intended by the manufacturer to apply glass, ceramic, metal, stone or composite panels to exterior building frames.

"Subfloor installation" means the installation of subflooring material over floor joists, including the construction of any load bearing joists. Subflooring is covered by a finish surface material.

"Surface preparation solvent" means a solvent used to remove dirt, oil and other contaminants from a substrate prior to the application of a primer, adhesive or sealant.

"Thin metal laminating adhesive" means any adhesive intended by the manufacturer for use in bonding multiple layers of metal to metal or metal to plastic in the production of electronic or magnetic components in which the thickness of the bond line(s) is less than 0.25 mils.

"Tire repair" means a process that includes expanding a hole, tear, fissure or blemish in a tire casing by grinding or gouging, applying adhesive and filling the hole or crevice with rubber.

"Tire tread adhesive" means any adhesive intended by the manufacturer for application to the back of precure tread rubber and to the casing and cushion rubber. Tire tread adhesive may also be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.

"Traffic marking tape" means preformed reflective film intended by the manufacturer for application to public streets, highways and other surfaces, including but not limited to curbs, berms, driveways and parking lots.

"Traffic marking tape adhesive primer" means any primer intended by the manufacturer for application to surfaces prior to installation of traffic marking tape.

"Undersea-based weapons systems components" means the fabrication of parts, assembly of parts or completed units of any portion of a missile launching system used on undersea ships.

"Waterproof resorcinol glue" means a two-part resorcinol-resin-based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

(c) Standards.

(1) No person shall use, apply, sell, supply, offer for sale or manufacture for sale any adhesive, sealant, adhesive primer or sealant primer for use in Vermont with a VOC content in excess of the following emission limits:

Adhesive, sealant, adhesive primer or sealant primer category	**VOC content limit (grams VOC per liter[a])**
Adhesives	
ABS welding	400
Ceramic tile installation	130
Computer diskette jacket manufacturing	850
Contact bond	250
Cove base installation	150
CPVC welding	490
Indoor floor covering installation	150
Metal to urethane/rubber molding or casting	850
Motor vehicle adhesive	250
Motor vehicle weatherstrip adhesive	750
Multipurpose construction	200
Nonmembrane roof installation/repair	300
Other plastic cement welding	510
Outdoor floor covering installation	250
PVC welding	510
Single-ply roof membrane installation/repair	250
Structural glazing	100
Thin metal laminating	780
Tire retread (not tire repair)	100
Perimeter bonded sheet vinyl flooring installation	660

Waterproof resorcinol glue	170
Sheet-applied rubber installation	850
Sealants	
Architectural	250
Marine deck	760
Nonmembrane roof installation/repair	300
Roadway	250
Single-ply roof membrane	450
Other	420
Adhesive Primers	
Automotive glass	700
Plastic cement welding	650
Single-ply roof membrane	250
Traffic marking tape	150
Other	250
Sealant Primers Applied to the Listed Substrate	
Non-porous architectural	250
Porous architectural	775
Marine deck	760
Other	750
Adhesives Applied to the Listed Substrate	
Flexible vinyl	250
Fiberglass	200
Metal	30
Porous material except wood	120
Rubber	250
Wood	30
Other substrates	250
[a] VOC content values are expressed in units of mass of VOC per volume of coating, excluding water and exempt compounds, as applied.	

(2) Where an adhesive or sealant primer has a specific content limit in the table above, such specific limit shall apply rather than the respective substrate limit.

(3) Where a substrate limit applies in absence of a specific content limit in the table above, if an adhesive is used to bond dissimilar substrates together, the applicable substrate category with the highest VOC content shall apply.

(4) No person shall use materials for surface preparation with a VOC content in excess of 70 grams per liter except a material with a composite vapor pressure, excluding water and exempt compounds, not to exceed 45 mm Hg at 20 degrees Celsius may be used for surface preparation before applying single-ply roofing.

(5) No person shall use materials for the removal of adhesives, sealants, or adhesive or sealant primers from surfaces, other than spray application equipment, with a composite vapor pressure, excluding water and exempt compounds, in excess of 45 mm Hg at 20 degrees Celsius except as provided for in subsection (7)(vii) below.

(6) Container Labeling. Each manufacturer of an adhesive, sealant, adhesive primer or sealant primer subject to this section shall display the following information on the product container or label:

(i) A statement of the manufacturer's recommendation regarding thinning, reducing, or mixing of the product, except that:

(A) This requirement does not apply to the thinning of a product with water; and

(B) If thinning of the product prior to use is not necessary, the recommendation must specify that the product is to be applied without thinning;

(ii) The maximum or the actual VOC content of the product, as supplied, displayed in grams of VOC per liter of product; and

(iii) The maximum or the actual VOC content of the product, which includes the manufacturer’s maximum recommendation for thinning, as applied, displayed in grams of VOC per liter of product.

(7) Work Practice Requirements.

(i) Application methods. Only one of the following application methods shall be used for the application of adhesives, sealants, adhesive primers or sealant primers: electrostatic spray, High volume-low pressure (HVLP) spray, flow coat, roll coat, or hand application, (including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application), dip coating (including electrodeposition), airless spray, air-assisted airless spray, or other application methods capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying.

(ii) Any person using adhesives, sealants, adhesive primers, sealant primers, surface preparation or clean-up solvents subject to this section shall:

(A) Store or dispose of all such materials and absorbent materials, such as cloth or paper, which are moistened with adhesives, sealants, primers or solvents subject to this section, in non-absorbent containers that shall be closed except when placing materials in or removing materials from the container;

(B) Ensure that mixing and storage containers used for VOC-containing adhesives, adhesives primers, and process-related waste materials are kept closed at all times except when depositing or removing these materials;

(C) Minimize spills of VOC-containing adhesives, adhesive primers, and process-related waste materials;

(D) Convey VOC-containing adhesives, adhesive primers, and process-related waste materials from one location to another in closed containers or pipes; and

(E) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and that all spent solvent is captured in closed containers.

(iii) Removal of an adhesive, sealant, adhesive primer or sealant primer from the parts of spray application equipment shall be performed as follows:

(A) In an enclosed cleaning system, or its equivalent as approved by the Air Pollution Control Officer and EPA;

(B) Using a solvent with a VOC content less than or equal to 70 grams of VOC per liter of material; or

(C) For parts containing dried adhesive, soaking in a solvent where the composite vapor pressure of the solvent, excluding water and exempt compounds, is less than or equal to 9.5 mm Hg at 20 degrees Celsius and the parts and solvent are in a closed container that remains closed except when adding parts to or removing parts from the container.

(d) Control devices.

(1) As an alternative to compliance with the emission limits in subsection (c) of this section, an owner or operator may comply with this section by:

(i) Installing and operating a capture system and control device for control of VOC emissions from the use or application of all adhesives, sealants, adhesive primers and sealant primers; and

(ii) Demonstrating that the overall emission reduction efficiency achieved for such emissions is greater than 90%. The achieved overall emission reduction efficiency shall be determined in

accordance with procedures and test methods specified by the Air Pollution Control Officer and EPA.

(2) An owner or operator subject to this section shall ensure that:

(i) A capture system and control device, if used, are operated at all times, and the owner or operator demonstrates compliance with this section in accordance with the coating analysis and capture system and control device efficiency test methods specified by the Air Pollution Control Officer and EPA; and

(ii) The control device is equipped with the monitoring equipment required by the Air Pollution Control Officer, and such equipment is installed, calibrated, operated and maintained according to the vendor's specifications at all times the control device is in use. The monitoring equipment shall monitor the following parameters:

(A) Combustion chamber temperature of each thermal incinerator or afterburner;

(B) Temperature before the catalyst bed and temperature rise across each catalytic incinerator bed; and

(C) The VOC concentration of the inlet and outlet from each carbon adsorption bed.

(e) Recordkeeping and Reporting.

(1) Each person subject to this section shall maintain records demonstrating compliance with this section, including, but not limited to, the following information:

(i) A list of each adhesive, sealant, adhesive primer, sealant primer cleanup solvent and surface preparation solvent in use and in storage;

(ii) A data sheet or material list which provides the material name, manufacturer identification, and material application;

(iii) Catalysts, reducers or other components used and the mix ratio;

(iv) The VOC content of each product as supplied;

(v) The final VOC content or vapor pressure, as applied; and

(vi) The monthly volume of each adhesive, sealant, adhesive primer, sealant primer, cleanup or surface preparation solvent used.

(2) Any person who complies with this section through the use of add-on air pollution control equipment shall record the key operating parameters for the control equipment, including but not limited to, the following information:

(i) The volume used per day of each adhesive, sealant, adhesive primer, sealant primer or solvent that is subject to a VOC content limit in Table 1 and that exceeds such a limit;

(ii) On a daily basis, the combustion temperature, inlet and exhaust gas temperatures and control device efficiency, as appropriate, pursuant to sub-section (d)(ii) of this section;

(iii) Daily hours of operation; and

(iv) All maintenance performed including the date and type of maintenance.

(3) For adhesives, sealants, adhesive primers and sealant primers subject to the laboratory testing exemption pursuant to this section, the person conducting the testing shall make and maintain records of all such materials used, including, but not limited to, the product name, the product category of the material or type of application and the VOC content of each material.

(4) All records made to determine compliance with this section shall be maintained for five (5) years from the date such record is created.

5-253.9 Offset Lithographic and Letterpress Printing

(a) Applicability.

(1) This section applies to any *offset lithographic printing operation* and any *letterpress printing operation*, except any such printing operations within a *stationary source* whose *actual emissions* without *control devices* from all printing operations within the source are less than 3 tons of *volatile organic compounds* per 12-month rolling period. Once a source is subject to this section, it shall remain so, even if its *emissions* levels later fall below the applicability threshold.

(2) Existing sources subject to this standard must comply within 24 months of the promulgation of this section.

(b) Definitions. For the purpose of this section, the following definitions apply, in addition to those of Section 5-101 of this chapter.

"*Cleaning materials*" means all materials used for cleaning a press, press parts, or to remove dried ink from areas around a press including blanket washing, roller washing, plate cleaners, metering roller cleaners, impression cylinder cleaners, rubber rejuvenators, and other cleaners. Cleaning materials do not include materials used on electronic components of a press, pre-press cleaning operations (e.g., platemaking), post-press cleaning operations (e.g., binding), cleaning supplies (e.g., detergents) used to clean the floor (other than dried ink) in the area around a press, or cleaning performed in parts washers or cold cleaners.

"*Cold-set*" means a press that uses inks that do not require heat to set or dry and instead rely primarily on absorption into the media. Cold-set inks tend to have lower *volatile organic compound* contents and higher vegetable oil content than heat-set inks and permanently retain most of the *volatile organic compounds* in the substrate.

"*Fountain solution*" means a water-based material that is applied to the non-image areas of the lithographic plate that were rendered water receptive thus making these areas unreceptive to ink. Fountain solutions have historically contained significant amounts of isopropyl alcohol which serves as a wetting agent or "dampening aid" to enhance the spreadability of the fountain solution across the plate.

"*Heat-set*" means a press that uses inks that require heat to set and dry the inks, usually in a printing press dryer. Heat-set inks tend to have higher *volatile organic compound* contents and lower vegetable oil content than cold-set inks and much of these compounds are volatilized off in the press dryer.

"*Letterpress printing operation*" means a printing process in which the image area is raised relative to the non-image area and the paste ink is transferred to the substrate directly from the image surface.

"*Offset lithographic printing operation*" means a planographic printing process in which the printing image areas and non-image areas are on the same plane on the same thin lithographic plate where the image area is rendered oil (ink) receptive and the non-image area is rendered water

receptive. The ink is transferred from an ink roller to the printing image areas of the lithographic plate, where it is confined to the plate areas that are rendered oil (ink) receptive and repelled from the plate areas that are rendered water receptive that instead pick up the water-based *fountain solution*. The ink is then transferred to a rubber-covered, intermediate "offset" cylinder before being transferred to the substrate being printed.

"*Sheet-fed press*" means a press where individual sheets of paper or other substrate are fed to the press.

"*Web-fed press*" means a press where continuous rolls of substrate material are fed to the press and rewound or cut to size after printing.

(c) Standards.

(1) Heat-set printing press dryers. Each press dryer shall be equipped with an effective emission capture and control system that shall comply with at least one of the following limitations: (1) the system shall achieve a minimum 99.0 percent overall destruction efficiency of *volatile organic compounds* from the press dryer, or (2) the system shall achieve an outlet *volatile organic compound* concentration not to exceed 5 ppmvd as hexane. Notwithstanding the above, presses used exclusively for printing of books and presses with a maximum web width of 22 inches or less shall not be subject to the above limitations.

(2) Fountain solutions.

(i) Heat-set printing operation fountain solutions. Each fountain solution shall comply with at least one of the following limitations: (1) the *volatile organic compound* content of the *fountain solution* as applied shall not exceed 1.6 percent by weight, (2) the *volatile organic compound* content of the *fountain solution* as applied shall not exceed 3.0 percent by weight if the fountain solution is refrigerated to 60 degrees F or below, or (3) the fountain solution as applied shall contain no alcohol and shall not exceed 5 percent by weight alcohol substitutes.

(ii) Cold-set web-fed press printing operations. Each fountain solution as applied shall contain no alcohol and shall not exceed 5 percent by weight alcohol substitutes.

(iii) Cold-set sheet-fed press printing operations. Each fountain solution shall comply with at least one of the following limitations: (1) the *volatile organic compound* content of the *fountain solution* as applied shall not exceed 5.0 percent by weight, (2) the *volatile organic compound* content of the *fountain solution* as applied shall not exceed 8.5 percent by weight if the fountain solution is refrigerated to 60 degrees F or below, or (3) the fountain solution as applied shall contain no alcohol and shall not exceed 5 percent by weight alcohol substitutes. Notwithstanding the above, sheet-fed presses with a maximum sheet size of 11 inches by 17 inches or smaller or any sheet-fed presses with a total fountain solution reservoir of 1 gallon or less shall not be subject to the above limitations.

(3) Cleaning materials. Each *cleaning material* used shall comply with at least one of the following limitations: (1) the composite vapor pressure of the cleaning material as applied shall not exceed 10 mmHG at 20 degrees C, or (2) the *volatile organic compound* content of the *cleaning material* as applied shall not exceed 70 percent by weight. All cleaning materials and shop rags contaminated with cleaning materials shall be kept in normally closed containers. Notwithstanding the above, a facility may use up to 110 gallons per calendar year of cleaning materials for all printing operations combined at the *stationary source* that do not meet either of the content limitations above.

(d) Recordkeeping and Reporting

(1) The owner or operator of any *offset lithographic printing operation* or any *letterpress printing operation* shall maintain records sufficient to determine the *volatile organic compound* emissions from all printing operations at the *stationary source* per 12-month rolling period, including the following:

(i) The quantity of each ink, *fountain solution* and *cleaning material* used each day.
(ii) The *volatile organic compound* content of each ink, *fountain solution* and cleaning material used each day and the *Material Safety Data Sheet* for each.

(2) All such records shall be retained for a minimum of 5 years and shall be made available to the *Secretary* upon request.

5-253.12 Coating of Flat Wood Paneling

(a) Applicability.

(1) This section applies to any *flat wood paneling coating line*, except any such *coating* line within a *stationary source* whose *actual emissions* without *control devices* from all flat wood paneling coating lines within the source are less than 3 tons of *volatile organic compounds* per 12-month rolling period. Once a source is subject to this section, it shall remain so, even if its *emissions* levels later fall below the applicability threshold.

(2) Existing sources subject to this standard must comply within 24 months of the promulgation of this section.

(3) This rule does not apply to surface coating of wood flat stock that is subsequently used in furniture or cabinetry.

(b) Definitions. For the purpose of this section, the following definitions apply, in addition to those of Section 5-101 of this chapter.

"*Engineered wood exterior siding"* means wood containing products, other than solid wood exterior siding, such as *hardboard*, plywood, particle board and waferboard designed for exterior service.
"*Flat wood paneling*" means any of the following flat wood products: exterior wood siding, including engineered wood exterior siding and solid wood exterior siding, interior Class I hardboard tileboard, interior Class II hardboard, natural finish hardwood plywood, printed interior panels made of hardwood plywood or thin particleboard.

"*Flat wood paneling coating line*" means a *coating* line used to apply coatings to flat wood paneling products and includes the application, drying and/or curing of such coatings.

"Hardboard" is a panel manufactured primarily from inter-felted ligno-cellulosic fibers that are consolidated under heat and pressure in a hot press.

"Hardwood plywood" is plywood whose surface layer is a veneer of hardwood.

"Interior Class I hardboard tileboard panel" means a premium interior wall flat wood paneling product made of hardboard that is used in high moisture areas of the home such as kitchens and bathrooms that meets the specification for Class I hardboard as approved by the American National Standards Institute A135.4-2004.

"Interior Class II hardboard panel" means an interior wall flat wood paneling product made of hardboard that meets the specifications for Class II hardboard as approved by the American National Standards Institute A135.5-2004.

"Natural finish hardwood plywood panels" means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

"*Particle board*" means an engineered sheet wood product manufactured from small wood chips, sawmill shavings, or sawdust and a synthetic resin or other suitable binder, which is pressed and extruded.

"*Plywood*" means an engineered sheet wood product manufactured with one or more thin layers of solid wood veneer in alternating orientation of the grain

"Printed interior panels" means panels whose grain or natural surface is obscured by fillers and base coats upon which a simulated grain or decorative pattern is printed.

"*Solid wood exterior siding*" means siding, such as clapboard, made from a single layer of sawn natural wood. This siding may have glued joints, such as finger joints, to allow for the removal of defects, such as knots.

"Thin particleboard" is a manufactured board that is 0.25 inches or less in thickness made of individual wood particles that have been coated with a binder and formed into flat sheets by pressure.

"*Waferboard*" also known as flakeboard, waferboard, or chipboard, means an engineered sheet wood product manufactured from machined wood chips and a synthetic resin or other suitable binder, which is pressed and extruded.

(c) Standards.

(1) Except as provided in 5-253.12(d), no owner or operator of a *flat wood paneling coating line* subject to this section shall cause or allow the application of coatings with a volatile organic compound content, as applied and based on a weighted daily average of all such coatings for each flat wood paneling category in excess of the following *emission* limits:

Flat Wood Paneling VOC Content Emission Limits	
Flat wood paneling category	Grams/liter (lbs/gal)[a]
All flat wood paneling, except solid wood exterior siding covered below.	250 (2.1)
Solid wood exterior siding of cedar, hemlock, mahogany and redwood species at a stationary source whose actual emissions from all coating lines within the source are less than 50 tons of volatile organic compounds per 12-month rolling period.	325 (2.9)
[a] VOC content values are expressed in units of mass of VOC per volume of coating, excluding water and exempt compounds, as applied.	

(2) Work Practices. The owner or operator of a flat wood paneling coating line subject to this section shall control VOC emissions from VOC containing coatings, thinners, cleaning materials, and coatings and cleaning related waste materials by using the following work practices:

(i) Storing all VOC containing materials including coatings, thinners, cleaning materials, and coating and cleaning related waste materials including used shop towels, in nonabsorbent, non-leaking closed containers;

(ii) Keeping such containers closed at all times except when depositing or removing VOC containing materials;

(iii) Collecting all cleaning solvents into normally closed containers after cleaning and as appropriate reclaiming for reuse as a cleaning solvent or as a thinner for coatings provided the as applied VOC contents of such coatings comply with the limitations in this section;

(iv) Minimizing and immediately cleaning up spills of VOC containing materials;

(v) Conveying VOC containing materials from one location to another in closed containers or pipes; and

(vi) Minimizing emissions of VOC during cleaning of storage, mixing, and conveying equipment.

(d) Control devices.

(1) As an alternative to compliance with the *emission* limits in paragraph (c) of this section, an owner or operator of a *flat wood paneling coating line* may comply with this section by:

(i) Installing and operating a *capture system* and *control device* on that line; and

(ii) Demonstrating that the *overall emission reduction efficiency* achieved for that line is greater than 90%.

(A) The collection efficiency of the fugitive emissions will be determined pursuant to EPA's "Guidelines For Developing Capture Efficiency Protocols."

(B) The efficiency of the control device and the VOC content measured and calculated as carbon in the control device exhaust gases shall be determined by EPA Test Methods 25 and 25A as described in CFR Title 40 Part 60, or by other methods approved by the Agency and the EPA,

(C) The achieved *overall emission reduction efficiency* shall be determined by multiplying the collection efficiency by the efficiency of the control device.

(2) An owner or operator of a *flat wood paneling coating line* subject to this section shall ensure that:

(i) A *capture system* and *control device*, if used, are operated at all times that the line is in operation, and the owner or operator demonstrates compliance with this section in accordance with the *coating* analysis and *capture system* and *control device* efficiency test methods specified by the *Air Pollution Control Officer and EPA*; and

(ii) The *control device* is equipped with the monitoring equipment required by the *Air Pollution Control Officer*, and such equipment is installed, calibrated, operated and maintained according to the vendor's specifications at all times the *control device* is in use. The monitoring equipment shall monitor the following parameters:

(A) Combustion chamber temperature of each thermal *incinerator* or afterburner;

(B) Temperature before the catalyst bed and temperature rise across each catalytic *incinerator* bed; and

(C) The *VOC* concentration of the inlet and outlet from each carbon adsorption bed.

(e) Record keeping and reporting.

(1) The owner or operator of a *coating* line complying with paragraph (c) of this section by means of the use of complying *coatings* shall collect and record all of the following information each month for each *coating* line and maintain the information at the source for a period of 5 years:

(i) The name and identification number of each *coating*, as applied, used to coat each type of flat wood paneling product; and

(ii) The pounds of *VOC* per gallon of *coating* as applied, (excluding water and exempt compounds) for each *coating* type recorded for 5-253.12(e)(1)(i).

(iii) Calculate the monthly weighted average *VOC* content for all *coatings* applied on each *flat wood paneling coating line* for each type of *flat wood paneling* product.

(2) The owner or operator of any *coating* line complying with this section by the use of *control devices* shall perform such compliance testing, keep such records and furnish such reports as required by the *Air Pollution Control Officer* to demonstrate continuing compliance with this section.

5-253.13 Coating of Miscellaneous Metal and Plastic Parts

(a) Applicability.

(1) This section applies to any *miscellaneous metal and plastic parts coating line*, except any such coating line within any stationary source whose actual emissions without control devices from all miscellaneous metal and plastic parts coating lines within the source are less than 3 tons of volatile organic compounds per 12-month rolling period. Once a source is subject to this section, it shall remain so, even if its emissions levels later fall below the applicability threshold.

(b) Definitions. For the purpose of this section, the following definitions apply, in addition to those of Section 5-101 of this chapter.

"Air-dried coating" means a *coating* that is dried by the use of air or forced warm air at temperatures up to 194^{0}F (90^{0}C).

"Clear Coating" a *coating* that either lacks color and opacity or is transparent and uses the surface to which it is applied as a reflective base or undertone color.

"Drum" means any cylindrical metal shipping container of 13 to 110 gallon capacity.

"Pail" means any cylindrical metal shipping container of 1 to 12 gallon capacity and constructed of 29 gauge and heavier material.

"Air dried" means cured at a temperature below 90°C (194 °F);

"Airless spray application" means a coating spray application system using high fluid pressure, without compressed air, to atomize the coating;

"Air-assisted airless spray application" means a coating spray application system using fluid pressure to atomize the coating and lower pressure air to adjust the shape of the spray pattern;

"Antifouling coating" means a coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms;

"Antifouling sealer or tie coat" means a coating applied over biocidal antifouling coating for the purpose of preventing release of biocides into the environment or to promote adhesion between an antifouling coating and a primer or another antifouling coating;

"Antique aerospace vehicle" means an aircraft or component thereof that was built at least 30 years ago and that is not routinely in commercial or military service in the capacity for which it was designed;

"Appurtenance" means any accessory to a stationary structure, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment,

air conditioning equipment, and other fixed mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways; fixed ladders; catwalks; fire escapes and window screens;

"As applied" means the composition of coating at the time it is applied to a surface, including any solvent, catalyst or other substance added to the coating but excluding water and exempt compounds;

"Automotive-transportation part" means an interior or exterior component of a motor vehicle or mobile source;

"Baked" means cured at a temperature at or above 90°C (194°F);

"Base coat" means the initial coating applied to a substrate in a process of applying two or more coatings;

"Bearing coating" does not include a material that can also be classified as a dry lubricative material or a solid film lubricant;

"Business machine" means a device that uses electronic or mechanical methods to process information, perform calculations, print or copy information or convert sound into electrical impulses for transmission, such as, typewriters, electronic computing devices, calculating and accounting machines, telephone and telegraph equipment and photocopy machines;

"Camouflage coating" means a coating used, principally by the military, to conceal equipment from detection;

"Capture efficiency" means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from the miscellaneous metal and plastic parts coating operation, expressed as a percentage;

"Cleaning solvent" means any VOC-containing liquid, including a liquid impregnated wipe or towelette, used in cleaning;

"Coating" means a material that is deposited in a thin, persistent, uniform layer across the surface of a substrate for aesthetic, protective or functional purposes, including but not limited to, paints, primers, inks and maskants. "Coating" does not include protective oils, acids and bases;

"Coating unit" means a series of one or more coating applicators and any associated drying area or oven wherein a coating is applied, dried or cured. A "coating unit" ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating;

"Control device efficiency" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;

"Dip coating" means a method of applying a coating to a surface by submersion into and removal from a coating bath;

"Electric dissipating coating" means a coating that rapidly dissipates a high-voltage electric charge;

"Electric-insulating and thermal-conducting coating" means a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit;

"Electric-insulating varnish" means a coating applied to electric motors, components of electric motors or power transformers to provide electrical, mechanical and environmental protection or resistance;

"Electrostatic application" means a method of applying coating particles or coating droplets to a grounded surface by electrically charging such particles or droplets;

"Electrostatic preparation coating" means a coating applied to a plastic part solely to provide conductivity for the subsequent application of a primer, a topcoat or other coating through the use of electrostatic application methods;

"EMI/RFI shield coating" means a coating that functions to attenuate electromagnetic interference, radio frequency interference signals or static discharge;

"Etching filler" means a coating that contains less than 23% solids by weight and at least 0.5% acid by weight and is used as a substitute for the application of a pretreatment coating followed by a primer;

"Exempt compound" means a carbon compound excluded from the definition of "volatile organic compound," as defined in section 5-101 of these Regulations;

"Extreme high-gloss coating" means a coating that, when tested by American Society for Testing Material Test Method D523-08, Standard Test Method for Specular Gloss, shows a reflectance of 90 or more on a 60 degree meter;

"Extreme performance coating" means a coating used on a metal surface where the coated surface is, in its intended use, subject to one of the following conditions:
(A) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution,
(B) Repeated exposure to temperatures in excess of 250°F, or
(C) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleaners or scouring agents;

"Finish primer or surfacer" means a coating applied with a wet film thickness of less than 10 millimeters prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier or promotion of a uniform surface necessary for filling in surface imperfections;

"Flow coating" means a non-atomized technique of applying coating to a substrate using a fluid nozzle in a fan pattern with no air supplied to the nozzle;

"Fog coat" means a coating that is applied to a plastic part at a thickness of no more than 0.5 mils of coating solids for the purpose of color matching without masking a molded-in texture;

"General" means a coating category for a coating that does not meet any other category definition provided in this subsection for the specified substrate (i.e., metal part or plastic part);

"General aviation rework facility" means any aerospace facility with the majority of its revenues resulting from the reconstruction, repair, maintenance, repainting, conversion or alteration of general aviation aerospace vehicles or components;

"Gloss reducer" means a coating that is applied to a plastic part at a thickness of no more than 0.5 mils of coating solids solely to reduce the shine of the part;

"Heat-resistant coating" means a coating able to withstand a temperature of at least 400° F during normal use;

"High build primer or surfacer" means a coating applied with a wet film thickness of 10 millimeters or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier or promotion of a uniform surface necessary for filling in surface imperfections;

"High gloss coating" means a coating that, when tested by American Society for Testing Material Test Method D523-08, Standard Test Method for Specular Gloss, shows a reflectance of 85 or more on a 60 degree meter;

"High-performance architectural coating" means a coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 2604-05 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-05 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels);

"High temperature coating" means a coating certified to withstand a temperature of 1000°F for 24 hours;

"HVLP spray application" means to apply a coating using a coating application system that uses lower air pressure and higher volume than conventional air atomized spray systems, where the manufacturer has represented that the system is HVLP by affixing a permanent label or through representations on the packaging or other product literature;

"Lacquer" means a clear or pigmented coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction and that is resoluble in its original solvent;

"Large commercial aircraft" means an aircraft of more than 110,000 pounds, maximum certified take-off weight, manufactured for non-military use;

"Mask coating" means thin film coating applied through a template to coat a small portion of a substrate;

"Medical device" means an instrument, apparatus, implement, machine, gadget, appliance, implant, in vitro reagent or other similar or related article, including any component, part or accessory, which meets one of the following conditions:
(A) Recognized in the official National Formulary or the United States Pharmacopeia or any supplement thereto,
(B) Intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment or prevention of disease in persons or animals, or
(C) Intended to affect the structure or function of the body of a person or animal and which does not achieve its primary intended purposes through chemical action within or on such body and which is not dependent upon being metabolized for the achievement of its primary intended purposes;

"Metallic coating" means a coating that contains more than five grams of metal particles per liter of coating, as applied;

"Miscellaneous metal and plastic parts" means metal and plastic components of products as well as the products themselves constructed either entirely or partially from metal or plastic including, but not limited to: aerospace vehicles and components, fabricated metal products, molded plastic parts, small and large farm machinery, commercial and industrial machinery and equipment, automotive or transportation equipment, interior or exterior automotive parts, construction equipment, motor vehicle accessories, bicycles and sporting goods, toys, recreational vehicles, extruded aluminum structural components, railroad cars, lawn and garden equipment, business machines, laboratory and medical equipment, electronic equipment, steel drums, metal pipes and small appliances;

"Miscellaneous metal and plastic parts coating line" means a coating line in which a coating is applied to any miscellaneous metal or plastic parts.

