# Certification of Reasonably Available Control Technology for the 2008 and 2015 8-hour Ozone National Ambient Air Quality Standards

**August 21, 2018**

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

*This page intentionally left blank*

R-ARD-18-03

# Revision to the New Hampshire State Implementation Plan

# Certification of Reasonably Available Control Technology for the 8-hour Ozone National Ambient Air Quality Standard

August 21, 2018

Prepared by
Felice Janelle, Michele Roberge
Air Resources Division

Robert R. Scott, Commissioner
Craig Wright, Director, Air Resources Division

New Hampshire Department of Environmental Services
PO Box 95, Concord, NH 03302-0095
(603) 271-3503
www.des.nh.gov

# TABLE OF CONTENTS

1.0 INTRODUCTION ..... 1
2.0 BACKGROUND ..... 1
2.1 1979 1-hour Ozone NAAQS ..... 1
2.2 1997 8-hour Ozone NAAQS ..... 2
2.3 2008 8-hour Ozone NAAQS ..... 3
2.4 2015 8-hour Ozone NAAQS ..... 3
3.0 NHDES RACT SIP SUBMITTALS ..... 4
3.1 1997 Ozone RACT SIP ..... 4
3.2 2008 Ozone RACT SIP Draft ..... 4
4.0 IDENTIFICATION OF RACT SOURCES ..... 5
5.0 RACT FOR THE 2008 8-HOUR OZONE NAAQS ..... 6
5.1 Determination of VOC RACT compliance ..... 7
5.1.1 NHDES VOC RACT Regulations ..... 7
5.1.2 Certification ..... 7
5.1.3 Source-Specific VOC RACT ..... 12
5.1.4 Negative Declaration ..... 14
5.2 Determination of NOx RACT Compliance ..... 15
5.2.1 NOx RACT Rule ..... 15
5.2.2 NOx RACT Rule Revision 2018 ..... 16
5.2.3 Certification ..... 16
5.2.4 Source-specific ..... 17
5.2.5 Negative Declaration ..... 20
6.0 ADDITIONAL CONTROL MEASURES ..... 20
6.1 Compliance and Enforcement Strategies ..... 20
7.0 CERTIFICATION ..... 21
8.0 ADDITIONAL CONTROL MEASURES ..... 22
9.0 ADMINISTRATIVE MATERIALS ..... 22

**Tables**

Table 2-1 - New Hampshire Design Values for the 2008 Ozone NAAQS (0.075 ppm) ..... 3
Table 2-2 - New Hampshire Design Values for the 2015 Ozone NAAQS (0.07 ppm) ..... 4
Table 5-1 - VOC RACT Source Categories and Applicable Rules ..... 8
Table 5-2 - VOC RACT Orders ..... 12
Table 5-3 - Negative Declaration for VOC Source Categories ..... 14
Table 5-4 - NOx RACT Source Categories and Applicable Rules ..... 17
Table 5-5 - NOx RACT Orders ..... 18
Table 5-6 - Negative Declaration for NOx Source Categories ..... 20

**Figures**

Figure 4-1 - NOx Emissions trends from RACT Sources in New Hampshire ..... 6

Figure 5-1 – VOC Emissions trends from RACT Sources in New Hampshire ..... 7

## Appendices

Appendix A NOx and VOC RACT Sources and Reported Annual Emissions
Appendix B Evidence of Legal Authority
Appendix C Public Notice for SIP Revision
Appendix D Certification of Public Hearing
Appendix E Public Comments and NHDES Responses
Appendix F Technical Support Document
Appendix G Env-A 1200 VOC RACT
Appendix H Env-A 1300 NOx RACT
Appendix I Response to comments on revision of Env-A 1300
Appendix J Env-A 4100 Consumer Products
Appendix K Env-A 4200 Architectural and Industrial Maintenance Coatings

## 1.0 INTRODUCTION

On March 12, 2008, the United States Environmental Protection Agency (EPA) announced revisions to the National Ambient Air Quality Standard (NAAQS) for ozone.[1] This action revised the primary and secondary standards to a level of 0.075 parts per million (ppm) over an eight-hour period. One of the key elements related to the implementation of the 2008 8-hour ozone NAAQS is a revision to the State Implementation Plan (SIP) accounting for the proper application of Reasonably Available Control Technology (RACT), pursuant to Clean Air Act (CAA) Section 172(c)(1). The New Hampshire Department of Environmental Services (NHDES) submits this SIP revision to satisfy this requirement. This revision has been prepared in accordance with the general SIP submittal requirements of 40 CFR Part 51 Appendix V, as well as RACT SIP guidance provided by the EPA.[2]

RACT is defined as the lowest emissions limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. CAA Section 183 requires EPA to issue, and periodically update as needed, guidance that would help states meet RACT requirements. This includes the development of Control Techniques Guidelines (CTG) for controlling volatile organic compounds (VOCs) and Alternative Control Techniques (ACT) documents for controlling oxides of nitrogen (NOx) from stationary sources. CTGs presumptively define a level of control as RACT. The ACT documents do not formally define RACT, but describe available measures that are technologically and economically feasible which states can adopt to satisfy RACT.