"Mold-seal coating" means the initial coating applied to a new mold or a repaired mold to provide a smooth surface that, when coated with a mold release coating, prevents products from sticking to the mold;

"Mold release" means a coating applied to a mold surface to prevent the molded piece from sticking to the mold as it is removed;

"Motor vehicle" means any self-propelled vehicle, including, but not limited to, cars, trucks, buses, golf carts, vans, motorcycles, tanks and armored personnel carriers;

"Motor vehicle bedliner coating" means a multi-component coating applied to a cargo bed after the application of a topcoat to provide additional durability and chip resistance;

"Motor vehicle cavity wax" means a coating applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection;

"Motor vehicle deadener" means a coating applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment;

"Motor vehicle gasket/sealing material" means a fluid applied to coat a gasket or replace and perform the same function as a gasket. Automobile

and light-duty truck gasket/gasket sealing material includes room temperature vulcanization (RTV) seal material;

"Motor vehicle lubricating wax/compound" means a protective lubricating material applied to vehicle hubs and hinges;

"Motor vehicle sealer" means a high viscosity material generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk;

"Motor vehicle trunk interior coating" means a coating applied to the trunk interior to provide chip protection;

"Motor vehicle underbody coating" means a coating applied to the undercarriage or firewall to prevent corrosion or provide chip protection;

"Multi-colored coating" means a coating packaged in a single container and applied in a single coat which exhibits more than one color when applied;

"Multi-component coating" means a coating requiring the addition of a separate reactive resin, such as a catalyst or hardener, before application to form an acceptable dry film;

"One-component coating" means a coating that is ready for application as packaged for sale, except for the addition of a thinner to reduce the viscosity;

"Optical coating" means a coating with a low reflectance in the infrared and visible wavelength range that is used on or near optical or laser lenses or hardware;

"Overall control efficiency" means the product of the capture efficiency and the control device efficiency;

"Pan-backing coating" means a coating applied to the surface of pots, pans or other cooking implements that are exposed directly to a flame or other heating element;

"Plastic part" means any piece or combination of pieces of which at least one has been formed from one or more resins. Such pieces may be solid, porous, flexible or rigid. "Plastic part" does not include a part made of fiberglass or composite material;

"Pleasure craft" means any marine or freshwater vessel manufactured or operated primarily for recreational purposes;

"Pleasure craft coating" means any marine coating, except unsaturated polyester resin (fiberglass), applied to a pleasure craft or to parts and components of a pleasure craft;

"Powder coating" means any coating applied as a dry, finely divided solid that, when melted and fused, adheres to the substrate as a paint film;

"Prefabricated architectural component coating" means a coating applied to prefabricated metal parts and products that are to be used as architectural appurtenances or structures and that are detached from the structure when coated in a shop environment;

"Pretreatment wash primer" means a coating, containing at least 0.1 percent acid by weight and no more than 25 percent solids by weight, that is used to provide surface etching and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings;

"Primer" means a coating applied to prevent corrosion, provide protection or provide a surface for adhesion of subsequent coatings;

"Related cleaning" means the removal of uncured coatings, coating residue and contaminants from:
(A) Miscellaneous metal and plastic parts prior to the application of coatings,
(B) Miscellaneous metal and plastic parts between coating applications, or
(C) Transfer lines, storage tanks, spray booths and coating application equipment;

"Repair coating" means a coating used to recoat portions of a product that has sustained mechanical damage to the coating following normal painting operations;

"Resin" means any of numerous physically similar polymerized synthetics or chemically modified natural materials including thermoplastic materials such as polyvinyl, polystyrene and polyethylene and thermosetting materials such as polyesters, epoxies and silicones;

"Resist coating" means a coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part;

"Roll coating" means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a set of oppositely rotating rollers;

"Safety-indicating coating" means a coating that changes in a physical characteristic, such as color, to indicate unsafe conditions;

"Screen print ink" means an ink used in screen printing processes during fabrication of decorative laminates and decals;

"Sealant" means a material used to prevent the intrusion of water, fuel, air or other liquids or solids from certain areas of aerospace vehicles or components;

"Shock-free coating" means a coating applied to electrical components to protect the user from electric shock and that provides for low capacitance and high resistance and resists breaking down under high voltage;

"Silicone-release coating" means any coating that contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans;

"Solar-absorbent coating" means a coating that has as its primary purpose the absorption of solar radiation;

"Solid-film lubricant" means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene or other solids that act as a dry lubricant between faying surfaces;

"Space vehicle" means a man-made device, either manned or unmanned, designed for operation beyond earth's atmosphere, including, but not limited to, integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets and test coupons, including auxiliary equipment associated with test, transport and storage, which through contamination can compromise the space vehicle performance;

"Specialty coating" means a coating that, even though it meets the definition of a primer, topcoat or self priming topcoat, has additional performance criteria beyond those of primers, topcoats and self-priming topcoats for specific applications. Such performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesion or enhanced corrosion protection;

"Stencil coating" means an ink or a coating that is rolled or brushed onto a template or stamp to add identifying letters or numbers to metal parts or products;

"Temporary protective coating" does not include any coating that protects against strong acid or alkaline solutions;

"Texture coat" means a coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating;

"Textured finish" means a rough surface produced by spraying and splattering large drops of coating onto a previously applied coating;

"Topcoat" means the final coating applied in a process of applying two or more coatings;

"Touch-up coating" means a coating used to cover minor coating imperfections appearing after the main coating operation;

"Transfer efficiency" means the portion of coating solids that adheres to the metal or plastic surface during the application process, expressed as a percentage of the total volume of coating solids delivered by the applicator;

"Translucent coating" means a coating which contains binders and pigment and is formulated to form a colored, but not opaque, film;

"Vacuum-metalizing coating" means the undercoat applied to a substrate on which the metal is deposited prior to a vacuum-metalizing process or the

overcoat applied directly to the metal film after a vacuum metalizing process;

"Vacuum metalizing process" means the process of evaporating metals inside a vacuum chamber and depositing them on a substrate to achieve a uniform metalized layer;

(c) Standards. Coating limits.

(1) Prior to September 15, 2018 no *owner* or *operator* of a *miscellaneous metal parts and products coating line* subject to this section shall cause or allow the application of any *coating* with *VOC* content in excess of the following *emission* limits:

Coating Category		**lb/gal[a]**
(i)	*Clear coating*	4.3
(ii)	Steel *pail* and *drum* interior	4.3
(iii)	*Air-dried coating*	3.5
(iv)	*Extreme performance coating*	3.5
(v)	All other *coatings*	3.0
[a] VOC content values are expressed in units of mass of VOC (lb.) per volume of coatings (gallon), excluding water and exempt compounds, as applied.		

(2) No owner or operator of a miscellaneous metal and plastic parts coating line subject to this section shall cause or allow the application of any coating with VOC content in excess of the following emission limits:

Coating of Miscellaneous Metal and Plastic Parts Coating Limits				
Metal Parts Coating VOC Content Limits*				
	Air Dried		Baked	
	G VOC/liter coating	Lbs VOC/gal coating	G VOC/liter coating	Lbs VOC/gal coating
General one-component	340	2.8	280	2.3
General, Multi-Component	340	2.8	280	2.3
Camouflage	420	3.5	420	3.5
Electric-Insulating Varnish	420	3.5	420	3.5
Etching Filler	420	3.5	420	3.5
Extreme High-Gloss	420	3.5	360	3.0
Extreme Performance	420	3.5	360	3.0
Heat-Resistant	420	3.5	360	3.0
High Performance Architectural	740	6.2	740	6.2
High Temperature	420	3.5	420	3.5
Metallic	420	3.5	420	3.5
Military Specification	340	2.8	280	2.3
Mold-Seal	420	3.5	420	3.5
Pan-Backing	420	3.5	420	3.5
Prefabricated Architectural Multi-Component	420	3.5	280	2.3
Prefabricated Architectural One-Component	420	3.5	280	2.3
Pretreatment Coatings	420	3.5	420	3.5
Repair and Touch Up	420	3.5	360	3.0
Silicone-Release	420	3.5	420	3.5
Solar-Absorbent	420	3.5	360	3.0
Vacuum-Metalizing	420	3.5	420	3.5
Drum Coating, New, Exterior	340	2.8	340	2.8
Drum Coating, New Interior	420	3.5	420	3.5
Drum Coating, Reconditioned, Exterior	420	3.5	420	3.5
Drum Coating, Reconditioned, Interior	500	4.2	500	4.2
Plastic Parts Coating VOC Content Limits*				

	G VOC/liter coating	Lbs VOC/gal coating
General one-component	280	2.3
General, Multi-Component	420	3.5
Electric Dissipating Coatings and Shock-Free Coatings	800	6.7
Extreme Performance	420 (2-pack coatings)	3.5 (2 pack coatings)
Metallic	420	3.5
Military Specification	340 (1 Pack) 420 (2 pack)	2.8 (1 pack) 3.5 (2 pack)
Mold-Seal	760	6.3
Multi-Colored Coatings	680	5.7
Optical Coatings	800	6.7
Vacuum-Metalizing	800	6.7
Automotive-Transportation Plastic Parts Coating VOC Content Limits*		
	G VOC/liter coating	Lbs VOC/gal coating
I. High bake coatings -interior and exterior parts		
Flexible Primer	540	4.5
Non-Flexible Primer	420	3.5
Basecoat	520	4.3
Clear Coat	480	4.0
Non-Basecoat/Clear Coat	520	4.3
II. Low Bake/Air Dried Coatings – Interior Parts		
Primers	580	4.8
Basecoat	600	5.0
Clear Coat	540	4.5
Non-Basecoat/Clear Coat	600	5.0
III. Low Bake/Air Dried Coatings – Interior Parts	600	5.0
IV. Touchup and Repair Coatings	620	5.2

Business Machine Plastic Parts Coating VOC Content Limits*		
	G VOC/liter coating	Lbs VOC/gal coating
I. Primers	350	2.9
II. Topcoat	350	2.9
III. Texture Coat	350	2.9
IV. Fog coat	260	2.2
V. Touchup and repair	350	2.9
Pleasure Craft Coating VOC Content Limits*		
	G VOC/liter coating	Lbs VOC/gal coating
Extreme High-Gloss Topcoat	600	5.1
High-Gloss Topcoat	420	3.5
Pretreatment Wash Primer	780	6.5
Finish Primer/Surfacer	420	3.5
High Build Primer Surfacer	340	2.8
Aluminum Substrate Antifoulant Coating	560	4.7
Antifouling Sealer/Tie Coating	420	3.5
Other Substrate Antifoulant Coating	400	3.3
All Other Pleasure Craft Surface Coatings for Metal or Plastic	420	3.5
Motor Vehicle Materials VOC Content Limits*		
	G VOC/liter coating	Lbs VOC/gal coating
Motor vehicle cavity wax	650	5.4
Motor vehicle sealer	650	5.4
Motor vehicle deadener	650	5.4
Motor vehicle gasket/gasket sealing material	200	1.7
Motor vehicle underbody coating	650	5.4
Motor vehicle trunk interior coating	650	5.4
Motor vehicle bedliner	200	1.7
Motor vehicle lubricating wax/compound	700	5.8
*VOC content values are expressed in units of mass of VOC, both as grams (G) and pounds (lbs), per volume of coatings, both liters and gallons (gal), excluding water and exempt compounds, as applied.		

(3) If more than one *emission* limit in (c)(1) or (c)(2) of this section applies to a specific *coating*, the least stringent *emission* limit shall apply.

(4) The owner or operator may use, in the aggregate, in any twelve consecutive months up to 55 gallons of miscellaneous metal or plastic parts coating or coatings that exceed the coating limitations of (c)(2) of this section provided records are maintained of the non-compliant coating use.

(5) The coating limitations in (c)(2) of this section shall not apply to a coating, or an alternative limitation may apply to a coating, upon request to and approval by the Air Pollution Control Officer and EPA.

(6) As an alternative to compliance with the emission limits in (c)(1) and (c)(2) of this section, an owner or operator of a miscellaneous metal or plastic parts coating line may comply with this section by:

(i) Installing and operating a capture system and control device on that line; and

(ii) Demonstrating that the overall emission reduction efficiency achieved for that line is greater than or equal to the required overall emission reduction efficiency. The achieved and the required overall emission reduction efficiencies shall be determined in accordance with procedures and test methods specified by the Air Pollution Control Officer and EPA.

(7) An owner or operator of a miscellaneous metal or plastic parts coating line subject to this section shall ensure that:

(i) A capture system and control device, if used, are operated at all times that the unit is in operation, and the owner or operator demonstrates compliance with his section in accordance with the coating analysis and capture system and control device efficiency test methods specified by the Air Pollution Control Officer and EPA; and

(ii) The control device is equipped with the monitoring equipment required by the Air Pollution Control Officer, and such equipment is installed, calibrated, operated and maintained according to the vendor's specifications at all times the control device is in use.

(d) Standards. Application methods.

(1) No owner or operator of a miscellaneous metal or plastic parts coating line subject to this section shall cause or allow the application of any coating subject to the emission limits in (c)(2) of this section by any method other than the following application methods:

(i) High volume-low pressure (HVLP) spray;
(ii) Electrostatic spray;
(iii) Flow coating;

(iv) Dip coating;
(v) Roll coating;
(vi) Airless spray application;
(vii) Air-assisted airless spray application;
(viii) Hand application; or
(ix) Any other coating application method achieving a transfer efficiency equivalent to or better than that provided by HVLP spray application if approved by the Air Pollution Control Officer.

(2) The application method requirements of (d)(1) of this section shall not apply to the following:

(i) Touch up or repair coatings;
(ii) EMI/RFI shield coatings; and
(iii) Electrostatic spray;

(e) Standards. Work practice requirements.

(1) The owner or operator of a miscellaneous metal or plastic parts coating line subject to this section shall control VOC emissions from VOC containing coatings, thinners, cleaning materials, and coatings and cleaning related waste materials by using the following work practices:

(i) Storing all VOC containing materials including coatings, thinners, cleaning materials, and coating and cleaning related waste materials including used shop towels, in nonabsorbent, non-leaking closed containers;
(ii) Keeping such containers closed at all times except when depositing or removing VOC containing materials;
(iii) Collecting all cleaning solvents into normally closed containers after cleaning and as appropriate reclaim for reuse as a cleaning solvent or as a thinner for coatings provided the as applied VOC contents of such coatings comply with the limitations in this section;
(iv) Minimizing and immediately cleaning up spills of VOC containing materials;
(v) Conveying VOC containing materials from one location to another in closed containers or pipes; and
(vi) Minimizing emissions of VOC during cleaning of storage, mixing, and conveying equipment.

(f) Record keeping and reporting.

(1) Within one year following the effective date of this section, the owner or operator of a *coating* line complying with paragraph (c)(2) of this section by means of the use of complying *coatings* shall collect and record all of the following information each day for each *coating unit* and maintain the information at the source for a period of 5 years:

(i) The name and identification number of each *coating*, as applied, used to coat each type of *miscellaneous metal part or product*; and

(ii) The mass of *VOC* per volume of each *coating* (excluding water and exempt compounds), as applied, used each day, on each *coating unit* and for each type of *miscellaneous metal part or product* (specified in paragraph (c) of this section).

(2) The *Air Pollution Control Officer* may require the owner or operator of any *coating line* complying with this section by the use of *control devices* to perform such compliance testing, keep such records and furnish such reports as necessary to demonstrate continuing compliance with this section.

5-253.17 Industrial Solvent Cleaning

(a) Applicability.

(1) Except as provided at paragraph (a)(3) below, this section shall apply to an owner or operator of any premises who purchases for use at the premises at least 855 gallons of *cleaning solvents*, in aggregate, per rolling 12-month period.

(2) Any owner or operator which is subject to the requirements of this section shall comply with the requirements of this section on or before September 15, 2018 and shall remain so even if solvent use subsequently falls below the applicability threshold.

(3) The requirements of this section shall not apply to the following:

(i) The use or purchase of *cleaning solvent* in

(A) *janitorial cleaning*,

(B) research and development,

(C) quality control or laboratory testing of coatings, inks or adhesives,

(D) *medical device* manufacturing,

(E) pharmaceutical manufacturing,

(F) digital printing operation,

(G) cleaning of screen printing equipment, if the cleaning solvent used has an as-applied VOC content that does not exceed 500 grams per liter, equivalent to 4.2 pounds per gallon,

(H) cleaning activities at *stationary sources* which are engaged in: Aerospace coating; Paper, fabric, film, and foil coating; Metal furniture coating; Wood furniture coating; Flexible packaging printing; Offset lithographic and letterpress printing; Flat wood paneling coating; Miscellaneous metal products coating; Plastic parts coating; Fiberglass boat manufacturing materials; and Miscellaneous industrial adhesives, Electrical and electronic components; Precision optics; Numismatic dies; Stripping of cured inks, coatings, and adhesives; Cleaning of resin, coating, ink, and adhesive mixing, molding, manufacturing and application equipment,

(I) A cleaning activity, including surface preparation prior to coating, necessary to meet a standard or specification issued or approved by the United States Department of Defense, Federal Aviation Administration or other federal government entity, provided that any person claiming exemption pursuant to this paragraph shall maintain records of the standard or specification,

(ii) Any owner or operator performing *industrial solvent cleaning* that exceeds the applicable limit of paragraph (c)(1)(i) of this section where the quantity used does not exceed 55 gallons per any twelve-month rolling aggregate. Any owner or operator claiming exemption pursuant to this clause shall record and maintain monthly records sufficient to demonstrate compliance with this exemption, or

(iii) Any owner or operator performing *industrial solvent cleaning* that exceeds the applicable limit of paragraph (c)(1)(i) of this section, if approved by the Air Pollution Control Officer and the EPA. Any request for approval shall be made in writing to the Air Pollution Control Officer and the EPA and shall include a description of the *cleaning solvent* and its *VOC content*, an explanation of why the *cleaning solvent* is necessary, quantification of the amount of the VOC that will be emitted as a result of the use of the noncompliant *cleaning solvent* and the time period over which the noncompliant solvent will be used.

(b) Definitions. For the purpose of this section, the following definitions apply, in addition to those of Section 5-101.

"*Cleaning solvent*" means any VOC-containing liquid, including a liquid impregnated wipe or towelette, used in cleaning;

"*Control device efficiency*" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;

"*Industrial solvent cleaning*" means the use of *cleaning solvent* to remove uncured adhesives, uncured inks, uncured coatings or contaminants such as dirt, soil or grease from parts, products, tools, machinery, equipment or work areas, where such parts, products, tools, machinery, equipment and work areas are incorporated into or used exclusively in manufacturing a product. "*Industrial solvent cleaning*" includes spray booth cleaning, cleaning of manufactured components, parts cleaning, cleaning of production equipment for maintenance or to prohibit cross-contamination, and cleaning of tanks, mixing pots, process vessels and lines. "*Industrial solvent cleaning*" does not include the cleaning of personal protection equipment, such as respirators.

"*Janitorial cleaning*" means general and maintenance cleaning of building or facility components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, restrooms, furnishings, kitchens and exterior surfaces of office equipment. "*Janitorial cleaning*" includes graffiti removal. "*Janitorial cleaning*" does not include the cleaning of parts, products or equipment, where such parts, products or equipment are incorporated into or used exclusively in manufacturing a product. "*Janitorial cleaning*" excludes the cleaning of work areas, such as laboratory benches, where manufacturing or repair activity is performed;

"*Medical device*" means an instrument, apparatus, implement, machine, gadget, appliance, implant, in vitro reagent or other similar or related article, including any component, part or accessory, which meets one of the following conditions:

(1) Recognized in the official National Formulary or the United States Pharmacopeia or any supplement thereto,

(2) Intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment or prevention of disease, in persons or animals, or

(3) Intended to affect the structure or function of the body of a person or animal, and which does not achieve its primary intended purposes through chemical action within or on such body and which is not dependent upon being metabolized for the achievement of its primary intended purposes; and

"*VOC content*" means the as-applied *VOC content* of a *cleaning solvent* at the time of use, including any solvent, catalyst or other substance added to the as-supplied *cleaning solvent*. "*VOC content*" is determined using an EPA reference method, a California Air Resources Board reference method or other method approved by the Air Pollution Control Officer and EPA.

(c) Standards.

(1) Any owner or operator performing *industrial solvent cleaning*, except as provided in paragraph (a), shall use one of the following methods to limit VOC emissions:

(i) Use only *cleaning solvent* that complies with one of the following limitations:

(A) As-applied, has a *VOC content* that does not exceed 50 grams per liter (0.42 lb/gal), or

(B) As-applied, has a vapor pressure no greater than 8 mmHg at 20°C; or

(ii) Install, operate and maintain in accordance with the manufacturer's recommendations, air pollution control equipment that reduces uncontrolled VOC emissions to the atmosphere from any *industrial solvent cleaning* by an *overall emissions reduction efficiency* of at least 85%.

(d) Work practices. Each owner or operator shall use the following work practices:

(1) New and used *cleaning solvent*, including those mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;

(2) Spills and leaks of *cleaning solvent* shall be minimized. Any leaked or spilled *cleaning solvent* shall be absorbed and removed immediately;

(3) Absorbent applicators, such as cloth and paper, which are moistened with *cleaning solvent*, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and

(4) *Cleaning solvent* shall be conveyed from one location to another in a closed container or pipe.

(e) Records.

(1) An owner or operator conducting *industrial solvent cleaning* shall maintain records of the information described in paragraph (e)(2) of this section. Such records shall be:

(i) Made available to the Air Pollution Control Officer to inspect and copy upon request, and

(ii) Maintained for five years from the date such record is created.

(2) An owner or operator conducting *industrial solvent cleaning* shall maintain daily records of all *cleaning solvents* used, as follows:

(i) Name and description of each *cleaning solvent*,

(ii) *VOC content* of each *cleaning solvent*, as-applied, and the associated calculations,

(iii) *VOC content* of each *cleaning solvent*, as supplied,

(iv) The amount of each *cleaning solvent*,

(v) A Material Safety Data Sheet for each *cleaning solvent*,

(vi) Documentation of *control device efficiency* and *capture efficiency*, if applicable, using an applicable EPA reference method or alternate method as approved by the Air Pollution Control Officer and the EPA, and

(vii) Date and type of maintenance performed on air pollution control equipment, if applicable.

(3) Any owner or operator conducting *industrial solvent cleaning* who is not otherwise subject to the provisions of this section shall maintain materials purchase records to verify that the provisions of this section do not apply to such owner or operator.

(4) An owner or operator conducting *industrial solvent cleaning* subject to an exemption or exception in paragraph (a) of this subsection shall maintain records sufficient to verify the applicability of the exemption or exception.

Appendix C: Annotated text of amended regulations

Annotated text of the following rules is included below to clearly mark changes made from their previously approved versions:

- 5-253.12 Coating of Flat Wood Paneling
- 5-253.13 Coating of Miscellaneous Metal and Plastic Parts

5-253.12 Coating of Flat Wood Paneling

(a) Applicability.

(1) This ~~sub~~section applies to any *flat wood paneling coating line*, except any such *coating* line within a~~ny~~ *stationary source* whose *actual emissions* without *control devices* from all flat wood paneling coating lines within the source are less than ~~15 lbs~~3 tons of *volatile organic compounds* per ~~day~~12-month rolling period. Once a source is subject to this ~~sub~~section, it shall remain so, even if its *emissions* levels later fall below the applicability threshold.

(2) Existing sources subject to this standard must comply within 24 months of the promulgation of this ~~rule~~section.

(3) This rule does not apply to surface coating of wood flat stock that is subsequently used in furniture or cabinetry.

(b) Definitions. For the purpose of this ~~sub~~section, the following definitions apply, in addition to those of Section 5-101 of this chapter.

~~*"Class II hardboard paneling finish"* means that meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.~~

~~"~~*Engineered wood exterior siding"* means wood containing products, other than solid wood exterior siding, such as *hardboard*, plywood, particle board and waferboard designed for exterior service.

"Flat wood paneling" means any of the following flat wood products: exterior wood siding, including engineered wood exterior siding and solid wood exterior siding, interior Class I hardboard tileboard, interior Class II hardboard, natural finish hardwood plywood, printed interior panels made of hardwood plywood or thin particleboard.

~~"~~*Flat wood paneling coating line"* means a *coating* line used to apply coatings to flat wood paneling products and includes the application, drying and/or curing of such coatings. ~~used to apply and dry or cure *coatings* applied to one of the following flat wood paneling product categories: *printed interior panels* made of *hardwood plywood* and *thin particle board* (i.e., less than or equal to 0.25 inches in thickness); *natural finish hardwood plywood panels; class II finishes on hardboard panels; tileboard; engineered wood exterior siding; and solid wood exterior siding.*~~

"Hardboard" is a panel manufactured primarily from inter-felted ligno-cellulosic fibers that are consolidated under heat and pressure in a hot press.

"Hardwood plywood" is plywood whose surface layer is a veneer of hardwood.

"Interior Class I hardboard tileboard panel" means a premium interior wall flat wood paneling product made of hardboard that is used in high moisture areas of the home such as kitchens and bathrooms that meets the specification for Class I hardboard as approved by the American National Standards Institute A135.4-2004.

"Interior Class II hardboard panel" means an interior wall flat wood paneling product made of hardboard that meets the specifications for Class II hardboard as approved by the American National Standards Institute A135.5-2004.

"Natural finish hardwood plywood panels" means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

"Particle board" means an engineered sheet wood product manufactured from small wood chips, sawmill shavings, or sawdust and a synthetic resin or other suitable binder, which is pressed and extruded.

"Plywood" means an engineered sheet wood product manufactured with one or more thin layers of solid wood veneer in alternating orientation of the grain

"Printed interior panels" means panels whose grain or natural surface is obscured by fillers and base coats upon which a simulated grain or decorative pattern is printed.

"Solid wood exterior siding" means siding, such as clapboard, made from a single layer of sawn natural wood. This siding may have glued joints, such as finger joints, to allow for the removal of defects, such as knots.

"Thin particleboard" is a manufactured board that is 0.25 inches or less in thickness made of individual wood particles that have been coated with a binder and formed into flat sheets by pressure.

"Waferboard" also known as flakeboard, waferboard, or chipboard, means an engineered sheet wood product manufactured from machined wood chips and a synthetic resin or other suitable binder, which is pressed and extruded.

(c) Standards.

(1) Except as provided in 5-253.12(d), n~~N~~o owner or operator of a *flat wood paneling coating line* subject to this ~~sub~~section shall cause or allow the application of coatings with a volatile organic compound content, as applied and ~~on any day~~based on a weighted daily average of all such coatings for each flat wood paneling –category~~, *volatile organic compound emissions from the coatings* of any one of the following flat wood paneling product categories~~ in excess of the following *emission* limits~~ in paragraphs (c)(1) through (3) of this subsection~~:

~~Flat Wood Paneling Product Category~~		~~lb/1,000 ft²~~
~~(1)~~	~~*Printed interior panels*~~	~~6.0~~
~~(2)~~	~~*Natural finish hardwood plywood panels*~~	~~12.0~~
~~(3)~~	~~*Class II finish on hardboard panels*~~	~~10.0~~
~~Note: The above volatile organic compound emission limits are expressed in units of mass of VOC (lb) per area of surface to which the *coating* is applied (1,000 square feet [ft²]).~~		

Flat Wood Paneling VOC Content Emission Limits	
Flat wood paneling category	Grams/liter (lbs/gal)[a]
All flat wood paneling, except solid wood exterior siding covered below.	250 (2.1)
Solid wood exterior siding of cedar, hemlock, mahogany and redwood species at a stationary source whose actual emissions from all coating lines within the source are less than 50 tons of volatile organic compounds per 12-month rolling period.	325 (2.9)
[a] VOC content values are expressed in units of mass of VOC per volume of coating, excluding water and exempt compounds, as applied.	

(2) Work Practices. The owner or operator of a flat wood paneling coating line subject to this section shall control VOC emissions from VOC containing coatings, thinners, cleaning materials, and coatings and cleaning related waste materials by using the following work practices:

(i) Storing all VOC containing materials including coatings, thinners, cleaning materials, and coating and cleaning related waste materials including used shop towels, in nonabsorbent, non-leaking closed containers;

(ii) Keeping such containers closed at all times except when depositing or removing VOC containing materials;

(iii) Collecting all cleaning solvents into normally closed containers after cleaning and as appropriate reclaiming for reuse as a cleaning solvent or as a thinner for coatings provided the as applied VOC contents of such coatings comply with the limitations in this section;

(iv) Minimizing and immediately cleaning up spills of VOC containing materials;

(v) Conveying VOC containing materials from one location to another in closed containers or pipes; and

(vi) Minimizing emissions of VOC during cleaning of storage, mixing, and conveying equipment.

(d) Control devices.

(1) As an alternative to compliance with the *emission* limits in paragraph (c) of this ~~sub~~section, an owner or operator of a *flat wood paneling coating line* may comply with this ~~sub~~section by:

(i) Installing and operating a *capture system* and *control device* on that line; and

(ii) ~~Demonstrating that the *overall emission reduction efficiency* achieved for that line is greater than or equal to the applicable standard under paragraph (c). The achieved and the~~

~~required *overall emission reduction efficiencies* shall be determined in accordance with procedures and test methods specified by the *Air Pollution Control Officer*.~~ Demonstrating that the *overall emission reduction efficiency* achieved for that line is greater than 90%.

(A) The collection efficiency of the fugitive emissions will be determined pursuant to EPA's "Guidelines For Developing Capture Efficiency Protocols."

(B) The efficiency of the control device and the VOC content measured and calculated as carbon in the control device exhaust gases shall be determined by EPA Test Methods 25 and 25A as described in CFR Title 40 Part 60, or by other methods approved by the Agency and the EPA,

(C) The achieved *overall emission reduction efficiency* shall be determined by multiplying the collection efficiency by the efficiency of the control device.

(2) An owner or operator of a *flat wood paneling coating line* subject to this ~~sub~~section shall ensure that:

(i) A *capture system* and *control device*, if used, are operated at all times that the line is in operation, and the owner or operator demonstrates compliance with this ~~sub~~section in accordance with the *coating* analysis and *capture system* and *control device* efficiency test methods specified by the *Air Pollution Control Officer* *and EPA*; and

(ii) The *control device* is equipped with the monitoring equipment required by the *Air Pollution Control Officer*, and such equipment is installed, calibrated, operated and maintained according to the vendor's specifications at all times the *control device* is in use. The monitoring equipment shall monitor the following parameters:

(A) Combustion chamber temperature of each thermal *incinerator* or afterburner;

(B) Temperature ~~rise~~ before the catalyst bed and temperature rise across each catalytic *incinerator* bed; and

(C) The *VOC* concentration of the inlet and outlet from each carbon adsorption bed.

(e) Record keeping and reporting.

(1) The owner or operator of a *coating* line complying with paragraph (c) of this ~~sub~~section by means of the use of complying *coatings* shall collect and record all of the following information each month~~day~~ for each *coating* line and maintain the information at the source for a period of 5 years:

(i) The name and identification number of each *coating*, as applied, used to coat each type of flat wood paneling product; and

(ii) ~~The mass of VOC per area of surface to which the coating is applied to each type of flat wood paneling product (specified in paragraph (c) of this subsection) for each coating used each day in terms of lb VOC/1,000 ft2 and the surface area coated each day of each type of flat wood paneling product.~~ The pounds of *VOC* per gallon of *coating* as applied, (excluding water and exempt compounds) for each *coating* type recorded for 5-253.12(e)(1)(i).

(iii) Calculate the monthly weighted average *VOC* content for all *coatings* applied on each *flat wood paneling coating line* for each type of *flat wood paneling* product.

(2) The owner or operator of any *coating* line complying with this ~~sub~~section by the use of *control devices* shall perform such compliance testing, keep such records and furnish such reports as required by the *Air Pollution Control Officer* to demonstrate continuing compliance with this ~~sub~~section.

5-253.13 Coating of Miscellaneous Metal and Plastic Parts

(1) Applicability.

(i) This ~~sub~~section applies to any *miscellaneous metal and plastic parts* ~~*and products*~~ *coating line*~~*unit*~~, except any such coating line within any stationary source whose actual emissions without control devices from all miscellaneous metal and plastic parts coating lines within the source are less than 3 tons of volatile organic compounds per 12-month rolling period. Once a source is subject to this section, it shall remain so, even if its emissions levels later fall below the applicability threshold. ~~automobile, light-duty and heavy-duty truck *refinishing*;~~

(2) ~~The *emission* limits in this subsection do not apply to any *coating unit* within a source whose *actual emissions* without *control devices* from all *miscellaneous metal part and* product *coating units* within the source are less than 5 tons of *VOCs* per year.~~

~~(3) Any source that becomes or is currently subject to this subsection shall remain so even if emissions from the source later fall below the applicability threshold.~~

(b) Definitions. For the purpose of this ~~sub~~section, the following definitions apply, in addition to those of Section 5-101 of this chapter.

"Air-dried coating" means a *coating* that is dried by the use of air or forced warm air at temperatures up to 194^{0}F (90^{0}C).

"Clear Coating" a *coating* that either lacks color and opacity or is transparent and uses the surface to which it is applied as a reflective base or undertone color.

"Drum" means any cylindrical metal shipping container of 13 to 110 gallon capacity.

~~*"Extreme environmental conditions"* means any of the following: the weather all of the time, temperatures frequently above 203^{0}F (95^{0}C), detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.~~

~~*"Extreme performance coatings"* means *coatings* intended for exposure to *extreme environmental conditions*.~~

~~*"Miscellaneous metal parts and products coating unit"* means a *coating unit* in which a *coating* is applied to any *miscellaneous metal parts and products*.~~

~~*"Miscellaneous parts and products"* means any metal part or metal product, even if attached to or combined with a nonmetal part or product. *Miscellaneous metal parts and products* include, but are not limited to any metal part or product that is within one of the following Standard Industrial Classification Codes: Major Group 33 (primary metal industries), Major Group 34 (fabricated metal products), Major Group 35 (nonelectric machinery), Major Group 36 (electrical machinery), Major Group 37 (transportation equipment), Major Group 38 (miscellaneous~~

~~instruments), and Major Group 39 (miscellaneous manufacturing industries).~~

"Pail" means any cylindrical metal shipping container of 1 to 12 gallon capacity and constructed of 29 gauge and heavier material.

~~*"Refinishing"* means the repainting of previously painted equipment.~~

"Air dried" means cured at a temperature below 90°C (194 °F);

"Airless spray application" means a coating spray application system using high fluid pressure, without compressed air, to atomize the coating;

"Air-assisted airless spray application" means a coating spray application system using fluid pressure to atomize the coating and lower pressure air to adjust the shape of the spray pattern;

"Antifouling coating" means a coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms;

"Antifouling sealer or tie coat" means a coating applied over biocidal antifouling coating for the purpose of preventing release of biocides into the environment or to promote adhesion between an antifouling coating and a primer or another antifouling coating;

"Antique aerospace vehicle" means an aircraft or component thereof that was built at least 30 years ago and that is not routinely in commercial or military service in the capacity for which it was designed;

"Appurtenance" means any accessory to a stationary structure, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways; fixed ladders; catwalks; fire escapes and window screens;

"As applied" means the composition of coating at the time it is applied to a surface, including any solvent, catalyst or other substance added to the coating but excluding water and exempt compounds;

"Automotive-transportation part" means an interior or exterior component of a motor vehicle or mobile source;

"Baked" means cured at a temperature at or above 90°C (194°F);

"Base coat" means the initial coating applied to a substrate in a process of applying two or more coatings;

"Bearing coating" does not include a material that can also be classified as a dry lubricative material or a solid film lubricant;

"Business machine" means a device that uses electronic or mechanical methods to process information, perform calculations, print or copy information or convert sound into electrical impulses for transmission,

such as, typewriters, electronic computing devices, calculating and accounting machines, telephone and telegraph equipment and photocopy machines;

"Camouflage coating" means a coating used, principally by the military, to conceal equipment from detection;

"Capture efficiency" means the ratio of VOC emissions delivered to the control device to the total VOC emissions resulting from the miscellaneous metal and plastic parts coating operation, expressed as a percentage;

"Cleaning solvent" means any VOC-containing liquid, including a liquid impregnated wipe or towelette, used in cleaning;

"Coating" means a material that is deposited in a thin, persistent, uniform layer across the surface of a substrate for aesthetic, protective or functional purposes, including but not limited to, paints, primers, inks and maskants. "Coating" does not include protective oils, acids and bases;

"Coating unit" means a series of one or more coating applicators and any associated drying area or oven wherein a coating is applied, dried or cured. A "coating unit" ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating;

"Control device efficiency" means the ratio of VOC emissions recovered or destroyed by the control device to the total VOC emissions that are introduced into the device, expressed as a percentage;

"Dip coating" means a method of applying a coating to a surface by submersion into and removal from a coating bath;

"Electric dissipating coating" means a coating that rapidly dissipates a high-voltage electric charge;

"Electric-insulating and thermal-conducting coating" means a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit;

"Electric-insulating varnish" means a coating applied to electric motors, components of electric motors or power transformers to provide electrical, mechanical and environmental protection or resistance;

"Electrostatic application" means a method of applying coating particles or coating droplets to a grounded surface by electrically charging such particles or droplets;

"Electrostatic preparation coating" means a coating applied to a plastic part solely to provide conductivity for the subsequent application of a primer, a topcoat or other coating through the use of electrostatic application methods;

"EMI/RFI shield coating" means a coating that functions to attenuate electromagnetic interference, radio frequency interference signals or static discharge;

"Etching filler" means a coating that contains less than 23% solids by weight and at least 0.5% acid by weight and is used as a substitute for the application of a pretreatment coating followed by a primer;

"Exempt compound" means a carbon compound excluded from the definition of "volatile organic compound," as defined in section 5-101 of these Regulations;

"Extreme high-gloss coating" means a coating that, when tested by American Society for Testing Material Test Method D523-08, Standard Test Method for Specular Gloss, shows a reflectance of 90 or more on a 60 degree meter;

"Extreme performance coating" means a coating used on a metal surface where the coated surface is, in its intended use, subject to one of the following conditions:
(A) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures or solution,
(B) Repeated exposure to temperatures in excess of 250°F, or
(C) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleaners or scouring agents;

"Finish primer or surfacer" means a coating applied with a wet film thickness of less than 10 millimeters prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier or promotion of a uniform surface necessary for filling in surface imperfections;

"Flow coating" means a non-atomized technique of applying coating to a substrate using a fluid nozzle in a fan pattern with no air supplied to the nozzle;

"Fog coat" means a coating that is applied to a plastic part at a thickness of no more than 0.5 mils of coating solids for the purpose of color matching without masking a molded-in texture;

"General" means a coating category for a coating that does not meet any other category definition provided in this subsection for the specified substrate (i.e., metal part or plastic part);

"General aviation rework facility" means any aerospace facility with the majority of its revenues resulting from the reconstruction, repair, maintenance, repainting, conversion or alteration of general aviation aerospace vehicles or components;

"Gloss reducer" means a coating that is applied to a plastic part at a thickness of no more than 0.5 mils of coating solids solely to reduce the shine of the part;

"Heat-resistant coating" means a coating able to withstand a temperature of at least 400° F during normal use;

"High build primer or surfacer" means a coating applied with a wet film thickness of 10 millimeters or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier or promotion of a uniform surface necessary for filling in surface imperfections;

"High gloss coating" means a coating that, when tested by American Society for Testing Material Test Method D523-08, Standard Test Method for Specular Gloss, shows a reflectance of 85 or more on a 60 degree meter;

"High-performance architectural coating" means a coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 2604-05 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-05 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels);

"High temperature coating" means a coating certified to withstand a temperature of 1000°F for 24 hours;

"HVLP spray application" means to apply a coating using a coating application system that uses lower air pressure and higher volume than conventional air atomized spray systems, where the manufacturer has represented that the system is HVLP by affixing a permanent label or through representations on the packaging or other product literature;

"Lacquer" means a clear or pigmented coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction and that is resoluble in its original solvent;

"Large commercial aircraft" means an aircraft of more than 110,000 pounds, maximum certified take-off weight, manufactured for non-military use;

"Mask coating" means thin film coating applied through a template to coat a small portion of a substrate;

"Medical device" means an instrument, apparatus, implement, machine, gadget, appliance, implant, in vitro reagent or other similar or related article, including any component, part or accessory, which meets one of the following conditions:
(A) Recognized in the official National Formulary or the United States Pharmacopeia or any supplement thereto,
(B) Intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment or prevention of disease in persons or animals, or
(C) Intended to affect the structure or function of the body of a person or animal and which does not achieve its primary intended purposes through chemical action within or on such body and which is not dependent upon being metabolized for the achievement of its primary intended purposes;

"Metallic coating" means a coating that contains more than five grams of metal particles per liter of coating, as applied;

"Miscellaneous metal and plastic parts" means metal and plastic components of products as well as the products themselves constructed either entirely or partially from metal or plastic including, but not limited to: aerospace vehicles and components, fabricated metal products, molded plastic parts, small and large farm machinery, commercial and industrial machinery and equipment, automotive or transportation equipment, interior or exterior automotive parts, construction equipment, motor vehicle

accessories, bicycles and sporting goods, toys, recreational vehicles, extruded aluminum structural components, railroad cars, lawn and garden equipment, business machines, laboratory and medical equipment, electronic equipment, steel drums, metal pipes and small appliances;

"Miscellaneous metal and plastic parts coating line" means a coating line in which a coating is applied to any miscellaneous metal or plastic parts.

"Mold-seal coating" means the initial coating applied to a new mold or a repaired mold to provide a smooth surface that, when coated with a mold release coating, prevents products from sticking to the mold;

"Mold release" means a coating applied to a mold surface to prevent the molded piece from sticking to the mold as it is removed;

"Motor vehicle" means any self-propelled vehicle, including, but not limited to, cars, trucks, buses, golf carts, vans, motorcycles, tanks and armored personnel carriers;

"Motor vehicle bedliner coating" means a multi-component coating applied to a cargo bed after the application of a topcoat to provide additional durability and chip resistance;

"Motor vehicle cavity wax" means a coating applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection;

"Motor vehicle deadener" means a coating applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment;

"Motor vehicle gasket/sealing material" means a fluid applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization (RTV) seal material;

"Motor vehicle lubricating wax/compound" means a protective lubricating material applied to vehicle hubs and hinges;

"Motor vehicle sealer" means a high viscosity material generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk;

"Motor vehicle trunk interior coating" means a coating applied to the trunk interior to provide chip protection;

"Motor vehicle underbody coating" means a coating applied to the undercarriage or firewall to prevent corrosion or provide chip protection;

"Multi-colored coating" means a coating packaged in a single container and applied in a single coat which exhibits more than one color when applied;

"Multi-component coating" means a coating requiring the addition of a separate reactive resin, such as a catalyst or hardener, before application to form an acceptable dry film;

"One-component coating" means a coating that is ready for application as packaged for sale, except for the addition of a thinner to reduce the viscosity;

"Optical coating" means a coating with a low reflectance in the infrared and visible wavelength range that is used on or near optical or laser lenses or hardware;

"Overall control efficiency" means the product of the capture efficiency and the control device efficiency;

"Pan-backing coating" means a coating applied to the surface of pots, pans or other cooking implements that are exposed directly to a flame or other heating element;

"Plastic part" means any piece or combination of pieces of which at least one has been formed from one or more resins. Such pieces may be solid, porous, flexible or rigid. "Plastic part" does not include a part made of fiberglass or composite material;

"Pleasure craft" means any marine or freshwater vessel manufactured or operated primarily for recreational purposes;

"Pleasure craft coating" means any marine coating, except unsaturated polyester resin (fiberglass), applied to a pleasure craft or to parts and components of a pleasure craft;

"Powder coating" means any coating applied as a dry, finely divided solid that, when melted and fused, adheres to the substrate as a paint film;

"Prefabricated architectural component coating" means a coating applied to prefabricated metal parts and products that are to be used as architectural appurtenances or structures and that are detached from the structure when coated in a shop environment;

"Pretreatment wash primer" means a coating, containing at least 0.1 percent acid by weight and no more than 25 percent solids by weight, that is used to provide surface etching and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings;

"Primer" means a coating applied to prevent corrosion, provide protection or provide a surface for adhesion of subsequent coatings;

"Related cleaning" means the removal of uncured coatings, coating residue and contaminants from:
(A) Miscellaneous metal and plastic parts prior to the application of coatings,
(B) Miscellaneous metal and plastic parts between coating applications, or
(C) Transfer lines, storage tanks, spray booths and coating application equipment;

"Repair coating" means a coating used to recoat portions of a product that has sustained mechanical damage to the coating following normal painting operations;

"Resin" means any of numerous physically similar polymerized synthetics or chemically modified natural materials including thermoplastic materials such as polyvinyl, polystyrene and polyethylene and thermosetting materials such as polyesters, epoxies and silicones;

"Resist coating" means a coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part;

"Roll coating" means a coating method using a machine that applies coating to a substrate by continuously transferring coating through a set of oppositely rotating rollers;

"Safety-indicating coating" means a coating that changes in a physical characteristic, such as color, to indicate unsafe conditions;

"Screen print ink" means an ink used in screen printing processes during fabrication of decorative laminates and decals;

"Sealant" means a material used to prevent the intrusion of water, fuel, air or other liquids or solids from certain areas of aerospace vehicles or components;

"Shock-free coating" means a coating applied to electrical components to protect the user from electric shock and that provides for low capacitance and high resistance and resists breaking down under high voltage;

"Silicone-release coating" means any coating that contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans;

"Solar-absorbent coating" means a coating that has as its primary purpose the absorption of solar radiation;

"Solid-film lubricant" means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene or other solids that act as a dry lubricant between faying surfaces;

"Space vehicle" means a man-made device, either manned or unmanned, designed for operation beyond earth's atmosphere, including, but not limited to, integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets and test coupons, including auxiliary equipment associated with test, transport and storage, which through contamination can compromise the space vehicle performance;

"Specialty coating" means a coating that, even though it meets the definition of a primer, topcoat or self priming topcoat, has additional performance criteria beyond those of primers, topcoats and self-priming topcoats for specific applications. Such performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesion or enhanced corrosion protection;

"Stencil coating" means an ink or a coating that is rolled or brushed onto a template or stamp to add identifying letters or numbers to metal parts or products;

"Temporary protective coating" does not include any coating that protects against strong acid or alkaline solutions;

"Texture coat" means a coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating;

"Textured finish" means a rough surface produced by spraying and splattering large drops of coating onto a previously applied coating;

"Topcoat" means the final coating applied in a process of applying two or more coatings;

"Touch-up coating" means a coating used to cover minor coating imperfections appearing after the main coating operation;

"Transfer efficiency" means the portion of coating solids that adheres to the metal or plastic surface during the application process, expressed as a percentage of the total volume of coating solids delivered by the applicator;

"Translucent coating" means a coating which contains binders and pigment and is formulated to form a colored, but not opaque, film;

"Vacuum-metalizing coating" means the undercoat applied to a substrate on which the metal is deposited prior to a vacuum-metalizing process or the overcoat applied directly to the metal film after a vacuum metalizing process;

"Vacuum metalizing process" means the process of evaporating metals inside a vacuum chamber and depositing them on a substrate to achieve a uniform metalized layer;

(c) Standards. Coating limits.

(1) Prior to September 15, 2018 ~~N~~no *owner* or *operator* of a *miscellaneous metal parts and products coating line~~unit~~* subject to this ~~sub~~section shall cause or allow the application of any *coating* with *VOC* content in excess of the following *emission* limits:

Coating Category		lb/gal[a]
(i)	*Clear coating*	4.3
(ii)	Steel *pail* and *drum* interior	4.3
(iii)	*Air-dried coating*	3.5
(iv)	*Extreme performance coating*	3.5
(v)	All other *coatings*	3.0

[a] VOC content values are expressed in units of mass of VOC (lb.) per volume of coatings (gallon), excluding water and exempt compounds, as applied.

(2) No owner or operator of a miscellaneous metal and plastic parts coating line subject to this section shall cause or allow the application of any coating with VOC content in excess of the following emission limits:

Coating of Miscellaneous Metal and Plastic Parts Coating Limits				
Metal Parts Coating VOC Content Limits*				
	Air Dried		Baked	
	G VOC/liter coating	Lbs VOC/gal coating	G VOC/liter coating	Lbs VOC/gal coating
General one-component	340	2.8	280	2.3
General, Multi-Component	340	2.8	280	2.3
Camouflage	420	3.5	420	3.5
Electric-Insulating Varnish	420	3.5	420	3.5
Etching Filler	420	3.5	420	3.5
Extreme High-Gloss	420	3.5	360	3.0
Extreme Performance	420	3.5	360	3.0
Heat-Resistant	420	3.5	360	3.0
High Performance Architectural	740	6.2	740	6.2
High Temperature	420	3.5	420	3.5
Metallic	420	3.5	420	3.5
Military Specification	340	2.8	280	2.3
Mold-Seal	420	3.5	420	3.5
Pan-Backing	420	3.5	420	3.5
Prefabricated Architectural Multi-Component	420	3.5	280	2.3
Prefabricated Architectural One-Component	420	3.5	280	2.3
Pretreatment Coatings	420	3.5	420	3.5
Repair and Touch Up	420	3.5	360	3.0
Silicone-Release	420	3.5	420	3.5
Solar-Absorbent	420	3.5	360	3.0
Vacuum-Metalizing	420	3.5	420	3.5
Drum Coating, New, Exterior	340	2.8	340	2.8
Drum Coating, New Interior	420	3.5	420	3.5
Drum Coating, Reconditioned, Exterior	420	3.5	420	3.5
Drum Coating, Reconditioned, Interior	500	4.2	500	4.2
Plastic Parts Coating VOC Content Limits*				

	G VOC/liter coating	Lbs VOC/gal coating
General one-component	280	2.3
General, Multi-Component	420	3.5
Electric Dissipating Coatings and Shock-Free Coatings	800	6.7
Extreme Performance	420 (2-pack coatings)	3.5 (2 pack coatings)
Metallic	420	3.5
Military Specification	340 (1 Pack) 420 (2 pack)	2.8 (1 pack) 3.5 (2 pack)
Mold-Seal	760	6.3
Multi-Colored Coatings	680	5.7
Optical Coatings	800	6.7
Vacuum-Metalizing	800	6.7
Automotive-Transportation Plastic Parts Coating VOC Content Limits*		
	G VOC/liter coating	Lbs VOC/gal coating
I. High bake coatings -interior and exterior parts		
Flexible Primer	540	4.5
Non-Flexible Primer	420	3.5
Basecoat	520	4.3
Clear Coat	480	4.0
Non-Basecoat/Clear Coat	520	4.3
II. Low Bake/Air Dried Coatings – Interior Parts		
Primers	580	4.8
Basecoat	600	5.0
Clear Coat	540	4.5
Non-Basecoat/Clear Coat	600	5.0
III. Low Bake/Air Dried Coatings – Interior Parts	600	5.0
IV. Touchup and Repair Coatings	620	5.2

Business Machine Plastic Parts Coating VOC Content Limits*		
	G VOC/liter coating	Lbs VOC/gal coating
I. Primers	350	2.9
II. Topcoat	350	2.9
III. Texture Coat	350	2.9
IV. Fog coat	260	2.2
V. Touchup and repair	350	2.9
Pleasure Craft Coating VOC Content Limits*		
	G VOC/liter coating	Lbs VOC/gal coating
Extreme High-Gloss Topcoat	600	5.1
High-Gloss Topcoat	420	3.5
Pretreatment Wash Primer	780	6.5
Finish Primer/Surfacer	420	3.5
High Build Primer Surfacer	340	2.8
Aluminum Substrate Antifoulant Coating	560	4.7
Antifouling Sealer/Tie Coating	420	3.5
Other Substrate Antifoulant Coating	400	3.3
All Other Pleasure Craft Surface Coatings for Metal or Plastic	420	3.5
Motor Vehicle Materials VOC Content Limits*		
	G VOC/liter coating	Lbs VOC/gal coating
Motor vehicle cavity wax	650	5.4
Motor vehicle sealer	650	5.4
Motor vehicle deadener	650	5.4
Motor vehicle gasket/gasket sealing material	200	1.7
Motor vehicle underbody coating	650	5.4
Motor vehicle trunk interior coating	650	5.4
Motor vehicle bedliner	200	1.7
Motor vehicle lubricating wax/compound	700	5.8
*VOC content values are expressed in units of mass of VOC, both as grams (G) and pounds (lbs), per volume of coatings, both liters and gallons (gal), excluding water and exempt compounds, as applied.		

(3) If more than one *emission* limit in ~~paragraph~~ (c)(1) or (c)(2) of this section applies to a specific *coating*, the least stringent *emission* limit shall apply.

(4) The owner or operator may use, in the aggregate, in any twelve consecutive months up to 55 gallons of miscellaneous metal or plastic parts coating or coatings that exceed the coating limitations of (c)(2) of this section provided records are maintained of the non-compliant coating use.

(5) The coating limitations in (c)(2) of this section shall not apply to a coating, or an alternative limitation may apply to a coating, upon request to and approval by the Air Pollution Control Officer and EPA.

~~(3) No *owner or operator* of a *miscellaneous metal parts and products coating unit* that applies multiple *coatings*, all of which are subject to the same numerical *emission* limitation within paragraph (c)(1) above, during the same day (e.g., all *coatings* used on the unit are subject to 3.5 lb/gal), shall apply, during any day, *coatings* on that unit whose daily-weighted average *VOC* content calculated, in accordance with the method specified by the *Air Pollution Control Officer*, exceeds the *coating VOC* content limit corresponding to the category of *coating* used.~~

(6) As an alternative to compliance with the emission limits in (c)(1) and (c)(2) of this section, an owner or operator of a miscellaneous metal or plastic parts coating line may comply with this section by:

(i) Installing and operating a capture system and control device on that line; and

(ii) Demonstrating that the overall emission reduction efficiency achieved for that line is greater than or equal to the required overall emission reduction efficiency. The achieved and the required overall emission reduction efficiencies shall be determined in accordance with procedures and test methods specified by the Air Pollution Control Officer and EPA.

(7) An owner or operator of a miscellaneous metal or plastic parts coating line subject to this section shall ensure that:

(i) A capture system and control device, if used, are operated at all times that the unit is in operation, and the owner or operator demonstrates compliance with his section in accordance with the coating analysis and capture system and control device efficiency test methods specified by the Air Pollution Control Officer and EPA; and

(ii) The control device is equipped with the monitoring equipment required by the Air Pollution Control Officer, and such equipment is installed, calibrated, operated and maintained according to the vendor's specifications at all times the control device is in use.

~~(d) Control devices.~~

~~(1) As an alternative to compliance with the *emission* limits in paragraph (c) of this subsection, an owner or operator of a *miscellaneous metal parts and products coating unit* may comply with this subsection by:~~

~~(i) Installing and operating a *capture system* and *control device* on that unit; and~~

~~(ii) Demonstrating that the *overall emission reduction efficiency* achieved for that unit is greater than or equal to the required *overall emission reduction efficiency*. The achieved and the required *overall emission reduction efficiencies* shall be determined in accordance with procedures and test methods specified by the *Air Pollution Control Officer*.~~

~~(2) An owner or operator of a miscellaneous metal parts and products *coating* unit subject to this subsection shall ensure that:~~

~~(i) A *capture system* and *control device*, if used, are operated at all times that the unit is in operation, and the owner or operator demonstrates compliance with his subsection in accordance with the *coating* analysis and *capture system* and *control device* efficiency test methods specified by the *Air Pollution Control Officer*; and~~

~~(ii) The *control device* is equipped with the monitoring equipment required by the *Air Pollution Control Officer*, and such equipment is installed, calibrated, operated and maintained according to the vendor's specifications at all times the *control device* is in use.~~

(d) Standards. Application methods.

(1) No owner or operator of a miscellaneous metal or plastic parts coating line subject to this section shall cause or allow the application of any coating subject to the emission limits in (c)(2) of this section by any method other than the following application methods:

(i) High volume-low pressure (HVLP) spray;
(ii) Electrostatic spray;
(iii) Flow coating;
(iv) Dip coating;
(v) Roll coating;
(vi) Airless spray application;
(vii) Air-assisted airless spray application;
(viii) Hand application; or
(ix) Any other coating application method achieving a transfer efficiency equivalent to or better than that provided by HVLP spray application if approved by the Air Pollution Control Officer.