CAA Sections 182(b)(2) and 182(f) require ozone nonattainment areas classified as moderate and above to adopt RACT for sources that are subject to CTGs, and for non-CTG major sources of VOCs and NOx. CAA Section 184 further requires states such as New Hampshire that reside in the Ozone Transport Region (OTR) to implement RACT with respect to all sources covered by CTGs.

On July 13, 2018, NHDES published in a statewide newspaper a public notice soliciting comment and announcing a public hearing to be held at the NHDES offices at 29 Hazen Drive in Concord on August 16, 2018 at 10:00 AM. NHDES has documented and reviewed the comments received and provided a response in Appendix D.

## 2.0 BACKGROUND

### 2.1 1979 1-hour Ozone NAAQS

Under the 1990 Clean Air Act Amendments, all or portions of five counties in New Hampshire were designated as nonattainment areas for the former 1-hour National Ambient Air Quality Standard (NAAQS) of 0.12 parts per million (ppm) for ground-level ozone: all of Strafford County and large portions of Hillsborough and Rockingham Counties were designated as

[1] 73 FR 16436

[2] Memorandum from William Harnett, Director, Air Quality Policy Division, EPA to Regional Air Quality Directors, US EPA dated May 18, 2006; https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20060518_harnett_ract_q&a.pdf

"serious" nonattainment areas as a portion of the Boston-Lawrence-Worcester MA/NH nonattainment area. This was redesignated to attainment based on clean data for 2005-2007.[3]

Remaining portions of Hillsborough and Rockingham counties plus all of Merrimack County were designated as "marginal" nonattainment areas; and all of Cheshire County was designated as a nonattainment area with incomplete data. Merrimack County and portions of Hillsborough and Rockingham Counties were redesignated to attainment in the June 5, 1998. Cheshire County was redesignated to unclassified /attainment. [4] On October 30, 2012, EPA issued a final determination that so-named Portsmouth-Dover-Rochester area met the now revoked one-hour ozone NAAQS in 1999, the area's original attainment date.[5] Although NHDES submitted an attainment demonstration dated June 30, 1998, the "Clean Data Determination" meant that there were no additional obligations under the revoked one-hour standard, and the submission was withdrawn.

## 2.2 1997 8-hour Ozone NAAQS

On July 18, 1997, the EPA adopted a new 8-hour ozone NAAQS. The new standard, 0.08 parts per million (ppm), was based on the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor. After the resolution of numerous legal challenges, on April 30, 2004, EPA published final attainment designations[6] for the 1997 8-hour ozone NAAQS.

In the years 2003 – 2005, New Hampshire did not exceed the new 8-hour ozone NAAQS. Based on this monitored data, NHDES did not need to require additional emission reductions in order to attain and maintain the new 8-hour ozone NAAQS. According to the "Final Rule to Implement the 8-hour Ozone National Ambient Air Quality Standard",[7] states were required to develop and submit these SIP revisions related to the new 8-hour ozone NAAQS:

- Attainment demonstration.
- RACT determination.

With the new 8-hour ozone NAAQS, the EPA classified the nonattainment areas based on measured design values and then further divided the areas into two sub-classifications based on the 1-hour ozone design value for the 3-year period 2001-2003 as listed below:

- Subpart 1 for areas where the 1-hour ozone design value is less than 0.121 ppm.
- Subpart 2 for areas where the 1-hour ozone design value is greater than 0.121 ppm.

The 1-hour ozone design value for this period for the Boston-Manchester-Portsmouth, NH area was 0.124 ppm. This area includes portions of Hillsborough, Merrimack, Rockingham, and Strafford counties. On April 30, 2004[8], the EPA designated these counties as a moderate nonattainment area for the 8-hour ozone NAAQS, even though no New Hampshire monitor had

[3] 77 FR 31496
[4] 63 FR 31014
[5] 77 FR 65625
[6] 69 FR 23857
[7] 70 FR 71612
[8] 69 FR 23951

an 8-hour ozone design value equal to or greater than 0.092 ppm. NHDES agreed to the higher classification for regional consistency.

### 2.3 2008 8-hour Ozone NAAQS

Effective July 20, 2012, all areas of New Hampshire were designated as in attainment for the new 8-hour standard.[9] In the past 8 years (Table 2-1), New Hampshire has not exceeded the 2008 8-hour ozone NAAQS, and, as demonstrated in our September 28, 2016 letter to the EPA Region 1 administrator, met the 2015 ozone design value for the period 2013-2015 (Table 2.2), indicating no violations of the revised standard as well. The designation was affirmed by the EPA as the entire state was designated unclassifiable/attainment in a letter to Governor Christopher Sununu dated November 6, 2017.[10]

Based on the state's designation and this monitored data, NHDES does not need additional emission reductions in order to attain and maintain the new 8-hour ozone NAAQS. Furthermore, NOx emissions in the state are down 42% since 2005 overall, and the largest source is down over 66%. However, as a state located within the Ozone Transport Region (OTR), New Hampshire must meet certain requirements, including RACT, even if all areas of the state are in attainment for ozone.