(2) The application method requirements of (d)(1) of this section shall not apply to the following:

(i) Touch up or repair coatings;
(ii) EMI/RFI shield coatings; and
(iii) Electrostatic spray;

(e) Standards. Work practice requirements.

(1) The owner or operator of a miscellaneous metal or plastic parts coating line subject to this section shall control VOC emissions from VOC containing coatings, thinners, cleaning materials, and coatings and cleaning related waste materials by using the following work practices:

(i) Storing all VOC containing materials including coatings, thinners, cleaning materials, and coating and cleaning related waste materials including used shop towels, in nonabsorbent, non-leaking closed containers;
(ii) Keeping such containers closed at all times except when depositing or removing VOC containing materials;
(iii) Collecting all cleaning solvents into normally closed containers after cleaning and as appropriate reclaim for reuse as a cleaning solvent or as a thinner for coatings provided the as applied VOC contents of such coatings comply with the limitations in this section;
(iv) Minimizing and immediately cleaning up spills of VOC containing materials;
(v) Conveying VOC containing materials from one location to another in closed containers or pipes; and
(vi) Minimizing emissions of VOC during cleaning of storage, mixing, and conveying equipment.

(~~e~~f) Record keeping and reporting.

(1) Within one year following the effective date of this ~~sub~~section, the owner or operator of a *coating* ~~*unit*~~ line complying with paragraph (c)(2) of this ~~sub~~section by means of the use of complying *coatings* shall collect and record all of the following information each day for each *coating unit* and maintain the information at the source for a period of 5 years:

(i) The name and identification number of each *coating*, as applied, used to coat each type of *miscellaneous metal part or product*; and

(ii) The mass of *VOC* per volume of each *coating* (excluding water and exempt compounds), as applied, used each day, on each *coating unit* and for each type of *miscellaneous metal part or product* (specified in paragraph (c) of this ~~sub~~section).

(2) The *Air Pollution Control Officer* may require the owner or operator of any *coating* ~~*unit*~~*line* complying with this ~~sub~~section by the use of *control devices* to perform such compliance testing, keep such records and furnish such reports as necessary to demonstrate continuing compliance with this ~~sub~~section.

~~(f) Compliance. A *coating unit* subject to this subsection shall comply with the requirements of this subsection on or before November 15, 1994.~~

Appendix D: Isovolta

Operating Permit RACT provisions

AOP-14-037

Issued on September 20, 2017

Only portions highlighted are intended for inclusion in the SIP.

Strikeout text is not intended for inclusion in SIP.

~~#AOP-14-037~~
~~DEC#RU95-0189~~
~~Operating Permit Expiration Date: September 20, 2022~~

~~State of Vermont~~
~~Agency of Natural Resources~~
~~Department of Environmental Conservation~~

~~Air Quality & Climate Division~~
~~Montpelier, Vermont~~

~~AIR POLLUTION CONTROL PERMIT TO CONSTRUCT AND OPERATE~~

~~Date Permit Issued: September 20, 2017~~

~~Owner/Operator:~~ ~~Isovolta, Inc.~~
~~P.O. Box 848~~
~~Rutland, Vermont 05701-0848~~

~~Source:~~ ~~Isovolta, Inc.~~
~~Electrical Insulation Manufacturing Facility~~
~~Windcrest Road~~
~~P.O. Box 848~~
~~Rutland, Vermont 05701-0848~~

~~FINDINGS OF FACT~~

~~(A) FACILITY DESCRIPTION~~

~~Isovolta, Inc. (also referred to herein as "Permittee") owns and operates an insulating mica paper manufacturing facility off Windcrest Road in the town of Rutland, Vermont (also referred to herein as "Facility").~~

~~Since the issuance of the last Permit to Operate, the Permittee has replaced No. 6 fuel oil fuel system for the Cleaver Brooks boiler with a propane fuel system. The boiler switched to propane during January 2014. As authorized in permit AOP-09-047, the Permittee replaced the regenerative thermal oxidizer (RTO) on the Midland Ross roll coater during July 2011. Both changes resulted in a reduction of emissions; this permitting action is to incorporate these modifications into the operating permit.~~

~~Upon issuance of this Permit, the approved regulated operations at the Facility include the following air pollution related operations, equipment and emission control devices:~~

~~Equipment Specifications~~			
~~Equipment/Make/Model~~	~~capacity/size MMBTU/hr[1]~~	~~fuel type~~	~~date of installation~~
~~Midland Ross roll coating machine~~	~~6.3 MMBtu/hr 5,000 cfm[3]~~	~~Propane~~	~~Unknown [4]~~
~~Midland Ross regenerative thermal oxidizer - Adwest Technologies RETOX 5.0 RTO95~~	~~1.44 MMBtu/hr~~	~~Propane and VOC~~	~~July 2011~~
~~Wolverine roll coating machine~~	~~5.0 MMBtu/hr 3,000 cfm~~	~~Propane~~	~~1980~~
~~Wolverine thermal oxidizer - Combustion Engineering Cor Pak unit~~	~~5.0 MMBtu/hr~~	~~Propane and VOC~~	~~1980~~
~~R&D roll coating machine~~	~~0.8 MMBtu/h 1,500 cfm~~	~~Propane~~	~~Unknown~~
~~Casso Solar paper machine~~	~~151.2 kW[2]~~	~~Electric~~	~~1952~~
~~Industrial Clean Air fabric filter (192 bags, 3,264 total sq.ft. cloth; air to cloth 3.06)~~	~~10,000 cfm~~	~~n/a~~	~~Unknown~~
~~Cleaver Brooks CB600X-300 boiler~~	~~12.5 MMBtu/hr Propane burner rated @ 7.99 MMBtu/hr~~	~~Propane~~	~~1973 Propane as of 2014~~
~~Bartlett Snow kiln~~	~~1 MMBtu/hr~~	~~Propane~~	~~1952~~
~~Acrylator oven~~	~~0.90 MMBtu/hr~~	~~Propane~~	~~Unknown~~
~~Resin mixing room~~	~~-~~	~~-~~	~~Unknown~~

~~[1] MMBtu/hr - Million British Thermal Units per hour maximum rated heat input.~~
~~[2] kW – kiloWatt.~~
~~[3] cfm – Cubic feet per minute.~~
~~[4] Equipment with an unknown installation date will be treated as if they were installed after 4/30/1970 for purposes of visible emission standards.~~

~~(B) FACILITY CLASSIFICATION~~

~~The Facility is classified as a source of air contaminants pursuant to Title 10 of the *Vermont Statutes Annotated* ("10 *VSA*") §555 and §5-401 (11) [Manufacturing, processing and application of chemicals, including the processing or application of plastics, rubbers or resins] of the *Vermont Air Pollution Control Regulations* (hereinafter "*Regulations*"). In addition, §5-101 of the *Regulations* defines a *stationary source* as any structure(s), equipment, installation(s), or operation(s), or combination thereof, which emit or may emit any air contaminant, which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person or persons under common control. Based on this definition, all of the equipment, operations, and structures at the Facility are grouped together by the Agency of Natural Resources, Department of Environmental Conservation, Air Quality & Climate Division (hereinafter "Agency") as one stationary air contaminant source for purposes of review under the *Regulations*.~~

~~(C) PRIOR AGENCY ACTIONS/APPROVALS~~

~~The Facility has been issued the following "Permit to Construct" approvals pursuant to 10 *VSA* §556 and §5-501 of the *Regulations* and the following "Permit to Operate" approvals pursuant to 10 *VSA* §556a and Subchapter X of the *Regulations*.~~

~~**Prior Agency Permit Approvals and Actions**~~	
~~Date of Action~~	~~Description of Agency Approval/Action~~
~~January 4, 1995~~	~~Original Agency Administrative Order for VOC RACT at the Facility requiring 81% overall reduction in VOC emissions by weight.~~
~~June 2, 1995~~	~~Notice of Alleged Violation for failure to complete VOC capture efficiency testing or to submit a capture efficiency demonstration.~~
~~August 14, 1995~~	~~Revised Administrative Order for VOC RACT allowing operation of Phase II coating line until November 6, 1995.~~
~~January 28, 2000~~	~~Notice of Alleged Violation for failure of the Wolverine coating machine to pass capture efficiency test. The coater was subsequently retested on March 2, 2000 and passed.~~
~~January 6, 2006~~	~~OP-95-040 - Initial Permit to Operate approval incorporating the VOC RACT Administrative Order requirements.~~
~~February 11, 2011~~	~~OP-09-047 – Construction Permit approval to authorize replacing the Midland RTO and to allow the use of water based resins on the Wolverine coater while not operating the Wolverine thermal oxidizer.~~

~~(D) FACILITY PERMIT APPLICABILITY~~

~~As noted above, the Facility is classified as a source of air contaminants under §5-401 of the *Regulations*. Pursuant to 10 *VSA* §556 and §5-501 of the *Regulations* a Permit to Construct, or an amendment to any existing Permit to Construct, must be obtained before commencing the construction, installation, modification or operation of an air contaminant source. The proposed change of fuel type from No.6 fuel oil to Liquefied Petroleum Gas (LPG, also known as propane) for the boiler is considered a modification to the Facility~~

~~under the *Regulations* and consequently a Permit to Construct must be obtained.~~

~~Pursuant to 10 *VSA* §556a and Subchapter X of the *Regulations* a Permit to Operate is required for any air contaminant source with allowable emissions of all air contaminants combined of ten (10) tons per year ("tpy") or more or that is otherwise subject to Title 40 *Code of Federal Regulations* ("40 *CFR*") Part 70.~~

~~In addition, an existing Permit to Operate must also be amended to incorporate any modifications to the Facility. The proposed changes to the Facility are considered a modification under the *Regulations* and consequently an amendment to the Permit to Operate must be obtained consistent with the requirements of Subchapter X of the *Regulations*. Allowable emissions from the Facility are estimated to be greater than the ten (10) tpy combined threshold for applicability with Subchapter X of the *Regulations*, but each pollutant is less than the one-hundred (100) tpy single pollutant threshold (50 tpy for VOC) for applicability to Title V of the federal Clean Air Act. Therefore, pursuant to §§5-1002, 5-1003, and 5-1005 of the *Regulations*, the Facility is classified as a "Subchapter X Major Source."~~

~~In accordance with 10 *VSA* §556(e) the Agency has combined the previous Permit to Construct modification and the Permit to Operate modification and renewal for this Facility into one combined Permit to Construct and Operate. The allowable emissions for the Facility are summarized below:~~

~~**Allowable Air Contaminant Emissions (tons/year)**[1]~~					
~~**$PM/PM_{10}/PM_{2.5}$**~~	~~**CO**~~	~~**NO_x**~~	~~**SO_2**~~	~~**VOCs**~~	~~**HAPs**[2]~~
~~8.5~~	~~10.2~~	~~17.7~~	~~1.4~~	~~<50~~	~~<10/25~~

~~[1] $PM/PM_{10}/PM_{2.5}$ – total particulate matter, total particulate matter of 10 micrometers in size or smaller and total particulate matter of 2.5 micrometers in size or smaller, respectively (unless otherwise specified, all PM is assumed to be $PM_{2.5}$); SO_2 - sulfur dioxide; NO_x - oxides of nitrogen measured as NO_2 equivalent; CO - carbon monoxide; VOCs - volatile organic compounds; HAPs - hazardous air pollutants as defined in §112 of the federal Clean Air Act.~~

~~[2] For purposes of designation the Facility as a major or minor source of federal hazardous air pollutants (HAPs), the emissions of individual HAPs from the Facility are each <10 tpy and emissions of total HAPs combined are <25 tpy. Actual total combined HAPs from the Facility are estimated at <1 tpy~~

~~(E) REVIEW OF CRITERIA POLLUTANT EMISSIONS FOR THE PERMIT TO CONSTRUCT~~

~~(a) New Source Review Designation~~

~~The Facility, prior to the construction of the proposed modification, is designated as a non-major stationary source of air contaminants since it does not have allowable emissions of a single air contaminant of fifty (50) tons per year or greater. Consequently, any *modification* of the source that would result in a major increase in emissions of any air contaminant, as defined in §5-101 of the *Regulations*, is designated as a major modification and is subject to review under §5-501 and §5-502 of the *Regulations*. The proposed project identified in Findings of Fact (A) above, together with all previous minor modifications constructed at the Facility since July 1, 1979, and which have not been previously reviewed under §5-502 of the *Regulations*, will not result in a major increase in emissions. Consequently,~~

~~the proposed modification is designated as a non-major modification and is not subject to the requirements of §5-502 of the *Regulations*.~~

~~(b) Most Stringent Emission Rate~~

~~Pursuant to §5-502 of the *Regulations*, the owner/operator of each new major stationary source or major modification must apply control technology adequate to achieve the Most Stringent Emission Rate ("MSER") with respect to those air criteria pollutants for which there would be a major or significant actual emissions increase, respectively, but only for those currently proposed physical or operational changes which would contribute to the increased emissions.~~

~~The proposed project is designated as a non-major modification of a stationary source and therefore is not subject to review under the MSER requirements in §5-502 of the *Regulations*. In addition, there have been no prior MSER evaluations conducted for any of the previous modifications to the Facility.~~

~~(c) Ambient Air Quality Impact Evaluation~~

~~An ambient air quality impact evaluation for criteria pollutants is performed to demonstrate whether or not a proposed project will cause or contribute to violations of the national ambient air quality standards and/or significantly deteriorate existing air quality for the regulated criteria pollutants.~~

~~Based on the level of emissions from this Facility, it is not expected to cause or contribute to a violation of any national ambient air quality standard or significantly deteriorate air quality. Therefore, an air quality impact evaluation was not required by the Agency for the proposed project. In addition, there has been no prior ambient air quality impact evaluations conducted for any of the previous modifications to the Facility.~~

~~(F) REVIEW OF CRITERIA POLLUTANT EMISSIONS FOR THE PERMIT TO OPERATE~~

~~(a) Applicable Requirements~~

~~The operations at the Facility are subject to the following state and federal laws and regulations, the requirements of which are embodied in the conditions of this Permit.~~

~~(i) *Vermont Air Pollution Control Regulations*:~~

~~**Applicable Requirements from the Vermont Air Pollution Control Regulations**~~
~~Section 5-201 – Prohibition of Open Burning~~
~~Section 5-211(2) - Prohibition of Visible Air Contaminants, Installations Constructed Subsequent to April 30, 1970.~~
~~Section 5-221(1) - Prohibition of Potentially Polluting Materials in Fuel, Sulfur Limitation in Fuel.~~
~~Section 5-231(1) - Prohibition of Particulate Matter; Industrial Process Emissions.~~
~~Section 5-231(3) - Prohibition of Particulate Matter; Combustion Contaminants.~~
~~Section 5-231(4) - Prohibition of Particulate Matter; Fugitive Particulate Matter.~~
~~Section 5-241 – Prohibition of Nuisance and Odor.~~
~~Section 5-253.14 - Control of Volatile Organic Compounds from Solvent Metal Cleaning.~~
~~Section 5-253.20 – Other Sources That Emit Volatile Organic Compounds.~~
~~Section 5-261 – Control of Hazardous Air Contaminants.~~
~~Section 5-402 – Written Reports When Requested.~~
~~Section 5-403 – Circumvention.~~
~~Subchapter VIII – Registration of Air Contaminant Sources.~~
~~Subchapter X – Operating Permits.~~

~~(ii) Reasonably Available Control Technology - §5-1010 of the *Regulations*~~

~~Pursuant to 10 *VSA* §556a(d) and §5-1010 of the *Regulations* the Agency may establish and include within any Permit to Operate emission control requirements based on Reasonably Available Control Technology ("RACT"). Based on the Facility's existing levels of emissions and emission controls, the Agency has not imposed any further requirements on this Facility under this authority at this time.~~

~~(iii) Existing Air Pollution Control Permit to Construct and/or Operate~~

~~The Facility currently operates under the confines of a Permit to Construct issued on February 11, 2011 (#OP-09-047). The conditions within that existing permit are considered applicable requirements pursuant to §5-1002 of the *Regulations*. The requirements of that permit which are not being modified herein are incorporated into this new combined Permit to Construct and Operate (#AOP-14-037).~~

~~(iv) Federal Requirements:~~

~~Applicable Requirements from Federal Regulations and the Clean Air Act~~
~~40 *CFR* Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units. Applies to all boilers with a heat input rating of 10 MMBTU/hr or greater manufactured or modified after June 9, 1989. Units larger than 30 MMBTU per hour installed after February 27, 2005 are subject to additional particulate matter requirements.~~ ~~*The 12.5 MMBtu/hour Cleaver Brooks boiler was manufactured prior to June 9, 1989, therefore the Facility is not subject to this regulation.*~~
~~40 *CFR* Part 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers. Applies to new and existing fuel oil and solid fuel fired boilers located at area sources (major sources are subject to Subpart DDDDD). Natural gas or propane fired boilers are not subject. This gas exemption allows use of backup fuel during gas curtailments and up to 48 hours of elective use. Oil fired hot water boilers less than 1.6 MMBTU/hr are not subject. The rule requires a tune-up for each boiler once every two years except boilers with oxygen trim and oil boilers less than 5 MMBTU/hr must conduct tune-ups every five years. New boilers greater than 10 MMBTU/hr are subject to PM emission limits. Boilers that commenced construction on or before June 4, 2010 are considered an existing source.~~ ~~*Since Vermont has not taken delegation of this federal regulation, the U.S. EPA is the implementing authority and is responsible for determining applicability of this regulation. Subpart JJJJJJ is anticipated to apply to the Cleaver Brooks boiler at the Facility. Since the Facility is not a major source of HAPs, the Facility is not subject to Subpart DDDDD.*~~

~~(b) Non-Applicable Requirements~~

~~Pursuant to §5-1015(a)(14) of the *Regulations*, an owner or operator of a Facility may request a permit shield from specific state or federally enforceable regulations and standards which are not applicable to the source. The applicant has not requested such a permit shield in accordance with the requirements of §5-1015(a)(14) of the *Regulations.*~~

~~(G) CONTROL OF HAZARDOUS AIR CONTAMINTANTS~~

~~Pursuant to §5-261 of the *Regulations*, any stationary source subject to the rule[1] with current or proposed actual emissions of a hazardous air contaminant (HAC) equal to or greater than the respective Action Level (found in Appendix C of the *Regulations*) shall be subject to the Regulation and shall achieve the Hazardous Most Stringent Emission Rate (HMSER) for the respective HAC. HMSER is defined as a rate of emissions which the Secretary, on a case-by-case basis, determines is achievable for a stationary source based on the lowest emission rate achieved in practice by such a category of source and considering economic impact and cost. HMSER may be achieved through application of pollution control equipment, production processes or techniques, equipment design, work practices, chemical substitution, or innovative pollution control techniques.~~

~~Based on information provided by the Permittee, the Agency does not anticipate the Facility to have regulated emissions of any HAC in excess of an Action Level. Therefore, the Facility is not being reviewed pursuant to §5-261 of the *Regulations* at this time.~~

[1] APCR §5-261(1)(c)(ii) provides that solid fuel burning equipment (not including incinerators) installed or constructed prior to January 1, 1993, and all fuel burning equipment which combust virgin liquid or gaseous fuel shall not be subject to the requirements of §5-261.

~~Based on the Agency's review of the Facility's application and the above Findings of Fact, the Agency concludes that the Facility, subject to the following Permit conditions, complies with all applicable state and federal air pollution control laws and regulations or is subject to an acceptable schedule of compliance. Therefore, pursuant to 10 *VSA* §§556 and 556a, as amended, the Agency hereby issues a Permit approving the Facility, as described in the above Findings of Fact, subject to the following:~~

~~PERMIT CONDITIONS~~

~~- Construction and Equipment Specifications -~~

~~(1) The Permittee shall construct and operate the Facility in accordance with the plans and specifications submitted to the Agency and in accordance with the conditions set forth herein, including the equipment specifications as listed in Findings of Fact (A) or their equivalent as approved by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-501(1) of the *Regulations*]~~

(2) The Permittee shall operate and maintain emissions capture and incineration control devices on both the Wolverine and the Midland-Ross process lines. The emissions capture and incineration control devices shall be utilized at all times when the above referenced process lines are in operation. [RACT §5-253.20 of the *Regulations*. Administrative Order dated 14 August 1995]

(3) The Permittee shall operate the incineration control devices at a minimum temperature of 760° Celsius (1400° Fahrenheit) while the respective process lines are in operation. Furthermore, the Facility shall not process material in the process lines until such time as the respective incineration control device has reached a minimum temperature of 760° Celsius (1400° Fahrenheit). [RACT §5-253.20 of the *Regulations*. Administrative Order dated 14 August 1995]

(4) Notwithstanding Conditions (2), (3) and (8) of this Permit, the Wolverine incineration control device is not required to be operated when the Wolverine process line is running exclusively the "Film Face Tape" product to which is being applied a coating with a total VOC content, as applied, of not greater than 0.1% by weight. [10 V.S.A. §556a(d)] [Operating Permit Application #OP-09-047]

~~(5) The Permittee shall control emissions from the raw dry mica handling operations, including the feed hopper loading and the calciner inlet and outlet, by installing and operating a fabric filter dust collection system. All elements of this air pollution control system shall be maintained in good working order at all times and shall be operated in accordance with the manufacturer's operation and maintenance recommendations. The air pollution control system shall be in operation whenever the respective emission source is in operation. [10 V.S.A. §556a(d)] [§5-1015(a)(1), (3) and (4) of the *Regulations*]~~

~~(6) The fabric filter collector shall be equipped with a pressure drop measurement device which continuously measures and displays the pressure drop across the fabric filter~~

~~collector (e.g., manometer or magnehelic). The Permittee shall use the pressure drop measurement device to maintain the pressure drop across the fabric filter within acceptable ranges as specified by the manufacturer. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-1015(a)(1), (3) and (4) of the *Regulations*]~~

~~(7) Stack heights: The exhaust gases from the following emission sources shall be vented vertically through a stack(s) of the configuration noted below. Where stack heights are noted in Findings of Fact A such stacks shall be configured accordingly. The stack(s) shall not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed rain cap of a type that has not been approved by the Agency.~~

~~**Stack Height and Configuration**~~		
~~Emission source~~	~~Stack Dimensions~~	~~Minimum stack height (ft) Above roof line~~
~~Midland-Ross coater controlled with AdWest RTO~~	~~21.5 inch diameter~~	~~4~~
~~Wolverine coater controlled with Wolverine thermal oxidizer~~	~~1.17 square feet~~	~~4~~

~~For all other non-fugitive emission points at the Facility, the Agency recommends that they each be exhausted vertically through a stack(s) which extend a minimum of four (4) feet above the roof where the stack penetrates the roof and that they not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed rain cap of a type that has not been approved by the Agency. The Agency may require the Permittee to increase the stack height, remove a rain cap, or conduct a dispersion analysis to verify compliance with ambient air quality standards for any stack at the Facility if, in the judgment of the Agency, adequate dispersion cannot be maintained at the current stack configuration. Adequacy may in part be based on the actual emission rate of air contaminants, the characteristics of the current stack configuration, or inspections of the Facility that indicate poor dispersion or that confirm significant visible emissions or nuisance or odor beyond the property line. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-406 of the *Regulations*]~~

- Emission Limitations -

(8) The Permittee shall achieve an overall reduction in uncontrolled VOC emissions of at least 81% by weight from both the Wolverine and Midland-Ross lines. [RACT §5-253.20 of the *Regulations*. Administrative Order dated 14 August 1995]

~~(9) Particulate Matter [Industrial Clean Air fabric filter]: Emissions of particulate matter from the fabric filter dust collection system shall at no time exceed the emission limitations in the table below:~~

~~**Fabric Filter Collector PM/PM10 Emission Limitations**~~			
~~Unit~~	~~Emission Limitations~~		
	~~acfm[1]~~	~~gr/dscf[2]~~	~~lbs/hour[3]~~

~~Industrial Clean Air Fabric Filter~~	~~10,000~~	~~0.01~~	~~0.86~~

~~[1] acfm equals actual cubic foot of undiluted exhaust gas per minute.~~
~~[2] gr/dscf equals grains of pollutant emitted per dry std cubic foot of undiluted exhaust gas.~~
~~[3] lbs/hour equals pounds of pollutant emitted per hour.~~

~~Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 CFR Part 60, Appendix A, Reference Method 5 or an equivalent method approved in writing by the Agency.~~ ~~[10 *V.S.A.* §556a(d)] [§§5-404, 5-231(1) and 5-261(2) of the *Regulations*]~~

~~(10) Particulate Matter: Emissions of particulate matter ("PM") from any fossil fuel burning device, except motorized vehicles, with a heat input rating of less than ten (10) million British Thermal Units per hour ("MMBTU/hr") shall not exceed 0.5 pounds per MMBTU.~~

~~Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 and 202 or equivalent methods approved in writing by the Agency.~~ ~~[§§5-231(3)(a)(i) and 5-404 of the *Regulations*]~~

~~(11) Visible Emissions [Facility Wide]: Emissions of visible air contaminants from any installation at the Facility, except where otherwise noted in this Permit, shall not exceed twenty (20) percent opacity for more than a period or periods aggregating six (6) minutes in any hour and at no time shall visible emissions exceed sixty (60) percent opacity.~~

~~Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 51, Appendix M, Methods 203B and 203C, respectively, or equivalent methods approved in writing by the Agency.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§§5-211(2), 5-211(3) and 5-404 of the *Regulations*]~~

~~(12) Volatile Organic Compounds: Emissions of volatile organic compounds from the Facility shall not equal or exceed fifty (50) tons per calendar year.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-502 of the *Regulations*]~~

~~(13) Hazardous Air Pollutants: Emission of federally regulated hazardous air pollutants (HAPs) from the Facility shall not equal or exceed ten (10) tons per year of any single HAP or twenty-five (25) tons per year of all HAPs combined per calendar year.~~ ~~[40 *CFR* Part 63]~~

~~(14) Hazardous Air Contaminants: Emissions of state hazardous air contaminants (HACs) from the applicable operations at the Facility shall not equal or exceed their respective Action Level (found in Appendix C of the *Regulations*) unless the Agency has reviewed and approved such HAC emission under §5-261(2) of the *Regulations*.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-261 of the *Regulations*]~~

(15) Fugitive Emissions: The Permittee shall take reasonable precautions at all times to control and minimize emissions of fugitive particulate matter and volatile organic compounds from the operations at the Facility. This shall include but not be limited to the following:

(a) Coating and solvent containers containing VOC materials shall be covered when not in use.
(b) The Midland-Ross and Wolverine coating lines shall maintain a capture and Control efficiency of 81% or greater.

[10 V.S.A. §556a(d)] [§5-231(4) of the *Regulations*] [RACT §5-253.20 of the *Regulations*. Administrative Order dated 14 August 1995]

~~(16) Nuisance and Odor: The Permittee shall not discharge, cause, suffer, allow, or permit from any source whatsoever such quantities of air contaminants or other material which will cause injury, detriment, nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which causes or has a natural tendency to cause injury or damage to business or property. The Permittee shall not discharge, cause, suffer, allow, or permit any emissions of objectionable odors beyond the property line of the premises. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-241(1) of the *Regulations*]~~

- Continuous Temperature Monitoring System (CTMS) -

(17) The Permittee shall continuously monitor and record the exhaust gas temperature at the outlet of each incineration control device. [RACT §5-253.20 of the *Regulations*. Administrative Order dated 14 August 1995]

(18) The Permittee shall configure the Wolverine and the Midland-Ross coating lines and their respective incineration control devices with a temperature controlled start-up/shut-down interlock system (or feed-back loop) to insure that each coating line will not operate if its respective control device is operating below 1400°F, except for the Wolverine coating line when it is running the "Film Face Tape" product in accordance with condition (4) above. [RACT §5-253.20 of the *Regulations*. Administrative Order dated 4 January 1995]

(19) The Permittee shall operate and maintain each CTMS in accordance with the following:

(a) Each CTMS must record valid data during all source operating times except for periods of operation in accordance with condition (4) above, periods of established quality assurance and quality control procedures, preventative maintenance, or unavoidable malfunction. The CTMS must record valid data for at least 90% of the source operating time, excluding operation in accordance with condition (4) above, within any quarter of the calendar year.

(b) The Permittee shall maintain and implement a Quality Assurance (QA) Plan for the monitoring and recording systems which documents operations pursuant to the requirements of the CTMS. The QA plan shall specify the equipment, monitoring procedures, calibration, quarterly auditing and reporting procedures, and data recording systems to be used to demonstrate compliance with the January 4, 1995 RACT Administrative Order. The Permittee shall review the QA Plan and all data generated by its implementation at least once each year. The Permittee shall revise and update the plan as necessary, based on the results of this annual review, or upon the Agency's request. The Permittee shall notify the Agency in writing of the results of each annual review.