**Table 2-1 - New Hampshire Design Values for the 2008 Ozone NAAQS (0.075 ppm)**

| | | 3-yr Average of 4th Highest Daily Maximum Concentration, ppm | | |
|---|---|---|---|---|
| **Site Name** | **AQS Code** | **2008-2010** | **2011-2013** | **2014-2016** |
| Laconia-B | 330012004 | 0.065 | 0.062 | 0.059 |
| Keene | 330050007 | 0.065 | 0.063 | 0.062 |
| Summit Mt Washington | 330074001 | 0.071 | 0.067 | 0.067 |
| Mt Washington Base | 330074002 | 0.061 | 0.061 | 0.057 |
| Lebanon | 330090010 | 0.063 | 0.061 | 0.057 |
| Manchester | 330110020 | 0.062 | - | - |
| Nashua-Gilson | 330111011 | 0.067 | 0.067 | 0.063 |
| Peterborough | 330115001 | 0.075 | 0.067 | 0.068 |
| Concord | 330131007 | 0.066 | 0.064 | 0.062 |
| Portsmouth-Pierce Island | 330150014 | 0.068 | 0.067 | 0.065 |
| Rye-Odiorne State Park | 330150016 | 0.070 | 0.067 | 0.067 |
| Londonderry-Moose Hill | 330150018 | - | 0.068 | 0.065 |

### 2.4 2015 8-hour Ozone NAAQS

In 2015, the EPA revised the level of the standard from 0.75 ppm to 0.70 ppm, retaining the established form - the annual fourth-highest daily maximum averaged over three years, i.e., the design value. According to EPA, the standard is met if the calculated design value is 0.70 ppm or lower. NHDES submitted a letter to the Regional Administrator dated September 28,

[9] 77 FR 30088
[10] Pruitt, Administrator E. Scott. Letter to Honorable Chris Sununu. 6 November 2017.

2016, proposing that the entire state be designated attainment. Sited design values are shown in Table 2.4. As previously stated, the EPA has designated the entire state unclassifiable/ attainment.

**Table 2-2 - New Hampshire Design Values for the 2015 Ozone NAAQS (0.07 ppm)**

| | | 4th Highest Maximum Daily Concentration, ppm | | | Design Value, ppm | Ozone NAAQS Ppm |
|---|---|---|---|---|---|---|
| **Site Name** | **AQS Code** | **2014** | **2015** | **2016** | **2014-2016** | |
| Laconia | 330012004 | 0.061 | 0.055 | 0.06 | 0.059 | 0.07 |
| Keene | 330050007 | 0.060 | 0.059 | 0.066 | 0.062 | 0.07 |
| Summit Mt Washington | 330074001 | 0.065 | 0.073 | 0.066 | 0.067 | 0.07 |
| Mt Washington Base | 330074002 | 0.055 | 0.057 | 0.059 | 0.057 | 0.07 |
| Lebanon | 330090010 | 0.062 | 0.054 | 0.055 | 0.057 | 0.07 |
| Woodstock | 330099991 | 0.058 | 0.052 | 0.054 | - | 0.07 |
| Nashua-Gilson | 330111011 | 0.064 | 0.061 | 0.064 | 0.063 | 0.07 |
| Peterborough | 330115001 | 0.069 | 0.066 | 0.069 | 0.068 | 0.07 |
| Concord | 330131007 | 0.061 | 0.062 | 0.062 | 0.062 | 0.07 |
| Portsmouth-Pierce Island | 330150014 | 0.068 | 0.065 | 0.062 | 0.065 | 0.07 |
| Rye-Odiorne State Park | 330150016 | 0.070 | 0.065 | 0.067 | 0.067 | 0.07 |
| Londonderry-Moose Hill | 330150018 | 0.067 | 0.062 | 0.067 | 0.065 | 0.07 |

## 3.0 NHDES RACT SIP SUBMITTALS

### 3.1 1997 Ozone RACT SIP

According to the final rule,[11] Subpart 2 moderate and above areas and areas within the Ozone Transport Region (OTR) were required to submit a RACT SIP. The rule, referred to as the "Phase 2 Implementation rule," contained EPA's expectations for states with RACT obligations. On January 8, 2008, NHDES submitted a demonstration that its regulatory framework for stationary sources met the criteria for RACT as defined by EPA.[12] EPA approved the RACT demonstration on November 5, 2012, with an effective date of January 4, 2013.[13]