(c) The Permittee shall submit a summary monitoring report for each calendar quarter, within thirty (30) days after the close of the quarter, to the Agency. The format and content of the quarterly report shall be identified in the QA Plan.

(d) The Permittee shall conduct a functional integrity check to verify the performance of each start-up/shut-down interlock system. This check shall be performed annually. The procedure used must be acceptable to the Agency and identified in the QA Plan. The results of each annual check shall be included with the quarterly

report submitted for the quarter in which the integrity check was performed.

(e) All temperature data shall be recorded in degrees Fahrenheit.

(f) The Permittee shall maintain a file of all information reported in the quarterly summaries and all raw data collected by the monitoring systems for at least five (5) years from the date of collection of such data or submission of such summaries. All data records for the monitoring systems shall be marked to show the times of both start-up and shut-down of the incineration systems and the process lines.

[RACT §5-253.20 of the *Regulations*. Administrative Order dated 14 August 1995]

~~- Compliance Testing and Monitoring -~~

~~(20) Operation and Maintenance Plan [Industrial Clean Air fabric filter]: The Permittee shall continue to operate and maintain the Industrial Clean Air fabric filter in accordance with the operation and maintenance plan (O&M Plan) that was developed by the Permittee for permit OP-09-047. The purpose of said O&M Plan shall be to ensure the proper operation and maintenance of the fabric filter dust collection system in order to ensure continuous compliance with the respective conditions and emission limits of this Permit. The O&M Plan shall include, but not be limited to, a description of routine maintenance and inspection procedures, provisions for maintaining records of such maintenance and inspections as well as findings of those inspections and any corrective actions which were taken. Said O&M Plan shall be present at the facility at all times and shall be made available to representatives of the Agency upon request. The Permittee shall revise said O&M Plan at the Agency's request or on its own motion based on operating experience or to reflect equipment or operational changes. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]~~

~~- Record Keeping and Reporting -~~

~~(21) Records of Fuel Use: The Permittee shall maintain records of the total quantity of LPG consumed at the facility, in gallons, each month. At the end of each calendar year the Permittee shall calculate the total LPG usage, in gallons. [10 V.S.A. §556a(d)] [§5-405(1) of the *Regulations*]~~

~~(22) The Permittee shall maintain records of the total annual quantity of all raw materials used at the Facility and their respective VOC, acetone, HAP, and HAC contents. At the end of each calendar year, the Permittee shall calculate the resultant emissions of VOCs, acetone, HAPs, and HACs and verify that emissions after any applicable air pollution control equipment are below the limits specified by this Permit. [§5-405 of the Regulations]~~

~~(23) The Permittee shall maintain records of operation when the Wolverine process line is running exclusively the "Film Face Tape" product in accordance with Condition (4) above, noting the start and stop times so that compliance with the requirement to operate the Wolverine incineration control device at all other times of operation can be demonstrated. [10 V.S.A. §556a(d)] [§5-405(1) of the *Regulations*]~~

~~(24) All records shall be retained for a minimum period of five (5) years from the date of record and shall be made available to the Agency upon request. [§§5-402(1), 5-405(1) and 5-1015(a)(7) of the *Regulations*]~~

~~(25) Compliance Certification: By February 1st of each year, the Permittee shall submit an annual certification of compliance for the previous calendar year, concurrent with the annual registration data submitted to the Agency, which ascertains and identifies the compliance status of the Facility with respect to:~~

~~(a) Emissions of VOCs from the Facility are less than fifty (50) tons per year;~~
~~(b) Emissions of federal HAPs from the Facility are less than ten (10) tons per year for each individual HAP and less than twenty-five (25) tons per year for total HAPs, and;~~
~~(c) Emissions of each regulated state HAC is less than its respective Action Level (found in Appendix C of the Regulations) or the emission of the respective HAC has previously been reviewed and approved by the Agency under §5-261(3) of the Regulations.~~

~~[§5-402(1) of the *Regulations*]~~

~~(26) Notification: The Permittee shall notify the Agency in writing within ten (10) days of any violation, of which it is aware, of any requirements of this Permit. This notification shall include, at a minimum, the cause for the violation and corrective action or preventative maintenance taken to correct the violation. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-402 and 5-1015(a)(6) of the *Regulations*]~~

~~(27) Notification: The Permittee shall notify the Agency in writing of any proposed physical or operational change at the Facility which may increase the emission rate of any air contaminant to the ambient air regardless of any concurrent emission reductions that may be achieved. This notification requirement includes, but is not limited to, the proposed installation of any new equipment that is a source of air pollution, including the replacement of an existing permitted air pollution source. If the Agency determines that a permit amendment is required, a new application and the appropriate application fee shall be submitted. The permit amendment shall be obtained prior to commencing any such change except as may otherwise be allowed by the *Regulations*. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-402 and 5-501 of the *Regulations*]~~

~~(28) Annual Registration: The Permittee shall calculate the quantity of emissions of air contaminants from the Facility annually. If the Facility emits more than five (5) tons of any and all air contaminants per year, the Permittee shall register the source with the Secretary of the Agency (hereinafter "Secretary"), and shall renew such registration annually. Each day of operating a source which is subject to registration without a valid, current registration shall constitute a separate violation and subject the Permittee to civil penalties. The registration process shall follow the procedures set forth in Subchapter VIII of the *Regulations*, including the payment of the annual registration fee on or before May 15 of each year. [10 *V.S.A.* §§556(c) and 556a(d)] [Subchapter VIII §§5-802, 5-803, 5-807, 5-808 of the *Regulations*]~~

~~(29) All records, notifications and reports that are required to be submitted to the Agency by this Permit shall be submitted to:~~

~~Air Quality & Climate Division~~
~~Department of Environmental Conservation~~
~~Agency of Natural Resources~~
~~Davis 2~~
~~One National Life Drive~~
~~Montpelier, Vermont 05620-3802~~

~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-402 of the *Regulations*]~~

~~(30) All records, notifications and reports that are required to be submitted to the U.S. EPA by this Permit shall be submitted to:~~

~~Air Compliance Clerk~~
~~U.S. EPA-New England~~
~~5 Post Office Sq. Suite 100 (OES04-2)~~
~~Boston, MA 02109-3912~~

~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-402 of the *Regulations*]~~

~~- Standard Permit Conditions -~~

~~(31) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Agency which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [10 V.S.A. §§556(c) and (g) and 556a(d)] [40 CFR Part 60.11(d) and 63.6(e)]~~

~~(32) These Permit conditions may be suspended, terminated, modified, or revoked for cause and reissued upon the filing of a written request with the Secretary of the Agency (hereinafter "Secretary") or upon the Secretary's own motion. Any modification shall be granted only with the written approval of the Secretary. If the Secretary finds that modification is appropriate, only the conditions subject to modification shall be re-opened. The filing of a request for modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay any terms or conditions of this Permit. The Secretary may provide opportunity for public comment on any proposed modification of these conditions. If public comments are solicited, the Secretary shall follow the procedures set forth in 10 *V.S.A.* §556 and §556a, as amended. [10 *V.S.A.* §§556(d) and 556a(g)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]~~

~~(33) Cause for reopening, modification, termination and revocation of this Permit includes, but is not limited to:~~

~~(a) Inclusion of additional applicable requirements pursuant to state or federal law;~~
~~(b) A determination that the permit contains a material mistake or that inaccurate information was used to establish emissions standards or other terms or conditions of the operating permit;~~
~~(c) A determination that the operating permit must be modified or revoked to ensure compliance with applicable requirements;~~
~~(d) A determination that the subject source has failed to comply with a permit condition;~~
~~(e) For Title V subject sources, a determination by U.S. EPA that cause exists to terminate, modify, revoke or reissue an operating permit;~~
~~(f) Those causes which are stated as grounds for refusal to issue, renew or modify an operating permit under §5-1008(a) of the *Regulations*; or~~
~~(g) If more than three (3) years remain in the permit term and the source becomes subject to a new applicable requirement.~~

~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-1008(e)(4) of the *Regulations*]~~

~~(34) The Permittee shall furnish to the Agency, within a reasonable time, any information that the Agency may request in writing to determine whether cause exists to modify, revoke, reissue, or terminate the Permit or to determine compliance with this Permit. Upon request, the Permittee shall also furnish to the Agency copies of records required to be kept by this Permit. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-402 of the *Regulations*]~~

~~(35) By acceptance of this Permit, the Permittee agrees to allow representatives of the State of Vermont access to the properties covered by the Permit, at reasonable times, to ascertain compliance with Vermont environmental and health statutes and regulations and~~

~~with this Permit. The Permittee also agrees to give the Agency access to review and copy any records required to be maintained by this Permit, and to sample or monitor at reasonable times to ascertain compliance with this Permit. [10 *V.S.A.* §§556(c), 556a(d) and 557] [§§5-402, 5-404, and 5-1015(a)(10) of the *Regulations*]~~

~~(36) All data, plans, specifications, analyses and other information submitted or caused to be submitted to the Agency as part of the application for this Permit or an amendment to this Permit shall be complete and truthful and, for Title V permit applications, certified by a responsible official whose designation has been approved by the Secretary. Any such submission which is false or misleading shall be sufficient grounds for denial or revocation of this Permit, and may result in a fine and/or imprisonment under the authority of Vermont statutes. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-505 and 5-1006(f) of the *Regulations*]~~

~~(37) For the purpose of establishing whether or not a person has violated or is in violation of any condition of this Permit, nothing in this Permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(38) Any permit noncompliance could constitute a violation of the federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]~~

~~(39) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Permit. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(40) No person shall build, erect, install or use any article, machine, equipment or other contrivances, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which otherwise would constitute a violation of these *Regulations*. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-403 of the *Regulations*]~~

~~(41) The provisions of this Permit are severable. If any provision of this Permit, or its application to any person or circumstances is held invalid, illegal, or unenforceable by a court of competent jurisdiction, the invalidity shall not apply to any other portion of this Permit which can be given effect without the invalid provision or application thereof. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(42) This Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize any injury to private property or any invasion of personal rights. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(43) All subsequent owners and/or operators of this Facility must request an amendment and transfer of this Permit prior to commencing any operations covered by this Permit. All subsequent owners and/or operators shall submit to the Agency as part of the request for amendment all such information the Agency deems necessary to establish legal ownership and/or interest in the property and all such information the Agency deems necessary to ensure the new owners and/or operators will construct and operate the Facility in compliance with the *Regulations* and this Permit. The terms and conditions of this Permit shall remain in full force and effect after submittal of the request for amendment and until the issuance of an amended Permit or denial. Should the Secretary deny the~~

~~request, the new owner and/or operator must take whatever action is necessary to comply with the denial.~~ ~~[10 *V.S.A.* §§556 and 556a] [§§5-501, 5-1004, and 5-1013(a) of the *Regulations*]~~

~~(44) Renewable Energy Projects – Right to Appeal to Public Service Board. If this decision relates to a renewable energy plant for which a certificate of public good is required under 30 V.S.A. §248, any appeal of this decision must be filed with the Vermont Public Service Board pursuant to 10 V.S.A. §8506. This section does not apply to a facility that is subject to 10 V.S.A. §1004 (dams before the Federal Energy Regulatory Commission), 10 V.S.A. §1006 (certification of hydroelectric projects) or 10 V.S.A. Chapter 43 (dams). Any appeal under this section must be filed with the Clerk of the Public Service Board within 30 days of the date of this decision; the appellant must file with the Clerk an original and six copies of its appeal. The appellant shall provide notice of the filing of an appeal in accordance with 10 V.S.A. 8504(c)(2), and shall also serve a copy of the Notice of Appeal on the Vermont Department of Public Service. For further information, see the Rules and General Orders of the Public Service Board, available on line at www.psb.vermont.gov. The address for the Public Service Board is 112 State Street, Montpelier, Vermont, 05620-2701 (Tel. # 802-828-2358).~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(45) All Other Projects – Right to Appeal to Environmental Court. Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings, available on line at www.vermontjudiciary.org. The address for the Environmental Court is 2418 Airport Road, Suite 1, Barre, VT 05641 (Tel. # 802-828-1660).~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(46) This Operating Permit shall expire as indicated on the cover page to this Permit. The Permittee shall submit to the Agency a complete application for renewal of the Operating Permit at least six (6) months before the expiration of the Operating Permit. If a timely and administratively complete application for an operating permit renewal is submitted to the Secretary, but the Secretary has failed to issue or deny such renewal before the end of the term of this Operating Permit, then the Permittee may continue to operate the subject source and all terms and conditions of this Operating Permit shall remain in effect until the Secretary has issued or denied the operating permit renewal. However, this Operating Permit shall automatically expire if, subsequent to the renewal application being determined or deemed administratively complete pursuant to §5-1006 of the *Regulations*, the Permittee fails to submit any additional information required by the Secretary as well as information pertaining to changes to the Facility within thirty (30) days or such other period as specified in writing by the Secretary.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§§5-1011 and 5-1012(a) of the *Regulations*] [§§5-1005(c) and 5-1012 of the *Regulations*]~~

~~(47) The conditions of this Permit as set forth above supersede all conditions contained in all prior Permits issued by the Agency to the Permittee for this Facility.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)]~~

~~The Agency's issuance of this Air Pollution Control Permit relies upon the data, judgment, and other information supplied by the Permittee. The Agency makes no assurances that the air contaminant source approved herein will meet performance objectives or vendor guarantees supplied to the source Permittee. It is the sole responsibility of the Permittee to operate the source in accordance with the conditions herein and with all applicable state and federal standards and regulations.~~

~~Permit Issued this _____ day of _____, 2017.~~

~~Permit Issuance authorized by:~~

~~Agency of Natural Resources~~

~~Emily Boedecker Commissioner~~
~~Department of Environmental Conservation~~

~~By: _____~~
~~Heidi C. Hales, Director Date Signed~~
~~Air Quality & Climate Division~~

~~sks~~
~~Y:AP Admin\StationaryFacilities\Isovolta, Inc. – Rutland~~

Appendix E: Killington/Pico Ski Resort Partners, LLC.

Operating Permit RACT provisions

AOP-14-003

Issued on February 15, 2018

Only portions highlighted are intended for inclusion in the SIP.

Strikeout text is not intended for inclusion in SIP.

~~#AOP-14-003~~
~~DEC#RU97-0001~~
~~Operating Permit Expiration Date: February 15, 2023~~

~~State of Vermont~~
~~Agency of Natural Resources~~
~~Department of Environmental Conservation~~

~~Air Quality & Climate Division~~
~~Montpelier, Vermont~~

~~AIR POLLUTION CONTROL PERMIT TO CONSTRUCT AND OPERATE~~

~~Date Permit Issued: February 15, 2018~~

~~Owner/Operator:~~ ~~Killington/Pico Ski Resort Partners, LLC~~
~~4763 Killington Road~~
~~Killington, Vermont 05751~~

~~Source:~~ ~~Ski Resort Operations~~
~~Killington and Pico Ski Resorts~~
~~4763 Killington Road/Alpine Drive~~
~~Killington, Vermont~~

~~FINDINGS OF FACT~~

~~(A) FACILITY DESCRIPTION~~

~~Killington/Pico Ski Resort Partners, LLC (also referred to herein as "Permittee") owns and operates both the Killington and Pico ski resorts. The Killington Resort is located off Killington Road and the Pico Resort is located off U.S. Route 4 and Alpine Road, both within the town of Killington. Since the two resort properties are under common ownership and are on adjacent and contiguous property, the two resorts are considered to be one Facility for purposes of this Permit (the two resorts are also referred to herein as the "Killington Resort" and the "Pico Resort" and/or collectively as "Facility").~~

~~Both resorts currently consist of mixed-use development that combines ski resort operations, lodging, and various commercial activities. The diesel powered air compressors and generators for snowmaking operations at the Killington Resort are the primary source of air emissions at the Facility. The Pico Resort currently uses only electric-powered air compressors for its snowmaking operations. Both locations at the Facility also include numerous ski lift emergency backup engines for operation of the ski lifts during emergency power outages and numerous small distillate and propane space heating units in the lodges and ancillary buildings at the Facility. The Facility has approval for up to 18,500 bhp of diesel engine capacity for snowmaking operations and other non-emergency stationary engines and up to 850,000 gallons per year of diesel fuel usage in all the stationary and non-road engines combined at the two Facility locations, including fuel used in the emergency ski lift engines and trail groomers. All other potential air contaminant sources at the Facility are considered insignificant.~~

~~As part of this Permit to Operate renewal, the Agency is re-evaluating the prior NOx RACT determination under 5-251(2) of the *Vermont Air Pollution Control Regulations* due to adoption of revised ozone National Ambient Air Quality Standards in 2008 and 2015. The Agency has determined that NOx RACT will now be achieved by use of EPA Tier 4 emission certified engines for all snowmaking and non-emergency engine operations, except that up to 5,500 bhp of Tier 3, or better, engines may be used. Any new or replacement engine installed for ski lift emergency evacuation shall at a minimum comply with the US EPA non-road new emergency engine emission standards of 40 CFR Part 89 and 1039 in effect at time of installation (currently Tier 2 for engines greater than 750 bhp and Tier 3 for engines less than 750 bhp) and should be Tier 4 emission certified when feasible.~~

~~Upon issuance of this Permit, the approved regulated operations at the Facility include the following air pollution related operations, equipment and emission control devices:~~

~~Equipment Specifications~~			
~~Source~~	~~Make and model~~	~~BHP[5]~~	~~Date Installed~~
~~Diesel Engines for Snowmaking Operations[1]~~	~~Cummins QSX15 560-600 bhp Tier 4 emission certified, or equivalent, for all except:~~ ~~Up to 5,500 bhp total capacity of Tier 3 emission certified, or equivalent.~~	~~18,500 combined Facility total~~	~~Leased annually~~
~~Other Diesel Engines for Non-emergency Operation:[2]~~	~~None~~	~~na~~	~~na~~
~~Diesel Engines for Emergency Only Operation, including but not limited to: [3]~~	~~±Thirty-one (31) ski lift emergency evacuation engines~~	~~Various~~	~~All prior to permit issuance~~
~~Other Fuel Combustion Sources for Space Heating, including but not limited to: [4]~~	~~±Ten (10) small distillate oil fired space heating units~~	~~Total combined capacity less than 15 MMBtu/hr[6] and all units individually rated at less than 1.6 MMBtu/hr[6]~~	~~Varies~~
	~~±Twenty (20) small propane fired space heating units~~		
~~Various non-road diesel engines including those powering trail groomers, earth-moving and materials handling equipment and small portable electric generators and compressors.~~		~~Various~~	~~Varies~~

~~[1] The engine used to power equipment for snow making operations are leased each year. Therefore the number and make of these leased engines are subject to change each year. In accordance with the Permit herein the engines must, at a minimum, be certified to meet the Tier 4 full emission standards of 40 CFR Part 1039 or the equivalent, with up to 5,500 bhp certified to meet the Tier 3 emission standards of 40 CFR Part 89, or the equivalent.~~
~~[2] All non-emergency units must be included in the 18,500 bhp combined Facility total bhp capacity cap. The Skye Peak 665 bhp Detroit Diesel was previously approved for non-emergency operations but is no longer used for that purpose.~~
~~[3] Four of these units are greater than 600 bhp with a combined capacity of 2,965. The combined capacity of all units is less than 7,350.~~
~~[4] Replacement of heating equipment less than 1.6 MMBtu/hr of heat input with a similar sized unit does not require approval from the AQCD.~~
~~[5] BHP – brake horsepower rated output as specified by the manufacturer.~~
~~[6] MMBtu/hr – million British thermal units per hour maximum rated heat input.~~

~~(B) FACILITY CLASSIFICATION~~

~~The Facility is classified as a source of air contaminants pursuant to Title 10 of the *Vermont Statutes Annotated* ("10 *VSA*") §555 and §5-401(6)(c) [Fuel burning installations] of the *Vermont Air Pollution Control Regulations* (hereinafter "*Regulations*"). In addition, §5-101 of the *Regulations* defines a *stationary source* as any structure(s), equipment, installation(s), or operation(s), or combination thereof, which emit or may emit any air contaminant, which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person or persons under common control. Based on this definition, all of the equipment, operations, and structures at the Facility are grouped together by the Agency of Natural Resources, Department of Environmental Conservation, Air Quality & Climate Division (hereinafter "Agency") as one stationary air contaminant source for purposes of review under the *Regulations*.~~

~~While some of the portable diesel-powered equipment at the Facility, potentially including but not limited to trail groomers, earth moving and materials handling equipment, portable electrical generators and portable air compressors, may be classified as non-road engines under Federal air quality regulations, the operation of this non-road equipment within the confines of the Facility satisfies the requirements of a source that may be regulated by the Agency under the authority of 10 *VSA* §555 and §5-401(5) and (6)(c) of the *Regulations*.~~

~~(C) PRIOR AGENCY ACTIONS/APPROVALS~~

~~The Facility has been issued the following "Permit to Construct" approvals pursuant to 10 *VSA* §556 and §5-501 of the *Regulations* and the following "Permit to Operate" approvals pursuant to 10 *VSA* §556a and Subchapter X of the *Regulations*.~~

~~**Prior Agency Permit Approvals and Actions**~~	
~~Date of Action~~	~~Description of Agency Approval/Action~~
~~September 2, 2004~~	~~#AOP-04-025 – Initial Title V Permit to Construct and Operate for existing owned fleet of 22 engines (16,260 bhp capacity) for snowmaking operations plus minor modification to increase by up to four additional engines of not more than 560 bhp each for a total snowmaking engine capacity of 18,500 bhp. NOx RACT established requiring SCR on one engine and replacement of all others per schedule with Tier 2 or better by July 1, 2007.~~
~~June 14, 2007~~	~~#AOP-04-025a – Administrative amendment. Transfer of Ownership from Killington, LTD to Killington/Pico Ski Resort Partners, LLC.~~
~~May 26, 2010~~	~~#AOP-08-003 – Permit to Construct and Operate modification to revise NOx RACT to require Tier 3 or better and approve limited use of one emergency ski lift evacuation engine for peak shaving. As a result of permit Facility is no longer Title V.~~

~~(D) FACILITY PERMIT APPLICABILITY~~

~~As noted above, the Facility is classified as a source of air contaminants under §5-401 of the *Regulations*. Pursuant to 10 *VSA* §556a and Subchapter X of the *Regulations* a Permit to Operate is required for any air contaminant source with allowable emissions of all air contaminants combined of ten (10) tons per year ("tpy") or more or that is otherwise subject to Title 40 *Code of Federal Regulations* ("40 *CFR*") Part 70.~~

~~The Facility currently operates under a Permit to Operate issued on May 26, 2010. The allowable emissions from the Facility are estimated to be greater than the ten (10) tpy combined threshold for applicability with Subchapter X of the *Regulations*, but each pollutant is less than the one-hundred (100) tpy single pollutant threshold (50 tpy for VOC) for applicability to Title V of the federal Clean Air Act. Therefore, pursuant to §§5-1002, 5-1003, and 5-1005 of the *Regulations* the Facility is classified as a "Subchapter X Major Source". In accordance with §5-1009 of the *Regulations*, the agency is issuing the Permit to Operate herein as a renewal of the previous Permit to Operate for the Facility and the Permit herein supersedes all prior Permits for the Facility.~~

~~In accordance with 10 *VSA* §556(e) the Agency has combined the previous Permit to Construct and the Permit to Operate renewal for this Facility into one combined Permit to Construct and Operate. The allowable emissions for the Facility are summarized below:~~

~~**Allowable Air Contaminant Emissions (tons/year)[1]**~~					
~~**$PM/PM_{10}/PM_{2.5}$**~~	~~**CO**~~	~~**NO_x**~~	~~**SO_2[3]**~~	~~**VOCs**~~	~~**HAPs[2]**~~
~~2.0~~	~~46.8~~	~~40.9~~	~~0.1~~	~~1.1~~	~~<8/20~~

~~[1] $PM/PM_{10}/PM_{2.5}$ – total particulate matter, total particulate matter of 10 micrometers in size or smaller and total particulate matter of 2.5 micrometers in size or smaller, respectively. Unless otherwise specified, all PM is assumed to be $PM_{2.5}$; SO_2 - sulfur dioxide; NO_x - oxides of nitrogen measured as NO_2 equivalent; CO - carbon monoxide; VOCs - volatile organic compounds; HAPs - hazardous air pollutants as defined in §112 of the federal Clean Air Act.~~

~~[2] A stationary source with potential emissions of 10 tons per year or greater of any single HAP or 25 tons per year or greater of all HAPs combined is considered a major source of HAPs under §112 of the federal Clean Air Act. Any stationary source with potential emissions of 8 tons per year or greater of any single HAP or 20 tons per year or greater of all HAPs combined is considered a synthetic minor source. The Facility is limited by the Permit herein to less than thresholds for a synthetic minor source. Actual total combined HAPs from the Facility are estimated at <1 tpy. This Permit does not explicitly authorize emissions up to this level since any increase in actual HAP emissions may be subject to §5-261 and 5-501 of the Regulations as applicable.~~

~~[3] Commencing July 1, 2018 the allowed sulfur content of distillate fuel oils, No. 4 residual fuel oil and No. 6 residual fuel oils will decrease to 0.0015%, 0.25% and 0.5% by weight respectively, potentially further decreasing Facility allowed SO_2 emissions unless otherwise already restricted by the Permit herein.~~

~~(E) REVIEW OF CRITERIA POLLUTANT EMISSIONS FOR THE PERMIT TO CONSTRUCT~~

~~(a) New Source Review Designation~~

~~The Permittee has not proposed any modifications to the Facility in conjunction with the review for this Permit to Operate and therefore is not subject to review under the New Source Review requirements in §5-501 or §5-502 of the *Regulations* at this time.~~

~~(b) Most Stringent Emission Rate~~

~~The Permittee has not proposed any modifications to the Facility in conjunction with the review for this Permit to Operate and therefore is not subject to review under the MSER requirements in §5-502 of the *Regulations* at this time. In addition, there have been no prior MSER evaluations conducted for any prior modifications to the Facility.~~

~~(c) Ambient Air Quality Impact Evaluation~~

~~An ambient air quality impact evaluation for criteria pollutants is performed to demonstrate whether or not a proposed project will cause or contribute to violations of the national ambient air quality standards and/or significantly deteriorate existing air quality for the regulated criteria pollutants.~~

~~The Permittee has not proposed any modifications to the Facility in conjunction with the review for this Permit to Operate and therefore is not subject to an air quality impact analysis under §5-501 of the *Regulations* at this time. In addition, there have been no prior ambient air quality impact evaluations conducted for any prior modifications to the Facility.~~

~~(F) REVIEW OF CRITERIA POLLUTANT EMISSIONS FOR THE PERMIT TO OPERATE~~

~~(a) Applicable Requirements~~

~~The operations at the Facility are subject to the following state and federal laws and regulations, the requirements of which are embodied in the conditions of this Permit.~~

~~(ii) *Vermont Air Pollution Control Regulations*:~~

~~**Applicable Requirements from the Vermont Air Pollution Control Regulations**~~
~~Section 5-201 – Prohibition of Open Burning~~
~~Section 5-211(2) - Prohibition of Visible Air Contaminants, Installations Constructed Subsequent to April 30, 1970.~~

~~Applicable Requirements from the Vermont Air Pollution Control Regulations~~
~~Section 5-221(1) - Prohibition of Potentially Polluting Materials in Fuel, Sulfur Limitation in Fuel.~~
~~Section 5-231(3) - Prohibition of Particulate Matter; Combustion Contaminants.~~
~~Section 5-231(4) - Prohibition of Particulate Matter; Fugitive Particulate Matter.~~
~~Section 5-241 – Prohibition of Nuisance and Odor.~~
~~Section 5-251(2) – Control of Nitrogen Oxides Emissions; reasonably available control technology for large stationary sources.~~
~~Section 5-271 – Control of Air Contaminants from Stationary Reciprocating Internal Combustion Engines.~~
~~Section 5-402 – Written Reports When Requested.~~
~~Section 5-403 – Circumvention.~~
~~Section 5-404 – Methods for Sampling and Testing of Sources.~~
~~Section 5-405 – Required Air Monitoring.~~
~~Section 5-406 – Required Air Modeling.~~
~~Subchapter VIII – Registration of Air Contaminant Sources.~~
~~Subchapter X – Operating Permits.~~

~~(ii) Reasonably Available Control Technology - §5-251(2) and 5-1010 of the *Regulations*~~