### 3.2 2008 Ozone RACT SIP Draft

Pursuant to the revised ozone NAAQS of 2008 and section 182(f) of the CAA, New Hampshire submitted a draft RACT certification SIP amendment to the EPA in March of 2014. In this draft submittal, NHDES asserted that New Hampshire's RACT regulations originally submitted under the provisions for the 1-hour ozone National Ambient Air Quality Standard (NAAQS), as amended by the major revisions submitted for the 8-hour ozone NAAQS promulgated in 1997, and all RACT Orders that have been issued by NHDES, meet the criteria for RACT under the 8-hour ozone NAAQS promulgated in 2008. In part, NHDES used the rationale that, based on the

[11] Air Quality Designations and Classifications for the 8-Hour Ozone National Ambient Air Quality Standards; Early Action Compact Areas With Deferred Effective Dates, March 30, 2004, 69 FR 23857

[12] "Final Rule to Implement the 8-hour Ozone National Ambient Air Quality Standard," 70 FR 71612 (November 29, 2005).

[13] 77 FR 66388

state's attainment designation and monitored data, New Hampshire did not need additional emission reductions in order to attain and maintain the new 8-hour (2008) ozone NAAQS. EPA responded by letter dated April 18, 2014.[14] (See Appendix D) Comments are summarized below:

a. The New Hampshire Department of Environmental Services (NH DES) should review its NOx RACT requirements for electrical generating units (EGUs) to determine whether more stringent requirements are technologically and economically feasible.
b. Table B-1 in Appendix misidentifies the date of the revised Waste Management NOx RACT order.
c. Also with respect to Table B-1, NHDES should provide a brief explanation relative to the facilities they have identified as "discontinued or no longer subject to RACT."
d. Explain how sources currently meeting NOx RACT for the 1-hr and / or 1997 8-hr ozone standard meet the 2008 ozone standard.
e. Review the NOx limits for municipal waste combustors (MWCs) and determine whether they continue to represent RACT.
f. NHDES states in its draft submittal that it observes the threshold for major VOC sources at 50 TPY due to its inclusion in the OTR, but incorrectly states that it does so "even though the federal emission threshold for moderate 8-hr ozone nonattainment areas is 100 TPY." The moderate threshold is not relevant in this case, but the former serious status for the 1-hour ozone standard is, as well as the anti-backsliding requirements of the CAA and inclusion in the OTR.

NHDES has addressed these comments in the relevant sections of this document.

## 4.0 IDENTIFICATION OF RACT SOURCES

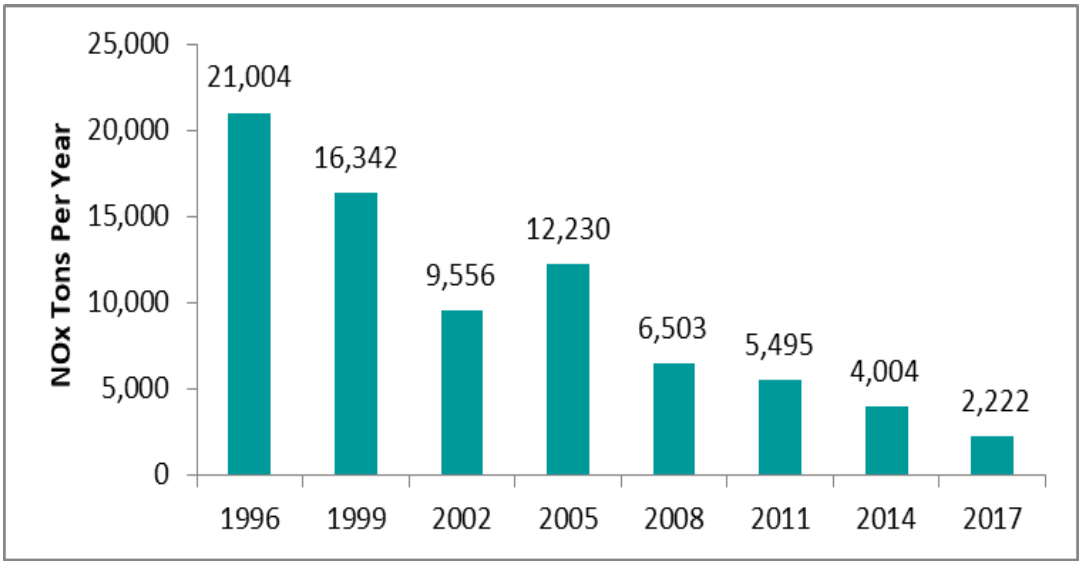
NHDES has developed a list of source categories based on the ACT and CTG documents and determined which state regulation was adopted for each source category. The major source emission threshold is dependent upon the attainment/nonattainment classification and location in the OTR. In New Hampshire's case, the major source threshold for NOx RACT is 50 tpy. The 50 tpy major source threshold for NOx RACT originated in the 1990s, when portions of the state were classified as "serious" nonattainment for the one-hour ozone standard. Accordingly, pursuant to sections 182(c) and 182(f) of the federal Clean Air Act, the major source threshold for NOx for sources in areas classified as serious was 50 tpy, and New Hampshire has chosen to assign that threshold statewide and has maintained it at that level as implementation of newer ozone standards progressed. The major source threshold for VOC RACT under the 8-hour ozone NAAQS is 50 tpy statewide because of the former serious nonattainment classification, because the minimum emission threshold in the OTR is 50 tpy, and due to the anti-backsliding requirements of the CAA. NHDES imposes RACT requirements on NOx sources with potential emissions equal to or greater than 50 tpy and on VOC sources with actual or potential emissions equal to or greater than 3-50 tpy, depending on the source category.

[14] Arnold, Anne. Letter to Barbara Hoffman. 18 April 2014.

NHDES has prepared an inclusive listing of sources subject to NOx RACT. Appendix A contains tables that provide a tabulation of annual NOx and VOC emissions for 1996, 1999, 2002, 2005, 2008, 2011 and 2014 for each RACT source.

Statewide emission totals for NOx RACT sources are represented graphically in Figure 4-1. As shown, NOx emissions have decreased steadily over time. Between 1996 and 2014, the total annual NOx emissions declined from 21,004 tons to 2,222 tons. These decreases are due to a combination of factors, including the application of RACT, other emission control programs, and facility shutdowns/operational changes.

**Figure 4-1 - NOx Emissions trends from RACT Sources in New Hampshire[15]**




## 5.0 RACT FOR THE 2008 8-HOUR OZONE NAAQS

According to the "Implementation of the 2008 National Ambient Air Quality Standards for Ozone," and final rule 40 CFR 51.1116, OTR states must develop and submit a RACT determination related to the 2008 8-hour ozone NAAQS. These RACT SIP revisions were due by July 20, 2014, and in February, 2017, the EPA issued a "Findings of Failure to Submit State Implementation Plan Submittals for the 2008 Ozone National Ambient Air Quality Standard (NAAQS)" for 15 states and the District of Columbia. These findings were related to both nonattainment areas and OTR states, including New Hampshire. Specifically, the named states "failed to submit specific SIP element(s) for the 2008 ozone NAAQS required under subpart 2 of part D of Title 1 of the CAA and the 2008 Ozone SIP Requirements Rule." The requirement applies to states with affected sources in the OTR including rules for all volatile organic compounds (VOC) sources covered by a new or existing Control Technique Guideline (CTG), and for all other major stationary sources of VOC and nitrogen oxide (NOx).

[15] As reported by NH sources. 2017 data is preliminary.

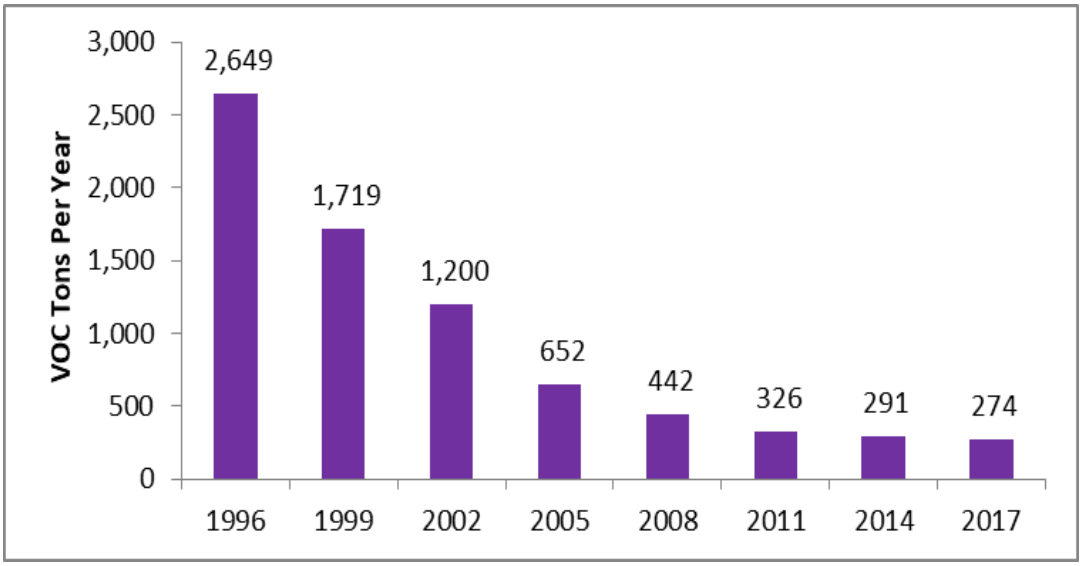
## 5.1 Determination of VOC RACT compliance

### 5.1.1 NHDES VOC RACT Regulations

NHDES originally adopted regulations for the applicable source categories to meet RACT for the 1-hour ozone NAAQS. New Hampshire submitted a revised version of its VOC RACT rules, then number Env-A 1204 on March 12, 2003. Additional updates were provided on July 9, 2007. Both were approved by EPA, in conjunction with the NHDES 1997 8-hour ozone RACT determination as well as several source specific RACT orders by EPA effective January 4, 2013.[16]

Like NOx, statewide emission totals for VOC RACT sources have declined, as represented graphically in Figure 5-1. VOC emissions are however 1 -2 orders of magnitude less than NOx emissions.