~~The Facility currently operates under a NOx RACT determination made under 5-251(2) of the *Vermont Air Pollution Control Regulations* as part of the Permit to Construct and Operate #AOP-08-003 issued May 26, 2010. Once a facility is subject to this regulation it remains subject even if its emission later fall below the applicability level. As part of this Permit to Operate renewal, the Agency is re-evaluating the prior NOx RACT determination due to adoption of revised ozone National Ambient Air Quality Standards in 2008 and 2015. The Agency has determined that NOx RACT will now be achieved by use of EPA Tier 4 emission certified engines for all snowmaking and non-emergency engine operations, except that up to 5,500 bhp of Tier 3, or better, engines may be used. As existing ski lift emergency evacuation engines are replaced at the Facility they shall at a minimum comply with the US EPA non-road new emergency engine emission standards of 40 CFR Part 89 and 1039 in effect at time of installation (currently Tier 2 for engines greater than 750 bhp and Tier 3 for engines less than 750 bhp) and should be Tier 4 emission certified when feasible.~~

~~In addition, pursuant to 10 *VSA* §556a(d) and §5-1010 of the *Regulations* the Agency may establish and include within any Permit to Operate emission control requirements based on Reasonably Available Control Technology ("RACT"). Consistent with the determination under 5-251(2) of the *Regulations* above, the Agency has not imposed any further requirements on this Facility under this authority at this time.~~

~~(iii) Existing Air Pollution Control Permit to Construct and/or Operate~~

~~The Facility currently operates under the confines of a Permit to Construct and Operate issued on May 26, 2010 (#AOP-08-003). The conditions within that existing permit are considered applicable requirements pursuant to §5-1002 of the *Regulations*. The requirements of that permit which are not being modified herein are incorporated into this new combined Permit to Construct and Operate (#AOP-14-003).~~

~~(iv) Federal Requirements:~~

~~**Applicable Requirements from Federal Regulations and the Clean Air Act**~~
~~40 *CFR* Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units. Applies to all boilers with a heat input rating of 10 MMBTU/hr or greater manufactured or modified after June 9, 1989. Units larger than 30 MMBTU per hour installed after February 27, 2005 are subject to additional particulate matter requirements.~~ ~~*The Facility is not subject to this regulation as the Facility has no boilers of 10 MMBtu/hour or greater.*~~
~~40 *CFR* Part 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers. Applies to new and existing fuel oil and solid fuel fired boilers located at area sources (major sources are subject to Subpart DDDDD). Natural gas or propane fired boilers are not subject. This gas exemption allows use of backup fuel during gas curtailments and up to 48 hours of elective use. Oil fired hot water boilers less than 1.6 MMBTU/hr are not subject. The rule requires a tune-up for each boiler once every two years except boilers with oxygen trim and oil boilers less than 5 MMBTU/hr must conduct tune-ups every five years. New boilers greater than 10 MMBTU/hr are subject to PM emission limits. Boilers that commenced construction on or before June 4, 2010 are considered an existing source.~~ ~~*Since Vermont has not taken delegation of this federal regulation, the U.S. EPA is the implementing authority and is responsible for determining applicability of this regulation. Subpart JJJJJJ is not anticipated to apply to the Facility all boilers are less than 1.6 MMBtu/hour. Since the Facility is not a major source of HAPs, the Facility is not subject to Subpart DDDDD.*~~
~~40 CFR Part 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Applies to CI RICE model year 2007 and later as well as those ordered after July 11, 2005 and with an engine manufacture date after April 1, 2006. This standard also applies to stationary CI RICE that are modified or reconstructed after July 11, 2005. This regulation established emission rates for affected engines, requires routine engine maintenance and sets maximum sulfur~~

~~Applicable Requirements from Federal Regulations and the Clean Air Act~~
~~content for the diesel fuel. Beginning October 1, 2010 applicable engines shall only use diesel fuel with a maximum sulfur content of 15 ppm (ULSD).~~ ~~*Since Vermont has not taken delegation of this federal regulation, the U.S. EPA is the implementing authority and is responsible for determining applicability of this regulation. Subpart IIII is anticipated to apply to the leased engines for snowmaking and the ski lift emergency evacuation engines as the older units are replaced with newer units.*~~
~~40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. Applies to new spark ignition engines installed after June 12, 2006. Engines greater than 100 bhp firing landfill or digester gas must meet emission limits for NOx, CO and VOC and, for units 500 bhp and less, shall have a on-time compliance test and, for units greater than 500 bhp, shall have a compliance test at least once every 8,760 hours of operation or every 3 years, whichever occurs first.~~ ~~*Since Vermont has not taken delegation of this federal regulation, the U.S. EPA is the implementing authority and is responsible for determining applicability of this regulation. Subpart JJJJ is not anticipated to apply to the Facility as they do not own or operate any gas fired engines.*~~
~~40 *CFR* Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. Applies to new engines that commenced construction (installed) on or after June 12, 2006 at area sources of HAPs. Requires such engines to comply with NSPS Subpart IIII or JJJJ, as applicable. Also applies to existing engines that commenced construction (installed) prior to June 12, 2006 at area sources of HAPs. By May 3, 2013 requires engines equal and greater than 300 bhp to meet CO emission standards which may necessitate catalytic controls, must install crankcase ventilation system, and requires ULSD fuel. Engines <300 bhp need only meet maintenance requirements including changing oil & filter and, inspecting and replacing if necessary, air filter, hoses and belts. Does not apply to existing emergency units at an area source residential/commercial/institutional facility unless they are enrolled in demand response programs. Subject emergency units are subject to maintenance requirements, must install an elapsed hour meter and must use ULSD commencing January 1, 2015 if used for DR. For engines firing landfill or digester gas comprising 10% or more of the heat input, the engines are subject to management practices only (change oil & filter, inspect plugs, and inspect hoses and belts every 1440 hours or annually, whichever occurs first) as well as operating in accordance with manufacturer's recommendations and minimizing time at idle.~~ ~~*Since Vermont has not taken delegation of this federal regulation, the U.S. EPA is the implementing authority and is responsible for determining applicability of this regulation. Subpart ZZZZ is anticipated to apply to all the engines at this Facility. The leased engines are anticipated to comply with the new engine requirements of Subpart ZZZZ by complying with Subpart IIII. The ski lift emergency evacuation engines are not exempt as residential/commercial/institutional units and are anticipated to comply with the existing emergency engine requirements of Subpart ZZZZ. No existing (~pre2006) 4Z engines are operated for non-emergency purposes.*~~

~~(b) Non-Applicable Requirements~~

~~Pursuant to §5-1015(a)(14) of the *Regulations*, an owner or operator of a Facility may request a permit shield from specific state or federally enforceable regulations and standards which are not applicable to the source. The applicant has not requested such a permit shield in accordance with the requirements of §5-1015(a)(14) of the *Regulations*~~

~~(G) CONTROL OF HAZARDOUS AIR CONTAMINTANTS~~

~~Pursuant to §5-261 of the *Regulations*, any stationary source subject to the rule[2] with current or proposed actual emissions of a hazardous air contaminant (HAC) equal to or greater than the respective Action Level (found in Appendix C of the *Regulations*) shall be subject to the Regulation and shall achieve the Hazardous Most Stringent Emission Rate (HMSER) for the respective HAC. HMSER is defined as a rate of emissions which the Secretary, on a case-by-case basis, determines is achievable for a stationary source based on the lowest emission rate achieved in practice by such a category of source and considering economic impact and cost. HMSER may be achieved through application of pollution control equipment, production processes or techniques, equipment design, work practices, chemical substitution, or innovative pollution control techniques.~~

~~Based on information provided by the Permittee, the Agency does not anticipate the Facility to have regulated emissions of any HAC in excess of an Action Level. Therefore, the Facility is not being reviewed pursuant to §5-261 of the *Regulations* at this time.~~

[2] APCR §5-261(1)(c)(ii) provides that solid fuel burning equipment (not including incinerators) installed or constructed prior to January 1, 1993, and all fuel burning equipment which combust virgin liquid or gaseous fuel shall not be subject to the requirements of §5-261.

~~Based on the Agency's review of the Facility's application and the above Findings of Fact, the Agency concludes that the Facility, subject to the following Permit conditions, complies with all applicable state and federal air pollution control laws and regulations or is subject to an acceptable schedule of compliance. Therefore, pursuant to 10 *VSA* §§556 and 556a, as amended, the Agency hereby issues a Permit approving the Facility, as described in the above Findings of Fact, subject to the following:~~

~~PERMIT CONDITIONS~~

~~- Construction and Equipment Specifications -~~

~~(48) The Permittee shall construct and operate the Facility in accordance with the plans and specifications submitted to the Agency and in accordance with the conditions set forth herein, including the equipment specifications as listed in Findings of Fact (A) or their equivalent as approved by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-501(1) of the *Regulations*]~~

(49) Stationary and Non-Road Diesel Engines: All diesel engines used for snowmaking purposes, including air compressors and generators, whether owned, leased or rented, shall at a minimum comply with the Federal non-road engine Tier 4 emission standards of 40 CFR Part 1039, or the equivalent as approved by the Agency, with the exception that up to 5,500 bhp of installed capacity may comply with the Federal non-road engine Tier 3 emission standards of 40 CFR Part 89, or the equivalent as approved by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-251(2) and 5-1010 of the *Regulations*] [Application for #AOP-08-003]

(50) Stationary and Non-Road Diesel Engines: The total installed capacity of all diesel engines used for snowmaking purposes, including air compressors and generators, as well as all other diesel engines used for non-emergency purposes but excluding those powering trail groomers, earth-moving and materials handling equipment and small portable electric generators and compressors, shall not exceed 18,500 brake horsepower combined at any one time. [10 *V.S.A.* §556a(d)] [§5-501(1) of the *Regulations*] [Application for #AOP-04-025]

(51) Stationary and Non-Road Diesel Engines: No stationary or non-road diesel engine shall be installed or operated at the Facility, except those engines identified in Finding of Fact (A), without the prior written approval of the Agency. Any new or replacement engine installed for ski lift emergency evacuation shall at a minimum comply with the US EPA non-road new emergency engine emission standards of 40 CFR Part 89 and 1039 in effect at time of installation (currently Tier 2 for engines greater than 750 bhp and Tier 3 for engines less than 750 bhp) and should be Tier 4 emission certified when feasible. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-501 of the *Regulations*]

~~(52) Boilers and Space Heating Units: No boilers or space heaters of any fuel type shall be installed or operated at the Facility that are greater than 10 MMBtu/hr maximum rated heat input without prior written approval of the Agency. No oil fired boiler or space heater shall be installed or operated at the Facility that is greater than 1.6 MMBtu/hr maximum rated heat input without prior notification to the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-501 of the *Regulations*] [40 CFR Part 60 Subpart Dc and Part 63 Subpart JJJJJJ]~~

~~(53) Stack heights: The exhaust gases from all boilers and space heating units and all stationary and non-road diesel engines, excluding those powering trail groomers, earth-moving and materials handling equipment and small portable electric generators and compressors, shall be vented vertically through a stack which extends a minimum of (4) feet above the roof where the stack penetrates the roof. The stacks shall not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed rain cap of a type that has not been approved by the Agency.~~

~~For all other non-fugitive emission points at the Facility, the Agency recommends that they each be exhausted vertically through a stack(s) which extend a minimum of four (4) feet above the roof where the stack penetrates the roof and that they not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed rain cap of a type that has not been approved by the Agency. The Agency may require the Permittee to increase the stack height, remove a rain cap, or conduct a dispersion analysis to verify compliance with ambient air quality standards for any stack at the Facility if, in the judgment of the Agency, adequate dispersion cannot be maintained at the current stack configuration. Adequacy may in part be based on the actual emission rate of air contaminants, the characteristics of the current stack configuration, or inspections of the Facility that indicate poor dispersion or that confirm significant visible emissions or nuisance or odor beyond the property line. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-406 of the *Regulations*]~~

- Operational Limitations -

(54) Stationary and Non-Road Diesel Engines [Fuel Limit]: The annual fuel consumption in all stationary and non-road diesel engines operated at the Facility, including engines used for snowmaking operations, other engines used for non-emergency purposes, engines used for ski lift emergency evacuation and other non-road diesel engines including those powering trail groomers, earth-moving and materials handling equipment, and small portable electric generators and compressors, shall not exceed a combined 850,000 gallons per year, based upon any rolling twelve (12) consecutive calendar month period. Fuel used in on-highway equipment shall not be included in this total. [10 *V.S.A.* §§556(c) and 556a(d)] [Application for #AOP-14-003]

(55) Stationary Non-Emergency Diesel Engines: None of the engines installed for ski lift emergency evacuation purposes shall be used for non-emergency purposes such as peak shaving without the prior approval of the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-401(6)(c) and 5-501 of the *Regulations*] [application for #AOP-14-003]

(56) Stationary and Non-Road Diesel Engines [Fuel Specifications]: Stationary diesel engines subject to 40 *CFR* Part 60 Subpart IIII or the non-emergency unit provisions of 40 *CFR* Part 63 Subpart ZZZZ in addition to non-road engines certified under 40 CFR Part 89 or 40 CFR Part 1039, may only use ultra-low sulfur diesel (ULSD). ULSD has a maximum sulfur content of 0.0015 percent by weight (15 ppm).

Other diesel engines not subject to the above federal regulations may only use distillate or lighter grade fuel oils with a maximum sulfur content not to exceed 0.05 percent by weight (500 ppm) unless the Permittees obtain prior written approval from the Agency to use another type of fuel.

Unless otherwise further restricted above, commencing on July 1, 2018, the sulfur content of No.2 and lighter distillate oils shall not exceed 0.0015 percent by weight. [10 *V.S.A.*§556a(d)] [§§5-501 and 5-1015(a)(1) of the *Regulations*] [§5-221(1)(a) of the *Regulations*]

~~(57) Boilers and Space Heating Units [Fuel Limit, LPG]: The annual LPG fuel consumption in the boilers and space heaters at the Facility, as well as all other LPG stationary fuel burning equipment, shall not exceed a combined 500,000 gallons per calendar year. [10 *V.S.A.* §§556(c) and 556a(d)] [Application for #AOP-14-003]~~

~~(58) Boilers and Space Heating Units [Fuel Limit, Fuel Oil]: The annual fuel oil consumption in the boilers and space heaters at the Facility shall not exceed a combined 60,000 gallons per calendar year. [10 *V.S.A.* §§556(c) and 556a(d)] [Application for #AOP-14-003]~~

~~(59) Boilers and Space Heating Units [Fuel Specifications]: Only LPG or No. 2 fuel oil or lighter grade fuels with a maximum sulfur content not to exceed 0.05 percent by weight may be used as fuel in the Facility's boilers and space heating equipment unless the Permittee obtains prior written approval from the Agency to use another type of fuel.~~

~~Commencing on July 1, 2018, the sulfur content of No.2 and lighter distillate oils shall not exceed 0.0015 percent by weight. [10 *V.S.A.* §556a(d)] [§§5-501 and 5-1015(a)(1) of the *Regulations*] [§5-221(1)(a) of the *Regulations*]~~

~~(60) Stationary and Non-Road Diesel Engines: The Permittee shall not install or operate a stationary reciprocating internal combustion engine, as defined in the *Regulations*, unless the engine complies with §5-271 of the *Regulations* as may be applicable as well as any federal regulations including 40 *CFR* Part 60 Subpart IIII and 40 *CFR* Part 63 Subpart ZZZZ, as may be applicable. All engines, including emergency engines, installed on or after July 1, 2007 must comply with the applicable emission standards (Tier 2) of §5-271 immediately upon installation. Installation of any size engine, even those below 450 bhp, may still require approval from the Agency in the form of an amended permit prior to installation. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-271 and 5-501 of the *Regulations*]~~

(61) Stationary and Non-Road Diesel Engines: The Permittee shall install, operate and maintain each reciprocating internal combustion engine, and any after-treatment control device (if any), in accordance with the manufacturer's written instructions and in a manner consistent with good air pollution control practices for minimizing emissions. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-501 and 5-1015(a)(1) of the *Regulations*]

~~(62) Stationary Emergency Diesel Engines: Stationary emergency diesel engines, including those specified as such in Finding of Fact (A), shall be used only for emergency purposes and up to 100 hours per year for routine testing and maintenance. Emergency purposes include periods of time when:~~

~~(a) The usual source of power, heat or lighting is temporarily unavailable due to reasons beyond the reasonable control of the owner/operator;~~
~~(b) A fire or flood makes it necessary to pump water to minimize property damage.~~

~~In the event the Permittee must take action to restore the normal power source, the Permittee must take such action in a reasonable period of time. Emergency engines shall not be operated as part of any ISO or utility peaking or load shedding activities without the approval of the Agency. The definition of emergency use for applicability to federal regulations NSPS Subpart IIII and NESHAP Subpart ZZZZ may be different and the Permittee should consult those regulations directly for applicability to those respective regulations.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§§5-401(6)(c) and 5-501 of the *Regulations*]~~

~~(63) Open Burning: Open burning is prohibited except as provided for in §5-202 of the *Regulations*. Prior to conducting open burning of any material, other than leaves, brush, or tree cuttings from normal grounds maintenance, the Permittee shall contact the Air Pollution Control Officer and obtain approval for such burning, if required.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-202 of the *Regulations*]~~

- Emission Limitations -

(64) Stationary and Non-Road Diesel Engines [Snow Making Operations, Emission Limits]: Except as provided in condition (18) below, emissions of the following pollutants from all diesel engines used for snowmaking purposes, including air compressors and generators, whether owned, leased or rented, shall not exceed the following limits:

Pollutant Emission Limitations [1]	
Cummins Engines QSX15 Tier 4 final, or equivalent	Emission Limitations g/bhp-hr
Nitrogen oxides (as NO_2)	0.3
Carbon monoxide	2.6
Particulate matter	0.015

[1] bhp – brake horsepower rated output as specified by the manufacturer; g/bhp-hr - grams of pollutant emitted per brake horsepower hour at rated load and speed.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Methods 5, 7E, and 10 or equivalent methods approved in writing by the Agency at the rated load and speed of the engine. Alternatively, compliance may be demonstrated by verifying that the engine has met the engine certification requirements of 40 *CFR* Part 1039 for the Tier 4 final or better. [10 *V.S.A.* §556a(d)] [§§5-251(2), 5-271(b), 5-404 and 5-1010 of the *Regulations*]

(65) Stationary and Non-Road Diesel Engines [Other Non-emergency Units, Emission Limits]: Notwithstanding condition (17) above, up to 5,500 bhp of installed diesel engine capacity used for snowmaking purposes, including air compressors and generators, whether owned, leased or rented, shall need only comply with the following limits in place of those in condition (17):

Pollutant Emission Limitations [1]	
Snowmaking and non-emergency units Tier 3, or equivalent	Emission Limitations
	g/bhp-hr
Nitrogen oxides (as NO_2 + Hydrocarbons)	3.0
Carbon monoxide	2.6
Particulate matter	0.15

[1] bhp – brake horsepower rated output as specified by the manufacturer; g/bhp-hr - grams of pollutant emitted per brake horsepower hour at rated load and speed.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Methods 5, 7E, and 10 or equivalent methods approved in writing by the Agency at the rated load and speed of the engine. Alternatively, compliance may be demonstrated by verifying that the engine has met the engine certification requirements of 40 *CFR* Part 89 for the Tier 3 or better including Part 1039 for interim Tier 4 or Tier 4. [10 *V.S.A.* §556a(d)] [§§5-271(b), 5-404 and 5-1010 of the *Regulations*] [Application for #AOP-08-003]

~~(66) Particulate Matter: Emissions of particulate matter ("PM") from any fossil fuel burning device, except motorized vehicles, with a heat input rating of less than ten (10) million British Thermal Units per hour ("MMBTU/hr") shall not exceed 0.5 pounds per MMBTU.~~

~~Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 and Part 51, Appendix M, Reference Method 202, or equivalent methods approved in writing by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-231(3)(a)(i) and 5-404 of the *Regulations*]~~

~~(67) Visible Emissions [Facility Wide]: Emissions of visible air contaminants from any installation at the Facility, except where otherwise noted in this Permit, shall not exceed twenty (20) percent opacity for more than a period or periods aggregating six (6) minutes in any hour and at no time shall visible emissions exceed sixty (60) percent opacity.~~

~~Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 51, Appendix M, Methods 203B and 203C, respectively, or equivalent methods approved in writing by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-211(2), 5-211(3) and 5-404 of the *Regulations*]~~

~~(68) Hazardous Air Pollutants: Emission of federally regulated hazardous air pollutants (HAPs) from the Facility shall not equal or exceed eight (8) tons per year of any single HAP or twenty (20) tons per year of all HAPs combined per calendar year per year based on any rolling twelve (12) consecutive calendar month period. [40 *CFR* Part 63]~~

~~(69) Hazardous Air Contaminants: Emissions of state hazardous air contaminants (HACs) from the applicable operations at the Facility shall not equal or exceed their respective Action Level (found in Appendix C of the *Regulations*) unless the Agency has reviewed and approved such HAC emission under §5-261(2) of the *Regulations*. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-261 of the *Regulations*]~~

~~(70) Fugitive Particulate Matter Emissions: The Permittee shall take reasonable precautions at all times to control and minimize emissions of fugitive particulate matter from the operations at the Facility. This shall include but not be limited to the following: the use of wet suppression, calcium chloride applications or other dust control measures as necessary to minimize fugitive dust from all unpaved roads and traffic areas, aggregate handling operations and storage piles at the Facility. The paved portions of the haul roads and traffic areas shall be periodically sprayed with water and swept to prevent buildup of material that may generate fugitive dust emissions. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-231(4) of the *Regulations*]~~

~~(71) Nuisance and Odor: The Permittee shall not discharge, cause, suffer, allow, or permit from any source whatsoever such quantities of air contaminants, or odors beyond the property line of a premises, which will cause injury, detriment, nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which causes or has a natural tendency to cause injury or damage to business or property. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-241(1) of the *Regulations*]~~

- Record Keeping and Reporting -

(72) Records of Fuel Use [Stationary and Non-Road Diesel Engines]: The Permittee shall maintain records of the total quantity of fuel oil consumed in all stationary and non-road diesel engines at the Facility, including engines used for snowmaking operations, other engines used for non-emergency purposes, engines used for ski lift emergency evacuation and other non-road diesel engines including those powering trail groomers, earth-moving and materials handling equipment, and small portable electric generators and compressors, in gallons, each month. Fuel used in on-highway equipment shall not be included in this total.

At the beginning of each calendar year, the Permittee shall calculate the total combined quantity of fuel oil consumed in such diesel engine powered stationary and non-road engines equipment, in gallons, during the previous calendar year. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]

~~(73) Records of Fuel Use [Boilers and Space Heating Units]: The Permittee shall maintain records of the total combined quantity of LPG and fuel oil consumed in the boilers and space heating units, in gallons of each, each month. At the beginning of each calendar~~

~~year, the Permittee shall calculate the total quantity of LPG and fuel oil consumed in the boilers and space heating units, in gallons of each, during the previous calendar year.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]~~

~~(74) Records of Emergency Generator/Engine Usage: The Permittee shall maintain records in a log book, or electronic record system, of all hours of operation of each stationary emergency generator/engine and shall make such records available to the Agency upon request. The records shall include: the dates on which each engine was operated; the number of hours the engine was operated on the respective date, including the starting and ending hours shown on the engine's elapsed hour meter; the purpose of the operation be it emergency, testing or maintenance; and, if the purpose of the operation was for an emergency, the records shall include a brief description of the emergency and its cause.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]~~

~~(75) Records of Non-Emergency Generator/Engine Usage: For each non-emergency diesel generator/engine approved herein for limited hours of non-emergency usage such as non-emergency demand response or peak shaving, the Permittee shall maintain records in a log book, or electronic record system, of all hours of operation of each such stationary generator/engine and shall make such records available to the Agency upon request. The records shall include: the dates on which each engine was operated; the number of hours the engine was operated on the respective date, including the starting and ending hours shown on the engine's elapsed hour meter; and the purpose of the operation.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]~~

(76) Records of Fuel Oil Certifications: The Permittee shall obtain from the fuel supplier, for each shipment of fuel oil received at the Facility for use in the stationary and non-road diesel engines as well as boilers and space heating units, a certification or invoice regarding the sulfur content of the fuel oil. The certification or invoice shall include the date of delivery, name of the fuel oil supplier, fuel type, quantity of fuel oil delivered, and a statement from the fuel oil supplier that the oil complies with the specifications for Ultra Low Sulfur Diesel/Distillate per 40 CFR Part 80 80.510(b) or a statement as to the sulfur content of the fuel oil in percent sulfur by weight. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]

~~(77) Records Retention: All records shall be retained for a minimum period of five (5) years from the date of record and shall be made available to the Agency upon request.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§§5-402, 5-405(1) and 5-1015(a)(7) of the *Regulations*]~~

(78) Annual Reporting: Prior to each ski season the Permittee shall provide the Agency a written description of the following information for all diesel engines to be operated at the Facility for snowmaking purposes, including air compressors and generators, whether owned, leased or rented:

(a) A listing of each engine proposed to be operated at the Facility during the ski season;
(b) A summary of engine and emission specifications;
(c) A cumulative listing of the manufacturer's rated horsepower output of each engine with a certifying statement that the Facility-wide cumulative horsepower capacity for snowmaking operations does not exceed the limits specified in this Permit;

and

(d) A certification that all engine emission rates meet the respective emission limits outlined in this Permit.