**Figure 5-1 – VOC Emissions trends from RACT Sources in New Hampshire[17]**




In 2011, NHDES renumbered and readopted with amendments its VOC RACT rules. Now codified as Env-A 1200, the revised VOC RACT rule was amended to address nine of the 11 CTGs issued by EPA in 2006-2008. The rules, together with two negative declarations, were submitted to EPA for approval on July 26, 2011, and approved effective January 7, 2013.[18] An update to the rule that clarifies Reasonably Available Control Technology (RACT) requirements as they apply to minor core activities of VOC sources was submitted to the EPA on October 4, 2012, and approved effective October 14, 2016.[19] New Hampshire's approved VOC RACT Regulations (Chapter Env-A 1200) are included in Appendix G.

### 5.1.2 Certification

[16] 77 FR 66388
[17] As reported by NH sources. 2017 data is preliminary.
[18] 77 FR 66921
[19] 81 FR 53926

Identification and certification/adoption of Env-A 1200 VOC RACT for meeting the 2008 and 2015 ozone standards is provided in Table 5.1.

**Table 5-1 - VOC RACT Source Categories and Applicable Rules**

| VOC CTG Document | State Regulatory Cite | State Effective Date | EPA SIP Approval Date |
|---|---|---|---|
| 1. CTG for Design Criteria for Stage I Vapor Control Systems - Gasoline Service Stations; November 1975. (Group I). | Env-A 1217.08, Env-A 1217.09 Bulk gasoline plants<br><br>Env-Or 500 Recovery of Gasoline Vapors | 6-1-11;<br><br>11-17-12 | 11-5-2012 (77 FR 66388)<br><br>5-29-14 (79 FR 30735) |
| 2. CTG for Control of Volatile Organic Emissions from Existing Stationary Sources, Volume I: Control Methods for Surface Coating Operations; EPA-450/2-76-028; November 1976. (Group I) | Env-A 1204 Miscellaneous metal and plastic parts and products coating | 8-31-95;<br>12-31-02;<br>2-26-05 | 3-10-98 (63 FR 11600) |
| 3. CTG for Control of Volatile Organic Emissions from Existing Stationary Sources, Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks; EPA-450/2-77-008; May 1977. (Group I) | Env-A 1204.06 Metal Cans;<br>Env-A 1204.10 Paper, Fabrics, Film and Foil Substrates;<br>Env-A 1204.14 Metal Coils<br><br>Env-A 1206 Metal Can Coating<br>Env-A 1211 Metal Coils Coating | 8-31-95;<br>12-31-02;<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 4. CTG for Control of Volatile Organic Emissions from Solvent Metal Cleaning; EPA-450/2-77-022; November 1977. (Group I) | Env-A 1204.43 – 1204.47 Solvent Metal Cleaning<br><br>Env-A 1221.01-1221.04 | 12-31-02<br>2-26-05<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 5. CTG for Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals; EPA-450/2-77-026; December 1977. (Group I) | Env-A 1204.40 (Bulk Gasoline Loading Terminals)<br><br>Env-A 1217.08-1217.09 | 8-31-95;<br>12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 6. CTG for Control of Volatile Organic Emissions from Existing Stationary Sources, Volume III: Surface Coating of Metal Furniture, EPA-450/2-77-032, December 1977 | Env-A 1204.12 Metal Furniture Coating<br><br>Env-A 1209 Metal Furniture Coating | 8-31-95;<br>12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 7. CTG for Control of Volatile Organic Emissions from Existing Stationary Sources, Volume IV: Surface Coating of Insulation of Magnet Wire; EPA-450/2-77-033; December 1977. (Group I) | Env-A 1204.13 Magnetic Wire Insulation Coating<br><br>Env-A 1210 Magnetic Wire Insulation Coating | 8-31-95;<br>12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |

| VOC CTG Document | State Regulatory Cite | State Effective Date | EPA SIP Approval Date |
|---|---|---|---|
| 8. CTG for Control of Volatile Organic Emissions from Bulk Gasoline Plants; EPA-450/2-77-035; December, 1977. (Group I) | Env-A 1204.41 Bulk Gasoline Plants; formerly Env-A 1204.23<br><br>Env-A 1217.08 Bulk Gasoline Plants | 8-31-95; 12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 9. CTG for Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed Roof Tanks; EPA-450/2-77-036; December 1977. (Group I) | Env-A 1204.38 Fixed Roof Tank VOL Storage; formerly 1204.20<br><br>Env-A 1217.02-1217.02 Fixed Roof Tank VOL Storage | 8-31-95; 12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 10. CTG for Control of Volatile Organic Compounds from Use of Cutback Asphalt; EPA-450/2-77-037; December 1977. (Group I) | Env-A 1204.42 Cutback and Emulsified Asphalt; formerly 1204.25<br><br>Env-A 1218 Cutback and Emulsified Asphalt | 8-31-95; 12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 11. Control Techniques for Volatile Organic Emissions from Stationary Sources; EPA 450/2-78-022; May 1978. (Group II) EPA Guidance | Env-A 1204 | 8-31-95; 12-31-02; 2-26-05 | 3-10-98 (63 FR 11600) |
| 12. CTG for Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VI: Surface Coating of Miscellaneous Metal Parts and Products; EPA-450/2-78-015; June 1978 | Env-A 1204.15 Miscellaneous Metal Parts and Products<br><br>Env-A 1212 Miscellaneous Metal Parts and Products coating | 8-31-95; 12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 13. CTG for Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VIII: Graphic Arts-Rotogravure and Flexography; EPA-450/2-78-033; December 1978. (Group II) | Env-A 1204.36 Roto-gravure and Flexographic Printing; formerly 1204.18<br><br>Env-A 1215 Rotogravure and Flexographic Printing | 8-31-95; 12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 14. CTG for Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks; EPA-450-2/78-047; December 1978. (Group II). | Env-A 1204.39 External Floating Roof Tanks; formerly 1204.21<br><br>Env-A 1217.03-1217.04 External Floating Roof Tanks | 8-31-95; 12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |

| VOC CTG Document | State Regulatory Cite | State Effective Date | EPA SIP Approval Date |
|---|---|---|---|
| 15. CTG for Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems; EPA-450/2-78-051; December 1978. (Group II) | Env-A 1205 (Env-Wm 1404 effective 8-21-04), Gasoline dispensing facilities, bulk gasoline plants, and cargo trucks.<br><br>Env-Or 500 Recovery of Gasoline Vapors (formerly Env-A Wm 1404) | 2-22-96; 9-28-96<br><br>11-17-12 | 12-07-98 (63 FR 67405)<br><br>5-29-14 (79 FR 30735) |
| 16. CTG for Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations; EPA 453/R-96-007; 1996/04[20] | Env-A 1204.25 Coating of Wood Furniture, Burial Caskets, and Gunstock<br><br>Env-A Wood Furniture, Burial Caskets, and Gunstock Coating | 8-31-95; 12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13 (77 FR 66921) |
| 17. CTG for Flexible Package Printing; EPA 453/R-06-003; September 2006. (Group II) | Env-A 1215.05 - 1215.07 Flexible-Package Printing | 6-1-11 | 1-7-13 (77 FR 66921) |
| 18. CTG for Flat Wood Paneling Coatings; EPA 453/R-06-004; September 2006. (Group II) | Env-A 1214 Flat Wood Paneling Coatings | 6-1-11 | 1-7-13 (77 FR 66921) |
| 19. CTG for Industrial Cleaning Solvents. EPA 453/R-06-001, September 2006.(Group II) | Env-A 1221.05-1221.07 Use of Industrial Cleaning Solvents. | 6-1-11 | 1-7-13 (77 FR 66921) |
| 20. CTG for Offset Lithographic Printing and Letterpress Printing; EPA 453/R-06-002, September 2006 (Group II) | Env-A 1216 Offset Lithographic and Letterpress Printing | 6-1-11 | 1-7-13 (77 FR 66921) |
| 21. CTG for Paper, Film, and Foil Coatings CTG; EPA 453/R-07-003; September 2007. (Group III) | Env-A 1207 Paper, Fabric, Film and Foil Substrates Coating | 6-1-11 | 1-7-13 (77 FR 66921) |
| 22. CTG for Metal Furniture Coatings; EPA 453/R-07-005; September 2007. (Group III) | Env-A 1209 Metal Furniture Coating | 6-1-11 | 1-7-13 (77 FR 66921) |
| 23. CTG for Miscellaneous Metal and Plastic Parts Coatings; EPA-453/R-08-003; September 2008. (Group IV) | Env-A 1212 Miscellaneous Metal and Plastics Parts and Products Coating | 6-1-11 | 1-7-13 (77 FR 66921) |
| 24. CTG for Fiberglass Boat Manufacturing Materials; EPA-453/R-08-004; September 2008. (Group IV) | Env-A 1219 Fiberglass Boat Manufacturing | 6-1-11 | 1-7-13 (77 FR 66921) |

[20] Note – Wood Furniture (CTG-MACT) – Draft MACT out 5-1994; Final CTG issued 4-1996. See also 61 FR-25223, May 20, 1996 and 61 FR-50823, September 27, 1996.