[10 *V.S.A.* §556a(d)] [§§5-251(3), 5-271 and 5-404 of the *Regulations*]

~~(79) Notification: The Permittee shall notify the Agency in writing within ten (10) days of any violation, of which it is aware, of any requirements of this Permit. This notification shall include, at a minimum, the cause for the violation and corrective action or preventative maintenance taken to correct the violation. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-402 and 5-1015(a)(6) of the *Regulations*]~~

~~(80) Notification: The Permittee shall notify the Agency in writing of any proposed physical or operational change at the Facility which may increase the emission rate of any air contaminant to the ambient air regardless of any concurrent emission reductions that may be achieved. This notification requirement includes, but is not limited to, the proposed installation of any new equipment that is a source of air pollution, including the replacement of an existing permitted air pollution source. If the Agency determines that a permit amendment is required, a new application and the appropriate application fee shall be submitted. The permit amendment shall be obtained prior to commencing any such change except as may otherwise be allowed by the *Regulations*. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-402 and 5-501 of the *Regulations*]~~

~~(81) Annual Registration: The Permittee shall calculate the quantity of emissions of air contaminants from the Facility annually. If the Facility emits more than five (5) tons of any and all air contaminants per year, the Permittee shall register the source with the Secretary of the Agency (hereinafter "Secretary"), and shall renew such registration annually. Each day of operating a source which is subject to registration without a valid, current registration shall constitute a separate violation and subject the Permittee to civil penalties. The registration process shall follow the procedures set forth in Subchapter VIII of the *Regulations*, including the payment of the annual registration fee on or before May 15 of each year. [10 *V.S.A.* §§556(c) and 556a(d)] [Subchapter VIII §§5-802, 5-803, 5-807, 5-808 of the *Regulations*]~~

~~(82) All records, notifications and reports that are required to be submitted to the Agency by this Permit shall be submitted to:~~

~~Air Quality & Climate Division~~
~~Department of Environmental Conservation~~
~~Agency of Natural Resources~~
~~Davis 2~~
~~One National Life Drive~~
~~Montpelier, Vermont 05620-3802~~

~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-402 of the *Regulations*]~~

~~- Standard Permit Conditions -~~

~~(83) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Agency which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [10 V.S.A. §§556(c) and (g) and 556a(d)] [40 CFR Part 60.11(d) and 63.6(e)]~~

~~(84) Approval to construct or modify under this Permit shall become invalid if construction or modification is not commenced within eighteen (18) months after issuance of this Permit, if construction or modification is discontinued for a period of eighteen (18) months or more, or if construction is not substantially completed within a reasonable time. The Agency may extend any one of these periods upon a satisfactory showing that an extension is justified. The term "commence" as applied to the proposed construction or modification of a source means that the Permittee either has:~~

~~(a) Begun, or caused to begin, a continuous program of actual on-site construction or modification of the source, to be completed within a reasonable time; or~~
~~(b) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the Permittee, to undertake a continuous program of actual on-site construction or modification of the source to be completed within a reasonable time.~~

~~[10 *V.S.A.* §556(c)] [§5-501 of the *Regulations*]~~

~~(85) These Permit conditions may be suspended, terminated, modified, or revoked for cause and reissued upon the filing of a written request with the Secretary of the Agency (hereinafter "Secretary") or upon the Secretary's own motion. Any modification shall be granted only with the written approval of the Secretary. If the Secretary finds that modification is appropriate, only the conditions subject to modification shall be re-opened. The filing of a request for modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay any terms or conditions of this Permit. The Secretary may provide opportunity for public comment on any proposed modification of these conditions. If public comments are solicited, the Secretary shall follow the procedures set forth in 10 *V.S.A.* §556 and §556a, as amended. [10 *V.S.A.* §§556(d) and 556a(g)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]~~

~~(86) Cause for reopening, modification, termination and revocation of this Permit includes, but is not limited to:~~

~~(a) Inclusion of additional applicable requirements pursuant to state or federal law;~~
~~(b) A determination that the permit contains a material mistake or that inaccurate information was used to establish emissions standards or other terms or conditions of the operating permit;~~
~~(c) A determination that the operating permit must be modified or revoked to ensure compliance with applicable requirements;~~

~~(d) A determination that the subject source has failed to comply with a permit condition;~~

~~(e) For Title V subject sources, a determination by U.S. EPA that cause exists to terminate, modify, revoke or reissue an operating permit;~~

~~(f) Those causes which are stated as grounds for refusal to issue, renew or modify an operating permit under §5-1008(a) of the *Regulations*; or~~

~~(g) If more than three (3) years remain in the permit term and the source becomes subject to a new applicable requirement.~~

~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-1008(e)(4) of the *Regulations*]~~

~~(87) The Permittee shall furnish to the Agency, within a reasonable time, any information that the Agency may request in writing to determine whether cause exists to modify, revoke, reissue, or terminate the Permit or to determine compliance with this Permit. Upon request, the Permittee shall also furnish to the Agency copies of records required to be kept by this Permit. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-402 of the *Regulations*]~~

~~(88) By acceptance of this Permit, the Permittee agrees to allow representatives of the State of Vermont access to the properties covered by the Permit, at reasonable times, to ascertain compliance with Vermont environmental and health statutes and regulations and with this Permit. The Permittee also agrees to give the Agency access to review and copy any records required to be maintained by this Permit, and to sample or monitor at reasonable times to ascertain compliance with this Permit. [10 *V.S.A.* §§556(c), 556a(d) and 557] [§§5-402, 5-404, and 5-1015(a)(10) of the *Regulations*]~~

~~(89) All data, plans, specifications, analyses and other information submitted or caused to be submitted to the Agency as part of the application for this Permit or an amendment to this Permit shall be complete and truthful and, for Title V permit applications, certified by a responsible official whose designation has been approved by the Secretary. Any such submission which is false or misleading shall be sufficient grounds for denial or revocation of this Permit, and may result in a fine and/or imprisonment under the authority of Vermont statutes. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-505 and 5-1006(f) of the *Regulations*]~~

~~(90) For the purpose of establishing whether or not a person has violated or is in violation of any condition of this Permit, nothing in this Permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(91) Any permit noncompliance could constitute a violation of the federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]~~

~~(92) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Permit. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(93) No person shall build, erect, install or use any article, machine, equipment or other contrivances, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which otherwise would constitute a violation of these *Regulations*. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-403 of the *Regulations*]~~

~~(94) The provisions of this Permit are severable. If any provision of this Permit, or its application to any person or circumstances is held invalid, illegal, or unenforceable by a court of competent jurisdiction, the invalidity shall not apply to any other portion of this Permit which can be given effect without the invalid provision or application thereof. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(95) This Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize any injury to private property or any invasion of personal rights. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(96) All subsequent owners and/or operators of this Facility must request an amendment and transfer of this Permit prior to commencing any operations covered by this Permit. All subsequent owners and/or operators shall submit to the Agency as part of the request for amendment all such information the Agency deems necessary to establish legal ownership and/or interest in the property and all such information the Agency deems necessary to ensure the new owners and/or operators will construct and operate the Facility in compliance with the *Regulations* and this Permit. The terms and conditions of this Permit shall remain in full force and effect after submittal of the request for amendment and until the issuance of an amended Permit or denial. Should the Secretary deny the request, the new owner and/or operator must take whatever action is necessary to comply with the denial. [10 *V.S.A.* §§556 and 556a] [§§5-501, 5-1004, and 5-1013(a) of the *Regulations*]~~

~~(97) Renewable Energy Projects – Right to Appeal to Public Service Board. If this decision relates to a renewable energy plant for which a certificate of public good is required under 30 V.S.A. §248, any appeal of this decision must be filed with the Vermont Public Service Board pursuant to 10 V.S.A. §8506. This section does not apply to a facility that is subject to 10 V.S.A. §1004 (dams before the Federal Energy Regulatory Commission), 10 V.S.A. §1006 (certification of hydroelectric projects) or 10 V.S.A. Chapter 43 (dams). Any appeal under this section must be filed with the Clerk of the Public Service Board within 30 days of the date of this decision; the appellant must file with the Clerk an original and six copies of its appeal. The appellant shall provide notice of the filing of an appeal in accordance with 10 V.S.A. 8504(c)(2), and shall also serve a copy of the Notice of Appeal on the Vermont Department of Public Service. For further information, see the Rules and General Orders of the Public Service Board, available on line at www.psb.vermont.gov. The address for the Public Service Board is 112 State Street, Montpelier, Vermont, 05620-2701 (Tel. # 802-828-2358). [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(98) All Other Projects – Right to Appeal to Environmental Court. Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must~~

~~give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings, available on line at www.vermontjudiciary.org. The address for the Environmental Court is 2418 Airport Road, Suite 1, Barre, VT 05641 (Tel. # 802-828-1660).~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(99) This Operating Permit shall expire as indicated on the cover page to this Permit. The Permittee shall submit to the Agency a complete application for renewal of the Operating Permit at least six (6) months before the expiration of the Operating Permit. If a timely and administratively complete application for an operating permit renewal is submitted to the Secretary, but the Secretary has failed to issue or deny such renewal before the end of the term of this Operating Permit, then the Permittee may continue to operate the subject source and all terms and conditions of this Operating Permit shall remain in effect until the Secretary has issued or denied the operating permit renewal. However, this Operating Permit shall automatically expire if, subsequent to the renewal application being determined or deemed administratively complete pursuant to §5-1006 of the *Regulations*, the Permittee fails to submit any additional information required by the Secretary as well as information pertaining to changes to the Facility within thirty (30) days or such other period as specified in writing by the Secretary.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§§5-1011 and 5-1012(a) of the *Regulations*] [§§5-1005(c) and 5-1012 of the *Regulations*]~~

~~(100) The conditions of this Permit as set forth above supersede all conditions contained in all prior Permits issued by the Agency to the Permittee for this Facility.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)]~~

~~The Agency's issuance of this Air Pollution Control Permit relies upon the data, judgment, and other information supplied by the Permittee. The Agency makes no assurances that the air contaminant source approved herein will meet performance objectives or vendor guarantees supplied to the source Permittee. It is the sole responsibility of the Permittee to operate the source in accordance with the conditions herein and with all applicable state and federal standards and regulations.~~

~~Permit issued and effective this _____ day of _____, 2018.~~

~~Permit Issuance authorized by:~~

~~Emily Boedecker, Commissioner~~
~~Department of Environmental Conservation~~
~~Agency of Natural Resources~~

~~By: _____~~
~~Heidi C. Hales, Director Date Signed~~
~~Air Quality & Climate Division~~

~~de~~
~~Y:AP Admin\StationaryFacilities\Killington~~

Appendix F: Okemo Limited Liability Company

Operating Permit RACT provisions

AOP-04-029

Issued on February 26, 2006

Only portions highlighted are intended for inclusion in the SIP.

Strikeout text is not intended for inclusion in SIP.

~~#AOP-14-034~~
~~DEC#NS77-0001~~
~~Operating Permit Expiration Date: February 15, 2023~~

~~State of Vermont~~
~~Agency of Natural Resources~~
~~Department of Environmental Conservation~~

~~Air Quality & Climate Division~~
~~Montpelier, Vermont~~

~~AIR POLLUTION CONTROL PERMIT TO CONSTRUCT AND OPERATE~~

~~Date Permit Issued: February 15, 2018~~

~~Owner/Operator:~~ ~~Okemo Limited Liability Company~~
~~77 Okemo Ridge Road~~
~~Ludlow, Vermont 05149~~

~~Source:~~ ~~Ski Resort Operations~~
~~Okemo Mountain Resort~~
~~77 Okemo Ridge Road~~
~~Ludlow, Vermont~~

~~FINDINGS OF FACT~~

~~(A) FACILITY DESCRIPTION~~

~~Okemo Limited Liability Company (also referred to herein as "Permittee") owns and operates the Okemo ski resort recreational facility located at 77 Okemo Ridge Road in the town of Ludlow, Vermont (also referred to herein as "Facility"). The Facility consist of mixed-use development that combines ski resort operations, lodging, and various commercial activities. The diesel powered air compressors and generators for snowmaking operations are the primary source of air emissions at the Facility. The Facility also includes numerous ski lift emergency backup engines for operation of the ski lifts during emergency power outages and numerous small distillate and propane space heating units in the lodges and ancillary buildings at the Facility. The Facility has approval for up to 18,500 bhp of diesel engine capacity for snowmaking operations and other non-emergency stationary engines and up to 850,000 gallons per year of diesel fuel usage in all the stationary and non-road engines combined at the two Facility locations, including fuel used in the emergency ski lift engines and trail groomers. All other potential air contaminant sources at the Facility are considered insignificant.~~

~~As part of this Permit to Operate renewal, the Agency is re-evaluating the prior NOx RACT determination under 5-251(2) of the *Vermont Air Pollution Control Regulations* due to adoption of revised ozone National Ambient Air Quality Standards in 2008 and 2015. The Agency has determined that NOx RACT will now be achieved by use of EPA Tier 4 emission certified engines for all snowmaking and non-emergency engine operations, except that up to 5,500 bhp of Tier 2, or better, engines may be used such as for the generators for the Base Pump Station and Black River Pump Station. Any new or replacement engine installed for ski lift emergency evacuation shall at a minimum comply with the US EPA non-road new emergency engine emission standards of 40 CFR Part 89 and 1039 in effect at time of installation (currently Tier 2 for engines greater than 750 bhp and Tier 3 for engines less than 750 bhp) and should be Tier 4 emission certified when feasible.~~

~~Upon issuance of this Permit, the approved regulated operations at the Facility include the following air pollution related operations, equipment and emission control devices:~~

~~Equipment Specifications~~			
~~Source~~	~~Make and model~~	~~BHP[5]~~	~~Date Installed~~
~~Diesel Engines for Snowmaking Operations[1]~~	~~±20 Cummins QSX15 560-600 bhp Tier 4 emission certified, or equivalent, for all except:~~ ~~Up to 5,500 bhp total capacity of Tier 2 emission certified, or equivalent, including ±2 Caterpillar 3516C 2722 bhp Tier 2 emission certified.~~	~~18,500 combined Facility total~~	~~Leased annually~~
	~~Caterpillar 3516 with aftermarket SCR~~	~~1,480~~	~~1993 (Removed 2017)~~
~~Other Diesel Engines for Non-emergency Operation:[2]~~	~~None currently~~	~~na~~	~~na~~
~~Diesel/Propane Engines for Emergency Only Operation, including but not limited to:[3]~~	~~±Fourteen (14) ski lift emergency evacuation engines~~	~~Various~~	~~All prior to permit issuance~~
	~~±Five (5) propane fired emergency gen sets (not owned/operated by Okemo)~~	~~< 40 bhp each~~	~~Varies~~
~~Other Fuel Combustion Sources for Space Heating, including but not limited to:[4]~~	~~±One (1) small distillate oil fired space heating unit~~	~~Total combined capacity less than 15 MMBtu/hr[6] and all oil units individually rated at less than 1.6 MMBtu/hr[6]~~	~~Varies~~
	~~±Forty-nine (49) small propane fired space heating units~~		
~~Various non-road diesel engines including those powering trail groomers, earth-moving and materials handling equipment and small portable electric generators and compressors.~~		~~Various~~	~~Varies~~

~~[1] The engine used to power equipment for snow making operations, both compressors and generators, are leased each year. Therefore the number and make of these leased engines are subject to change each year. The 18,500 bhp limit is based on AOP-10-045 and its limits of 11,515 bhp of leased engines, 5,500 bhp of leased generators, and 1,480 bhp from existing SCR equipped unit. In accordance with the Permit herein the engines must, at a minimum, be certified to meet the Tier 4 full emission standards of 40 CFR Part 1039 or the equivalent, with up to 5,500 bhp certified to meet the Tier 2 emission standards of 40 CFR Part 89, or the equivalent.~~
~~[2] All non-emergency units must be included in the 18,500 bhp combined Facility total bhp capacity cap.~~
~~[3] Each engine has a bhp capacity of less than 600 with a total combined capacity of less than 3,289.~~
~~[4] Replacement of heating equipment less than 1.6 MMBtu/hr of heat input with a similar sized unit does not require approval from the AQCD.~~
~~[5] BHP – brake horsepower rated output as specified by the manufacturer.~~
~~[6] MMBtu/hr – million British thermal units per hour maximum rated heat input.~~

~~(B) FACILITY CLASSIFICATION~~

~~The Facility is classified as a source of air contaminants pursuant to Title 10 of the *Vermont Statutes Annotated* ("10 *VSA*") §555 and §5-401(6)(c) [Fuel burning installations] of the *Vermont Air Pollution Control Regulations* (hereinafter "*Regulations*"). In addition, §5-101 of the *Regulations* defines a *stationary source* as any structure(s), equipment, installation(s), or operation(s), or combination thereof, which emit or may emit any air contaminant, which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person or persons under common control. Based on this definition, all of the equipment, operations, and structures at the Facility are grouped together by the Agency of Natural Resources, Department of Environmental Conservation, Air Quality & Climate Division (hereinafter "Agency") as one stationary air contaminant source for purposes of review under the *Regulations*.~~

~~While some of the portable diesel-powered equipment at the Facility, potentially including but not limited to trail groomers, earth moving and materials handling equipment, portable electrical generators and portable air compressors, may be classified as non-road engines under Federal air quality regulations, the operation of this non-road equipment within the confines of the Facility satisfies the requirements of a source that may be regulated by the Agency under the authority of 10 *VSA* §555 and §5-401(5) and (6)(c) of the *Regulations*.~~

~~(C) PRIOR AGENCY ACTIONS/APPROVALS~~

~~The Facility has been issued the following "Permit to Construct" approvals pursuant to 10 *VSA* §556 and §5-501 and/or 5-502 of the *Regulations* and the following "Permit to Operate" approvals pursuant to 10 *VSA* §556a and Subchapter X of the *Regulations*.~~

~~**Prior Agency Permit Approvals and Actions**~~	
~~Date of Action~~	~~Description of Agency Approval/Action~~
~~September 5, 2000~~	~~#OP-99-013 - Initial Title V Permit to Operate for existing ski resort snowmaking operations for a total snowmaking engine capacity of 18,500 bhp. NOx RACT established requiring SCR on one engine and replacement of all others per schedule with Tier 2 or better by July 1, 2007.~~
~~February 28, 2006~~	~~#AOP-04-029 – Permit to Operate renewal and Permit to Construction approval for installation of two 2,146 bhp generators to be operated no more than 1500 hours each.~~
~~November 17, 2009~~	~~#AOP-04-029a – Minor amendment in response to May 26, 2009 NOAV for stack heights, compliance schedule and reporting period.~~
~~October 15, 2010~~	~~#AOP-09-042 – Permit to Operate renewal and revision of NOx RACT to require Tier 3 or better except for two Tier 2 generators. As a result of permit Facility is no longer Title V.~~
~~November 29, 2010~~	~~#AOP-10-045 – Permit to Operate renewal and Permit to Construct approval to increase generator capacity to 5,500 bhp and adjust SCR catalyst maintenance schedule.~~

~~(D) FACILITY PERMIT APPLICABILITY~~

~~As noted above, the Facility is classified as a source of air contaminants under §5-401 of the *Regulations* Pursuant to 10 *VSA* §556a and Subchapter X of the *Regulations* a Permit to Operate is required for any air contaminant source with allowable emissions of all air contaminants combined of ten (10) tons per year ("tpy") or more or that is otherwise subject to Title 40 *Code of Federal Regulations* ("40 *CFR*") Part 70.~~

~~The Facility currently operates under a Permit to Operate issued on November 29, 2010. The allowable emissions from the Facility are estimated to be greater than the ten (10) tpy combined threshold for applicability with Subchapter X of the *Regulations*, but each pollutant is less than the one-hundred (100) tpy single pollutant threshold (50 tpy for VOC) for applicability to Title V of the federal Clean Air Act. Therefore, pursuant to §§5-1002, 5-1003, and 5-1005 of the *Regulations* the Facility is classified as a "Subchapter X Major Source". In accordance with §5-1009 of the *Regulations*, the agency is issuing the Permit to Operate herein as a renewal of the previous Permit to Operate for the Facility and the Permit herein supersedes all prior Permits for the Facility.~~

~~In accordance with 10 *VSA* §556(e) the Agency has combined the previous Permit to Construct and the Permit to Operate renewal for this Facility into one combined Permit to Construct and Operate. The allowable emissions for the Facility are summarized below:~~

~~**Allowable Air Contaminant Emissions (tons/year)[1]**~~					
~~**$PM/PM_{10}/PM_{2.5}$**~~	~~**CO**~~	~~**NO_x**~~	~~**SO_2[3]**~~	~~**VOCs**~~	~~**HAPs[2]**~~
~~1.8~~	~~47.3~~	~~41.2~~	~~0.1~~	~~1.0~~	~~<8/20~~

~~[1] $PM/PM_{10}/PM_{2.5}$ – total particulate matter, total particulate matter of 10 micrometers in size or smaller and total particulate matter of 2.5 micrometers in size or smaller, respectively. Unless otherwise specified, all PM is assumed to be $PM_{2.5}$; SO_2 - sulfur dioxide; NO_x - oxides of nitrogen measured as NO_2 equivalent; CO - carbon monoxide; VOCs - volatile organic compounds; HAPs - hazardous air pollutants as defined in §112 of the federal Clean Air Act.~~

~~[2] A stationary source with potential emissions of 10 tons per year or greater of any single HAP or 25 tons per year or greater of all HAPs combined is considered a major source of HAPs under §112 of the federal Clean Air Act. Any stationary source with potential emissions of 8 tons per year or greater of any single HAP or 20 tons per year or greater of all HAPs combined is considered a synthetic minor source. The Facility is limited by the Permit herein to less than thresholds for a synthetic minor source. Actual total combined HAPs from the Facility are estimated at <1 tpy. This Permit does not explicitly authorize emissions up to this level since any increase in actual HAP emissions may be subject to §5-261 and 5-501 of the Regulations as applicable.~~

~~[3] Commencing July 1, 2018 the allowed sulfur content of distillate fuel oils, No. 4 residual fuel oil and No. 6 residual fuel oils will decrease to 0.0015%, 0.25% and 0.5% by weight respectively, potentially further decreasing Facility allowed SO_2 emissions unless otherwise already restricted by the Permit herein.~~

~~(E) REVIEW OF CRITERIA POLLUTANT EMISSIONS FOR THE PERMIT TO CONSTRUCT~~

~~(a) New Source Review Designation~~

~~The Permittee has not proposed any modifications to the Facility in conjunction with the review for this Permit to Operate and therefore is not subject to review under the New Source Review requirements in §5-501 or §5-502 of the *Regulations* at this time.~~

~~(b) Most Stringent Emission Rate~~

~~The Permittee has not proposed any modifications to the Facility in conjunction with the review for this Permit to Operate and therefore is not subject to review under the MSER requirements in §5-502 of the *Regulations* at this time. In addition, there have been no prior MSER evaluations conducted for any of the previous modifications to the Facility.~~

~~(c) Ambient Air Quality Impact Evaluation~~

~~An ambient air quality impact evaluation for criteria pollutants is performed to demonstrate whether or not a proposed project will cause or contribute to violations of the national ambient air quality standards and/or significantly deteriorate existing air quality for the regulated criteria pollutants.~~

~~The Permittee has not proposed any modifications to the Facility in conjunction with the review for this Permit to Operate and therefore is not subject to an air quality impact analysis under §5-501 of the *Regulations* at this time. In addition, there have been no prior ambient air quality impact evaluations conducted for any of the previous modifications to the Facility.~~

~~(F) REVIEW OF CRITERIA POLLUTANT EMISSIONS FOR THE PERMIT TO OPERATE~~

~~(a) Applicable Requirements~~

~~The operations at the Facility are subject to the following state and federal laws and regulations, the requirements of which are embodied in the conditions of this Permit.~~

~~(iii) *Vermont Air Pollution Control Regulations*:~~

~~**Applicable Requirements from the Vermont Air Pollution Control Regulations**~~
~~Section 5-201 – Prohibition of Open Burning~~
~~Section 5-211(2) - Prohibition of Visible Air Contaminants, Installations Constructed Subsequent to April 30, 1970.~~

~~**Applicable Requirements from the Vermont Air Pollution Control Regulations**~~
~~Section 5-221(1) - Prohibition of Potentially Polluting Materials in Fuel, Sulfur Limitation in Fuel.~~
~~Section 5-231(3) - Prohibition of Particulate Matter; Combustion Contaminants.~~
~~Section 5-231(4) - Prohibition of Particulate Matter; Fugitive Particulate Matter.~~
~~Section 5-241 – Prohibition of Nuisance and Odor.~~
~~Section 5-251(2) – Control of Nitrogen Oxides Emissions; reasonably available control technology for large stationary sources.~~
~~Section 5-271 – Control of Air Contaminants from Stationary Reciprocating Internal Combustion Engines.~~
~~Section 5-402 – Written Reports When Requested.~~
~~Section 5-403 – Circumvention.~~
~~Section 5-404 – Methods for Sampling and Testing of Sources.~~
~~Section 5-405 – Required Air Monitoring.~~
~~Section 5-406 – Required Air Modeling.~~
~~Subchapter VIII – Registration of Air Contaminant Sources.~~
~~Subchapter X – Operating Permits.~~

~~(ii) Reasonably Available Control Technology - §5-251(2) and 5-1010 of the *Regulations*~~

~~The Facility currently operates under a NOx RACT determination made under 5-251(2) of the *Vermont Air Pollution Control Regulations* as part of the Permit to Construct and Operate #AOP-10-045 issued November 29, 2010. Once a facility is subject to this regulation it remains subject even if its emission later fall below the applicability level. As part of this Permit to Operate renewal, the Agency is re-evaluating the prior NOx RACT determination due to adoption of revised ozone National Ambient Air Quality Standards in 2008 and 2015. The Agency has determined that NOx RACT will now be achieved by use of EPA Tier 4 emission certified engines for all snowmaking and non-emergency engine operations, except that up to 5,500 bhp of Tier 2, or better, engines may be used such as for the generators for the Base Pump Station and Black River Pump Station. As existing ski lift emergency evacuation engines are replaced at the Facility they shall at a minimum comply with the US EPA non-road new emergency engine emission standards of 40 CFR Part 89 and 1039 in effect at time of installation (currently Tier 2 for engines greater than 750 bhp and Tier 3 for engines less than 750 bhp) and should be Tier 4 emission certified when feasible.~~

~~In addition, pursuant to 10 *VSA* §556a(d) and §5-1010 of the *Regulations* the Agency may establish and include within any Permit to Operate emission control requirements based on Reasonably Available Control Technology ("RACT"). Consistent with the determination under 5-251(2) of the *Regulations* above, the Agency has revised the RACT determination for NOx.~~

~~(iii) Existing Air Pollution Control Permit to Construct and/or Operate~~

~~The Facility currently operates under the confines of a Permit to Construct issued on November 29, 2010 (#AOP-10-045). The conditions within that existing permit are considered applicable requirements pursuant to §5-1002 of the *Regulations*. The requirements of that permit which are not being modified herein are incorporated into this new combined Permit to Construct and Operate (#AOP-14-034).~~

~~(iv) Federal Requirements:~~

~~**Applicable Requirements from Federal Regulations and the Clean Air Act**~~
~~40 *CFR* Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units. Applies to all boilers with a heat input rating of 10 MMBTU/hr or greater manufactured or modified after June 9, 1989. Units larger than 30 MMBTU per hour installed after February 27, 2005 are subject to additional particulate matter requirements.~~ ~~*The Facility is not subject to this regulation as the Facility has no boilers of 10 MMBtu/hour or greater.*~~
~~40 *CFR* Part 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers. Applies to new and existing fuel oil and solid fuel fired boilers located at area sources (major sources are subject to Subpart DDDDD). Natural gas or propane fired boilers are not subject. This gas exemption allows use of backup fuel during gas curtailments and up to 48 hours of elective use. Oil fired hot water boilers less than 1.6 MMBTU/hr are not subject. The rule requires a tune-up for each boiler once every two years except boilers with oxygen trim and oil boilers less than 5 MMBTU/hr must conduct tune-ups every five years. New boilers greater than 10 MMBTU/hr are subject to PM emission limits. Boilers that commenced construction on or before June 4, 2010 are considered an existing source.~~ ~~*Since Vermont has not taken delegation of this federal regulation, the U.S. EPA is the implementing authority and is responsible for determining applicability of this regulation. Subpart JJJJJJ is not anticipated to apply to the Facility as most boilers are propane fired and the one oil boiler is less than 1.6 MMBtu/hour. Since the Facility is not a major source of HAPs, the Facility is not subject to Subpart DDDDD.*~~
~~40 CFR Part 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Applies to CI RICE model year 2007 and later as well as those ordered after July 11, 2005 and with an engine manufacture date after April 1, 2006. This standard also applies to stationary CI RICE that are modified or reconstructed after July 11, 2005. This regulation established emission rates~~

~~Applicable Requirements from Federal Regulations and the Clean Air Act~~
~~for affected engines, requires routine engine maintenance and sets maximum sulfur content for the diesel fuel. Beginning October 1, 2010 applicable engines shall only use diesel fuel with a maximum sulfur content of 15 ppm (ULSD).~~ ~~*Since Vermont has not taken delegation of this federal regulation, the U.S. EPA is the implementing authority and is responsible for determining applicability of this regulation. Subpart IIII is anticipated to apply to the leased engines for snowmaking and the ski lift emergency evacuation engines as the older units are replaced with newer units.*~~
~~40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. Applies to new spark ignition engines installed after June 12, 2006. Engines greater than 100 bhp firing landfill or digester gas must meet emission limits for NOx, CO and VOC and, for units 500 bhp and less, shall have a on-time compliance test and, for units greater than 500 bhp, shall have a compliance test at least once every 8,760 hours of operation or every 3 years, whichever occurs first.~~ ~~*Since Vermont has not taken delegation of this federal regulation, the U.S. EPA is the implementing authority and is responsible for determining applicability of this regulation. Subpart JJJJ is not anticipated to apply to the Facility as they do not own or operate any gas fired engines. The gas fired engines are owned and operated by others such as condo association and are not part of the Facility stationary source.*~~
~~40 *CFR* Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. Applies to new engines that commenced construction (installed) on or after June 12, 2006 at area sources of HAPs. Requires such engines to comply with NSPS Subpart IIII or JJJJ, as applicable. Also applies to existing engines that commenced construction (installed) prior to June 12, 2006 at area sources of HAPs. By May 3, 2013 requires engines equal and greater than 300 bhp to meet CO emission standards which may necessitate catalytic controls, must install crankcase ventilation system, and requires ULSD fuel. Engines <300 bhp need only meet maintenance requirements including changing oil & filter and, inspecting and replacing if necessary, air filter, hoses and belts. Does not apply to existing emergency units at an area source residential/commercial/institutional facility unless they are enrolled in demand response programs. Subject emergency units are subject to maintenance requirements, must install an elapsed hour meter and must use ULSD commencing January 1, 2015 if used for DR. For engines firing landfill or digester gas comprising 10% or more of the heat input, the engines are subject to management practices only (change oil & filter, inspect plugs, and inspect hoses and belts every 1440 hours or annually, whichever occurs first) as well as operating in accordance with manufacturer's recommendations and minimizing time at idle.~~ ~~*Since Vermont has not taken delegation of this federal regulation, the U.S. EPA is the implementing authority and is responsible for determining applicability of this regulation. Subpart ZZZZ is anticipated to apply to all the engines at this Facility. The leased engines are anticipated to comply with the new engine requirements of Subpart ZZZZ by complying with Subpart IIII. The ski lift emergency evacuation engines are not exempt as residential/commercial/institutional units and are anticipated to comply with the existing emergency engine requirements of Subpart ZZZZ. No existing (~pre2006) 4Z engines are operated for non-emergency purposes.*~~

~~(b) Non-Applicable Requirements~~

~~Pursuant to §5-1015(a)(14) of the *Regulations*, an owner or operator of a Facility may request a permit shield from specific state or federally enforceable regulations and standards which are not applicable to the source. The applicant has not requested such a permit shield in accordance with the requirements of §5-1015(a)(14) of the *Regulations*.~~

~~(G) CONTROL OF HAZARDOUS AIR CONTAMINTANTS~~

~~Pursuant to §5-261 of the *Regulations*, any stationary source subject to the rule[3] with current or proposed actual emissions of a hazardous air contaminant (HAC) equal to or greater than the respective Action Level (found in Appendix C of the *Regulations*) shall be subject to the Regulation and shall achieve the Hazardous Most Stringent Emission Rate (HMSER) for the respective HAC. HMSER is defined as a rate of emissions which the Secretary, on a case-by-case basis, determines is achievable for a stationary source based on the lowest emission rate achieved in practice by such a category of source and considering economic impact and cost. HMSER may be achieved through application of pollution control equipment, production processes or techniques, equipment design, work practices, chemical substitution, or innovative pollution control techniques.~~

~~Based on information provided by the Permittee, the Agency does not anticipate the Facility to have regulated emissions of any HAC in excess of an Action Level. Therefore, the Facility is not being reviewed pursuant to §5-261 of the *Regulations* at this time.~~

[3] APCR §5-261(1)(c)(ii) provides that solid fuel burning equipment (not including incinerators) installed or constructed prior to January 1, 1993, and all fuel burning equipment which combust virgin liquid or gaseous fuel shall not be subject to the requirements of §5-261.

~~Based on the Agency's review of the Facility's application and the above Findings of Fact, the Agency concludes that the Facility, subject to the following Permit conditions, complies with all applicable state and federal air pollution control laws and regulations or is subject to an acceptable schedule of compliance. Therefore, pursuant to 10 *VSA* §§556 and 556a, as amended, the Agency hereby issues a Permit approving the Facility, as described in the above Findings of Fact, subject to the following:~~

~~PERMIT CONDITIONS~~

~~- Construction and Equipment Specifications -~~

(101) ~~The Permittee shall construct and operate the Facility in accordance with the plans and specifications submitted to the Agency and in accordance with the conditions set forth herein, including the equipment specifications as listed in Findings of Fact (A) or their equivalent as approved by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-501(1) of the *Regulations*]~~

(102) Stationary and Non-Road Diesel Engines: All diesel engines used for snowmaking purposes, including air compressors and generators, whether owned, leased or rented, shall at a minimum comply with the Federal non-road engine Tier 4 final emission standards of 40 CFR Part 1039, or the equivalent as approved by the Agency, with the exception that up to 5,500 bhp of installed capacity may comply with the Federal non-road engine Tier 2 emission standards of 40 CFR Part 89, or the equivalent as approved by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-251(2) and 5-1010 of the *Regulations*] [Application for #AOP-10-045]

(103) Stationary and Non-Road Diesel Engines: The total installed capacity of all diesel engines used for snowmaking purposes, including air compressors and generators, as well as all other diesel engines used for non-emergency purposes but excluding those powering trail groomers, earth-moving and materials handling equipment and small portable electric generators and compressors, shall not exceed 18,500 brake horsepower combined at any one time. [10 *V.S.A.* §556a(d)] [§5-501(1) of the *Regulations*] [Application for # AOP-10-045]

(104) Stationary and Non-Road Diesel Engines: No stationary or non-road diesel engine shall be installed or operated at the Facility, except those engines identified in Finding of Fact (A), without the prior written approval of the Agency. Any new or replacement engine installed for ski lift emergency evacuation shall at a minimum comply with the US EPA non-road new emergency engine emission standards of 40 CFR Part 89 and 1039 in effect at time of installation (currently Tier 2 for engines greater than 750 bhp and Tier 3 for engines less than 750 bhp) and should be Tier 4 emission certified when feasible. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-251(2), 5-501 and 5-1010 of the *Regulations*]

~~(105) Boilers and Space Heating Units: No boilers or space heaters of any fuel type shall be installed or operated at the Facility that are greater than 10 MMBtu/hr maximum rated heat input without prior written approval of the Agency. No oil fired boiler or space heater shall be installed or operated at the Facility that is greater than 1.6 MMBtu/hr maximum rated heat input without prior notification to the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-501 of the *Regulations*] [40 CFR Part 60 Subpart Dc and Part 63 Subpart JJJJJJ]~~

~~(106) Stack heights: The exhaust gases from all boilers and space heating units and all stationary and non-road diesel engines, excluding those powering trail groomers, earth-moving and materials handling equipment and small portable electric generators and compressors, shall be vented vertically through a stack which extends a minimum of (4) feet above the roof where the stack penetrates the roof. The stacks shall not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed rain cap of a type that has not been approved by the Agency.~~

~~For all other non-fugitive emission points at the Facility, the Agency recommends that they each be exhausted vertically through a stack(s) which extend a minimum of four (4) feet above the roof where the stack penetrates the roof and that they not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed rain cap of a type that has not been approved by the Agency. The Agency may require the Permittee to increase the stack height, remove a rain cap, or conduct a dispersion analysis to verify compliance with ambient air quality standards for any stack at the Facility if, in the judgment of the Agency, adequate dispersion cannot be maintained at the current stack configuration. Adequacy may in part be based on the actual emission rate of air contaminants, the characteristics of the current stack configuration, or inspections of the Facility that indicate poor dispersion or that confirm significant visible emissions or nuisance or odor beyond the property line. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-406 of the *Regulations*]~~

- Operational Limitations -

(107) Stationary and Non-Road Diesel Engines [Fuel Limit]: The annual fuel consumption in all stationary and non-road diesel engines operated at the Facility, including engines used for snowmaking operations, other engines used for non-emergency purposes, engines used for ski lift emergency evacuation and other non-road diesel engines including those powering trail groomers, earth-moving and materials handling equipment, and small portable electric generators and compressors, shall not exceed a combined 850,000 gallons per year, based upon any rolling twelve (12) consecutive calendar month period. Fuel used in on-highway equipment shall not be included in this total. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-251(2) and 5-1010 of the *Regulations*] [Application for #AOP-14-034]

(108) Stationary Non-Emergency Diesel Engines: None of the engines installed for ski lift emergency evacuation purposes shall be used for non-emergency purposes such as peak shaving without the prior approval of the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-401(6)(c) and 5-501 of the *Regulations*] [application for #AOP-14-034]

(109) Stationary and Non-Road Diesel Engines [Fuel Specifications]: Stationary diesel engines subject to 40 *CFR* Part 60 Subpart IIII or the non-emergency unit provisions of 40 *CFR* Part 63 Subpart ZZZZ in addition to non-road engines certified under 40 CFR Part 89 or 40 CFR Part 1039, may only use ultra-low sulfur diesel (ULSD). ULSD has a maximum sulfur content of 0.0015 percent by weight (15 ppm).

Other diesel engines not subject to the above federal regulations may only use distillate or lighter grade fuel oils with a maximum sulfur content not to exceed 0.05 percent by weight (500 ppm) unless the Permittees obtain prior written approval from the Agency to use another type of fuel.

Unless otherwise further restricted above, commencing on July 1, 2018, the sulfur content of No.2 and lighter distillate oils shall not exceed 0.0015 percent by weight. [10 *V.S.A.*§556a(d)] [§§5-501 and 5-1015(a)(1) of the *Regulations*] [§5-221(1)(a) of the *Regulations*]

~~(110) Boilers and Space Heating Units [Fuel Limit, LPG]: The annual LPG fuel consumption in the boilers and space heaters at the Facility, as well as all other LPG stationary fuel burning equipment, shall not exceed a combined 600,000 gallons per calendar year. [10 *V.S.A.* §§556(c) and 556a(d)] [Application for #AOP-14-034]~~

~~(111) Boilers and Space Heating Units [Fuel Limit, Fuel Oil]: The annual fuel oil consumption in the boilers and space heaters at the Facility shall not exceed a combined 25,000 gallons per calendar year. [10 *V.S.A.* §§556(c) and 556a(d)] [Application for #AOP-14-034]~~

~~(112) Boilers and Space Heating Units [Fuel Specifications]: Only LPG or No. 2 fuel oil or lighter grade fuels with a maximum sulfur content not to exceed 0.05 percent by weight may be used as fuel in the Facility's boilers and space heating equipment unless the Permittee obtains prior written approval from the Agency to use another type of fuel.~~

~~Commencing on July 1, 2018, the sulfur content of No.2 and lighter distillate oils shall not exceed 0.0015 percent by weight. [10 *V.S.A.* §556a(d)] [§§5-501 and 5-1015(a)(1) of the *Regulations*] [§5-221(1)(a) of the *Regulations*]~~

~~(113) Stationary and Non-Road Diesel Engines: The Permittee shall not install or operate a stationary reciprocating internal combustion engine, as defined in the *Regulations*, unless the engine complies with §5-271 of the *Regulations* as may be applicable as well as any federal regulations including 40 *CFR* Part 60 Subpart IIII and 40 *CFR* Part 63 Subpart ZZZZ, as may be applicable. All engines, including emergency engines, installed on or after July 1, 2007 must comply with the applicable emission standards (Tier 2) of §5-271 immediately upon installation. Installation of any size engine, even those below 450 bhp, may still require approval from the Agency in the form of an amended permit prior to installation. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-271 and 5-501 of the *Regulations*]~~

(114) Stationary and Non-Road Diesel Engines: The Permittee shall install, operate and maintain each reciprocating internal combustion engine, and any after-treatment control device (if any), in accordance with the manufacturer's written instructions and in a manner consistent with good air pollution control practices for minimizing emissions. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-501 and 5-1015(a)(1) of the *Regulations*]

~~(115) Stationary Emergency Diesel Engines: Stationary emergency diesel engines, including those specified as such in Finding of Fact (A), shall be used only for emergency purposes and up to 100 hours per year for routine testing and maintenance. Emergency purposes include periods of time when:~~

~~(a) The usual source of power, heat or lighting is temporarily unavailable due to reasons beyond the reasonable control of the owner/operator;~~
~~(b) A fire or flood makes it necessary to pump water to minimize property damage.~~

~~In the event the Permittee must take action to restore the normal power source, the Permittee must take such action in a reasonable period of time. Emergency engines shall not be operated as part of any ISO or utility peaking or load shedding activities without the approval of the Agency. The definition of emergency use for applicability to federal regulations NSPS Subpart IIII and NESHAP Subpart ZZZZ may be different and the Permittee should consult those regulations directly for applicability to those respective regulations.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§§5-401(6)(c) and 5-501 of the *Regulations*]~~

~~(116) Open Burning: Open burning is prohibited except as provided for in §5-202 of the *Regulations*. Prior to conducting open burning of any material, other than leaves, brush, or tree cuttings from normal grounds maintenance, the Permittee shall contact the Air Pollution Control Officer and obtain approval for such burning, if required.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-202 of the *Regulations*]~~

- Emission Limitations –

(117) Stationary and Non-Road Diesel Engines [Snow Making Operations, Emission Limits]: Except as provided in condition (18) below, emissions of the following pollutants from all diesel engines used for snowmaking purposes, including air compressors and generators, whether owned, leased or rented, shall not exceed the following limits:

Pollutant Emission Limitations [1]	
Cummins Engines QSX15 Tier 4 final, or equivalent	Emission Limitations g/bhp-hr
Nitrogen oxides (as NO_2)	0.3
Carbon monoxide	2.6
Particulate matter	0.015

[1] bhp – brake horsepower rated output as specified by the manufacturer; g/bhp-hr - grams of pollutant emitted per brake horsepower hour at rated load and speed.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Methods 5, 7E, and 10 or equivalent methods approved in writing by the Agency at the rated load and speed of the engine. Alternatively, compliance may be demonstrated by verifying that the engine has met the engine certification requirements of 40 *CFR* Part 1039 for the Tier 4 final or better. [10 *V.S.A.* §556a(d)] [§§5-251(2), 5-271(b), 5-404 and 5-1010 of the *Regulations*]

(118) Stationary and Non-Road Diesel Engines [Snow Making Operations, Emission Limits]: Notwithstanding condition (17) above, up to 5,500 bhp of installed diesel engine capacity used for snowmaking purposes, including air compressors and generators, whether owned, leased or rented, shall need only comply with the following limits in place of those in condition (17):

Pollutant Emission Limitations [1]	
Caterpillar Engines 3516C, 2722 bhp Tier 2, or equivalent	Emission Limitations
	g/bhp-hr
Nitrogen oxides (as NO_2 + Hydrocarbons)	4.8
Carbon monoxide	2.6
Particulate matter	0.15

[1] bhp – brake horsepower rated output as specified by the manufacturer; g/bhp-hr - grams of pollutant emitted per brake horsepower hour at rated load and speed.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Methods 5, 7E, and 10 or equivalent methods approved in writing by the Agency at the rated load and speed of the engine. Alternatively, compliance may be demonstrated by verifying that the engine has met the engine certification requirements of 40 *CFR* Part 89 for the Tier 2 or better including Part 1039 for interim Tier 4 or Tier 4. [10 *V.S.A.* §556a(d)] [§§5-251(2), 5-271(b), 5-404 and 5-1010 of the *Regulations*]

~~(119) Particulate Matter: Emissions of particulate matter ("PM") from any fossil fuel burning device, except motorized vehicles, with a heat input rating of less than ten (10) million British Thermal Units per hour ("MMBTU/hr") shall not exceed 0.5 pounds per MMBTU.~~

~~Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 and Part 51, Appendix M, Reference Method 202, or equivalent methods approved in writing by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-231(3)(a)(i) and 5-404 of the *Regulations*]~~

~~(120) Visible Emissions [Facility Wide]: Emissions of visible air contaminants from any installation at the Facility, except where otherwise noted in this Permit, shall not exceed twenty (20) percent opacity for more than a period or periods aggregating six (6) minutes in any hour and at no time shall visible emissions exceed sixty (60) percent opacity.~~

~~Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 51, Appendix M, Methods 203B and 203C, respectively, or equivalent methods approved in writing by the Agency. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-211(2), 5-211(3) and 5-404 of the *Regulations*]~~

~~(121) Hazardous Air Pollutants: Emission of federally regulated hazardous air pollutants (HAPs) from the Facility shall not equal or exceed eight (8) tons per year of any single HAP or twenty (20) tons per year of all HAPs combined per calendar year per year based on any rolling twelve (12) consecutive calendar month period. [40 *CFR* Part 63]~~

~~(122) Hazardous Air Contaminants: Emissions of state hazardous air contaminants (HACs) from the applicable operations at the Facility shall not equal or exceed their respective Action Level (found in Appendix C of the *Regulations*) unless the Agency has reviewed and approved such HAC emission under §5-261(2) of the *Regulations*. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-261 of the *Regulations*]~~

~~(123) Fugitive Particulate Matter Emissions: The Permittee shall take reasonable precautions at all times to control and minimize emissions of fugitive particulate matter from the operations at the Facility. This shall include but not be limited to the following: the use of wet suppression, calcium chloride applications or other dust control measures as necessary to minimize fugitive dust from all unpaved roads and traffic areas, aggregate handling operations and storage piles at the Facility. The paved portions of the haul roads and traffic areas shall be periodically sprayed with water and swept to prevent buildup of material that may generate fugitive dust emissions. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-231(4) of the *Regulations*]~~

~~(124) Nuisance and Odor: The Permittee shall not discharge, cause, suffer, allow, or permit from any source whatsoever such quantities of air contaminants, or odors beyond the property line of a premises, which will cause injury, detriment, nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which causes or has a natural tendency to cause injury or damage to business or property. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-241(1) of the *Regulations*]~~

- Record Keeping and Reporting -

(125) Records of Fuel Use [Stationary and Non-Road Diesel Engines]: The Permittee shall maintain records of the total quantity of fuel oil consumed in all stationary and non-road diesel engines at the Facility, including engines used for snowmaking operations, other engines used for non-emergency purposes, engines used for ski lift emergency evacuation and other non-road diesel engines including those powering trail groomers, earth-moving and materials handling equipment, and small portable electric generators and compressors, in gallons, each month. Fuel used in on-highway equipment shall not be included in this total.

At the beginning of each calendar year, the Permittee shall calculate the total combined quantity of fuel oil consumed in such diesel engine powered stationary and non-road engines equipment, in gallons, during the previous calendar year. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]

~~(126) Records of Fuel Use [Boilers and Space Heating Units]: The Permittee shall maintain records of the total combined quantity of LPG and fuel oil consumed in the boilers and space heating units, in gallons of each, each month. At the beginning of each calendar~~

~~year, the Permittee shall calculate the total quantity of LPG and fuel oil consumed in the boilers and space heating units, in gallons of each, during the previous calendar year.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]~~

~~(127) Records of Emergency Generator/Engine Usage: The Permittee shall maintain records in a log book, or electronic record system, of all hours of operation of each stationary emergency generator/engine and shall make such records available to the Agency upon request. The records shall include: the dates on which each engine was operated; the number of hours the engine was operated on the respective date, including the starting and ending hours shown on the engine's elapsed hour meter; the purpose of the operation be it emergency, testing or maintenance; and, if the purpose of the operation was for an emergency, the records shall include a brief description of the emergency and its cause.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]~~

~~(128) Records of Non-Emergency Generator/Engine Usage: For each non-emergency diesel generator/engine approved herein for limited hours of non-emergency usage such as non-emergency demand response or peak shaving, the Permittee shall maintain records in a log book, or electronic record system, of all hours of operation of each such stationary generator/engine and shall make such records available to the Agency upon request. The records shall include: the dates on which each engine was operated; the number of hours the engine was operated on the respective date, including the starting and ending hours shown on the engine's elapsed hour meter; and the purpose of the operation.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]~~

(129) Records of Fuel Oil Certifications: The Permittee shall obtain from the fuel supplier, for each shipment of fuel oil received at the Facility for use in the stationary and non-road diesel engines as well as boilers and space heating units, a certification or invoice regarding the sulfur content of the fuel oil. The certification or invoice shall include the date of delivery, name of the fuel oil supplier, fuel type, quantity of fuel oil delivered, and a statement from the fuel oil supplier that the oil complies with the specifications for Ultra Low Sulfur Diesel/Distillate per 40 CFR Part 80 80.510(b) or a statement as to the sulfur content of the fuel oil in percent sulfur by weight. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]

~~(130) Records Retention: All records shall be retained for a minimum period of five (5) years from the date of record and shall be made available to the Agency upon request.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§§5-402, 5-405(1) and 5-1015(a)(7) of the *Regulations*]~~

(131) Annual Reporting: Prior to each ski season the Permittee shall provide the Agency a written description of the following information for all diesel engines to be operated at the Facility for snowmaking purposes, including air compressors and generators, whether owned, leased or rented:

(a) A listing of each engine proposed to be operated at the Facility during the ski season;
(b) A summary of engine and emission specifications;
(c) A cumulative listing of the manufacturer's rated horsepower output of each engine with a certifying statement that the Facility-wide cumulative horsepower capacity for snowmaking operations does not exceed the limits specified in this Permit; and

(d) A certification that all engine emission rates meet the respective emission limits outlined in this Permit.

[10 *V.S.A.* §556a(d)] [§§5-251(3), 5-271 and 5-404 of the *Regulations*]

~~(132) Notification: The Permittee shall notify the Agency in writing within ten (10) days of any violation, of which it is aware, of any requirements of this Permit. This notification shall include, at a minimum, the cause for the violation and corrective action or preventative maintenance taken to correct the violation. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-402 and 5-1015(a)(6) of the *Regulations*]~~

~~(133) Notification: The Permittee shall notify the Agency in writing of any proposed physical or operational change at the Facility which may increase the emission rate of any air contaminant to the ambient air regardless of any concurrent emission reductions that may be achieved. This notification requirement includes, but is not limited to, the proposed installation of any new equipment that is a source of air pollution, including the replacement of an existing permitted air pollution source. If the Agency determines that a permit amendment is required, a new application and the appropriate application fee shall be submitted. The permit amendment shall be obtained prior to commencing any such change except as may otherwise be allowed by the *Regulations*. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-402 and 5-501 of the *Regulations*]~~

~~(134) Annual Registration: The Permittee shall calculate the quantity of emissions of air contaminants from the Facility annually. If the Facility emits more than five (5) tons of any and all air contaminants per year, the Permittee shall register the source with the Secretary of the Agency (hereinafter "Secretary"), and shall renew such registration annually. Each day of operating a source which is subject to registration without a valid, current registration shall constitute a separate violation and subject the Permittee to civil penalties. The registration process shall follow the procedures set forth in Subchapter VIII of the *Regulations*, including the payment of the annual registration fee on or before May 15 of each year. [10 *V.S.A.* §§556(c) and 556a(d)] [Subchapter VIII §§5-802, 5-803, 5-807, 5-808 of the *Regulations*]~~

~~(135) All records, notifications and reports that are required to be submitted to the Agency by this Permit shall be submitted to:~~

~~Air Quality & Climate Division~~
~~Department of Environmental Conservation~~
~~Agency of Natural Resources~~
~~Davis 2~~
~~One National Life Drive~~
~~Montpelier, Vermont 05620-3802~~

~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-402 of the *Regulations*]~~

~~- Standard Permit Conditions -~~

~~(136) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Agency which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [10 V.S.A. §§556(c) and (g) and 556a(d)] [40 CFR Part 60.11(d) and 63.6(e)]~~

~~(137) Approval to construct or modify under this Permit shall become invalid if construction or modification is not commenced within eighteen (18) months after issuance of this Permit, if construction or modification is discontinued for a period of eighteen (18) months or more, or if construction is not substantially completed within a reasonable time. The Agency may extend any one of these periods upon a satisfactory showing that an extension is justified. The term "commence" as applied to the proposed construction or modification of a source means that the Permittee either has:~~

~~(a) Begun, or caused to begin, a continuous program of actual on-site construction or modification of the source, to be completed within a reasonable time; or~~
~~(b) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the Permittee, to undertake a continuous program of actual on-site construction or modification of the source to be completed within a reasonable time.~~

~~[10 *V.S.A.* §556(c)] [§5-501 of the *Regulations*]~~

~~(138) These Permit conditions may be suspended, terminated, modified, or revoked for cause and reissued upon the filing of a written request with the Secretary of the Agency (hereinafter "Secretary") or upon the Secretary's own motion. Any modification shall be granted only with the written approval of the Secretary. If the Secretary finds that modification is appropriate, only the conditions subject to modification shall be re-opened. The filing of a request for modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay any terms or conditions of this Permit. The Secretary may provide opportunity for public comment on any proposed modification of these conditions. If public comments are solicited, the Secretary shall follow the procedures set forth in 10 *V.S.A.* §556 and §556a, as amended. [10 *V.S.A.* §§556(d) and 556a(g)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]~~

~~(139) Cause for reopening, modification, termination and revocation of this Permit includes, but is not limited to:~~

~~(a) Inclusion of additional applicable requirements pursuant to state or federal law;~~
~~(b) A determination that the permit contains a material mistake or that inaccurate information was used to establish emissions standards or other terms or conditions of the operating permit;~~
~~(c) A determination that the operating permit must be modified or revoked to ensure compliance with applicable requirements;~~

~~(d) A determination that the subject source has failed to comply with a permit condition;~~

~~(e) For Title V subject sources, a determination by U.S. EPA that cause exists to terminate, modify, revoke or reissue an operating permit;~~

~~(f) Those causes which are stated as grounds for refusal to issue, renew or modify an operating permit under §5-1008(a) of the *Regulations*; or~~

~~(g) If more than three (3) years remain in the permit term and the source becomes subject to a new applicable requirement.~~

~~[10 *V.S.A.* §§556(c) and 556a(d)] [§5-1008(e)(4) of the *Regulations*]~~

~~(140) The Permittee shall furnish to the Agency, within a reasonable time, any information that the Agency may request in writing to determine whether cause exists to modify, revoke, reissue, or terminate the Permit or to determine compliance with this Permit. Upon request, the Permittee shall also furnish to the Agency copies of records required to be kept by this Permit. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-402 of the *Regulations*]~~

~~(141) By acceptance of this Permit, the Permittee agrees to allow representatives of the State of Vermont access to the properties covered by the Permit, at reasonable times, to ascertain compliance with Vermont environmental and health statutes and regulations and with this Permit. The Permittee also agrees to give the Agency access to review and copy any records required to be maintained by this Permit, and to sample or monitor at reasonable times to ascertain compliance with this Permit. [10 *V.S.A.* §§556(c), 556a(d) and 557] [§§5-402, 5-404, and 5-1015(a)(10) of the *Regulations*]~~

~~(142) All data, plans, specifications, analyses and other information submitted or caused to be submitted to the Agency as part of the application for this Permit or an amendment to this Permit shall be complete and truthful and, for Title V permit applications, certified by a responsible official whose designation has been approved by the Secretary. Any such submission which is false or misleading shall be sufficient grounds for denial or revocation of this Permit, and may result in a fine and/or imprisonment under the authority of Vermont statutes. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-505 and 5-1006(f) of the *Regulations*]~~

~~(143) For the purpose of establishing whether or not a person has violated or is in violation of any condition of this Permit, nothing in this Permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(144) Any permit noncompliance could constitute a violation of the federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [10 *V.S.A.* §§556(c) and 556a(d)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]~~

~~(145) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Permit. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(146) No person shall build, erect, install or use any article, machine, equipment or other contrivances, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which otherwise would constitute a violation of these *Regulations*. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-403 of the *Regulations*]~~

~~(147) The provisions of this Permit are severable. If any provision of this Permit, or its application to any person or circumstances is held invalid, illegal, or unenforceable by a court of competent jurisdiction, the invalidity shall not apply to any other portion of this Permit which can be given effect without the invalid provision or application thereof. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(148) This Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize any injury to private property or any invasion of personal rights. [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(149) All subsequent owners and/or operators of this Facility must request an amendment and transfer of this Permit prior to commencing any operations covered by this Permit. All subsequent owners and/or operators shall submit to the Agency as part of the request for amendment all such information the Agency deems necessary to establish legal ownership and/or interest in the property and all such information the Agency deems necessary to ensure the new owners and/or operators will construct and operate the Facility in compliance with the *Regulations* and this Permit. The terms and conditions of this Permit shall remain in full force and effect after submittal of the request for amendment and until the issuance of an amended Permit or denial. Should the Secretary deny the request, the new owner and/or operator must take whatever action is necessary to comply with the denial. [10 *V.S.A.* §§556 and 556a] [§§5-501, 5-1004, and 5-1013(a) of the *Regulations*]~~

~~(150) Renewable Energy Projects – Right to Appeal to Public Service Board. If this decision relates to a renewable energy plant for which a certificate of public good is required under 30 V.S.A. §248, any appeal of this decision must be filed with the Vermont Public Service Board pursuant to 10 V.S.A. §8506. This section does not apply to a facility that is subject to 10 V.S.A. §1004 (dams before the Federal Energy Regulatory Commission), 10 V.S.A. §1006 (certification of hydroelectric projects) or 10 V.S.A. Chapter 43 (dams). Any appeal under this section must be filed with the Clerk of the Public Service Board within 30 days of the date of this decision; the appellant must file with the Clerk an original and six copies of its appeal. The appellant shall provide notice of the filing of an appeal in accordance with 10 V.S.A. 8504(c)(2), and shall also serve a copy of the Notice of Appeal on the Vermont Department of Public Service. For further information, see the Rules and General Orders of the Public Service Board, available on line at www.psb.vermont.gov. The address for the Public Service Board is 112 State Street, Montpelier, Vermont, 05620-2701 (Tel. # 802-828-2358). [10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(151) All Other Projects – Right to Appeal to Environmental Court. Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which~~

~~the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings, available on line at www.vermontjudiciary.org. The address for the Environmental Court is 2418 Airport Road, Suite 1, Barre, VT 05641 (Tel. # 802-828-1660).~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)]~~

~~(152) This Operating Permit shall expire as indicated on the cover page to this Permit. The Permittee shall submit to the Agency a complete application for renewal of the Operating Permit at least six (6) months before the expiration of the Operating Permit. If a timely and administratively complete application for an operating permit renewal is submitted to the Secretary, but the Secretary has failed to issue or deny such renewal before the end of the term of this Operating Permit, then the Permittee may continue to operate the subject source and all terms and conditions of this Operating Permit shall remain in effect until the Secretary has issued or denied the operating permit renewal. However, this Operating Permit shall automatically expire if, subsequent to the renewal application being determined or deemed administratively complete pursuant to §5-1006 of the *Regulations*, the Permittee fails to submit any additional information required by the Secretary as well as information pertaining to changes to the Facility within thirty (30) days or such other period as specified in writing by the Secretary.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)] [§§5-1011 and 5-1012(a) of the *Regulations*] [§§5-1005(c) and 5-1012 of the *Regulations*]~~

~~(153) The conditions of this Permit as set forth above supersede all conditions contained in all prior Permits issued by the Agency to the Permittee for this Facility.~~ ~~[10 *V.S.A.* §§556(c) and 556a(d)]~~

~~The Agency's issuance of this Air Pollution Control Permit relies upon the data, judgment, and other information supplied by the Permittee. The Agency makes no assurances that the air contaminant source approved herein will meet performance objectives or vendor guarantees supplied to the source Permittee. It is the sole responsibility of the Permittee to operate the source in accordance with the conditions herein and with all applicable state and federal standards and regulations.~~

~~Permit issued and effective this _____ day of _____, 2018.~~

~~Permit Issuance authorized by:~~

~~Emily Boedecker, Commissioner~~
~~Department of Environmental Conservation~~
~~Agency of Natural Resources~~

~~By: _____~~
~~Heidi C. Hales, Director Date Signed~~
~~Air Quality & Climate Division~~

~~de~~
~~Y:AP Admin\StationaryFacilities\Okemo~~