| VOC CTG Document | State Regulatory Cite | State Effective Date | EPA SIP Approval Date |
|---|---|---|---|
| 25. CTG for Miscellaneous Industrial Adhesives CTG; EPA-453/R-08-005; September 2008. (Group IV) | Env-A 1220 Miscellaneous Industrial Adhesives | 6-1-11 | 1-7-13<br>(77 FR 66921) |
| **VOC ACT Documents** | | | |
| 1. ACT for Volatile Organic Liquid Storage In Floating and Fixed Roof Tanks, EPA 453/R-94-001, January 1994. | Env-A 1204.39 External Floating Roof Tanks; Env-A 1204.38 Fixed-Roof Tank VOL Storage; formerly 1204.21<br><br>Env-A 1217.03 - 1217.04 External Floating Roof Tanks; Env-A 1217.01 - 1217.02 Fixed-Roof Tank VOL Storage | 8-31-95;<br>12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13<br>(77 FR 66921) |
| 2. ACT for Industrial Cleaning Solvents, EPA-453/R-94-015, February 1994 | Env-A 1204.48 Miscellaneous and Multicategory Stationary VOC Sources<br><br>Env-A 1221.05-1221.07 Use of Industrial Cleaning Solvents | 12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13<br>(77 FR 66921) |
| 3. ACT for Business Machine Plastic Parts Coating/Automobile Plastic Parts Coating, EPA 453/R-94-017, February 1994 | Env-A 1204.17 Coating Plastic Components of Automotive Interiors; Env-A 1204.18 Coating Plastic Components of Automotive Exteriors; Env-A 1204.19 Specialty Coatings on Automotive Components<br><br>Env-A 1212.07 VOC Limits for Automotive/ Transportation and Business Machine Plastic Parts Coating | 8-31-95;<br>12-31-02<br><br>6-1-11 | 3-10-98 (63 FR 11600)<br><br>1-7-13<br>(77 FR 66921) |
| 4. ACT for Offset Lithography, EPA 453/R-94-054, June 1994 | Env-A 1204.37 Offset Lithographic Printing, formerly 1204.19 | 8-31-95;<br>12-31-02 | 3-10-98 (63 FR 11600) |
| OTC Model Rules Related to VOCs | | | |
| VOC content of consumer products | Env-A 4100 Consumer Products | 12-16-14 | Not submitted as a SIP revision |
| VOC content of maintenance coatings | Env-A 4200 Architectural and Industrial Maintenance Coatings | 1-1-15 | Not submitted as a SIP revision |

In this submittal, NHDES certifies that New Hampshire's VOC RACT regulations originally submitted under the provisions for the 1-hour ozone National Ambient Air Quality Standard (NAAQS), as amended by the major revisions submitted for the 8-hour ozone NAAQS promulgated in 1997, and all Volatile Organic Compound (VOC) RACT Orders that have been issued by NHDES, are considered to be RACT under the 8-hour ozone NAAQS promulgated in 2008 and 2015. This determination is based on the fact that New Hampshire has developed regulations for each applicable source category listed in the CTG and ACT documents for which New Hampshire has a major source. New Hampshire has also adopted additional regulations consistent with the Ozone Transport Commission's Consumer Products Model Rule and Architectural and Industrial Maintenance Model Rule. These rules are codified in New Hampshire Administrative Rules Env-A 4100 and Env-A 4200 respectively and are contained in Appendices J and K. In addition, New Hampshire has evaluated all existing VOC RACT Orders based on a review of existing control technology at applicable New Hampshire facilities, comparable control technology and RACT emission rates in other states and VOC emissions trends. Where necessary updates to existing VOC RACT Orders have been made and are addressed in more detail in Section 5.1.3.

### 5.1.3 Source-Specific VOC RACT

NHDES submits certain source-specific RACT determinations to EPA as SIP revisions. In instances where a facility's operations are not covered by any of the CTG/ACT documents, or the facility cannot meet the applicable requirements due to technological or economic reasons, they may implement a modified control technique approved by the department and the EPA in accordance with the RACT order provisions of Env-A 1205.03 through Env-A 1205.06. Table 5.2 below lists VOC RACT orders submitted as SIP revisions.

**Table 5-2 - VOC RACT Orders**

| RACT Order # | Company Name | State Effective Date | EPA Effective Date | FR Citation | Comment |
|---|---|---|---|---|---|
| **ACTIVE** | | | | | |
| 00-001 | Anheuser Busch, Inc. | 4-15-2002 | 9-23-2002 | 67 FR 48033 | (a) |
| 07-003 | Concord Litho Group, Inc. | 12-31-2013 | 10-20-2014 | 79 FR 49458 | Revision – original RACT order 9-17-07 EPA approved 1-14-13 |
| RO-0002 | Diacom Corporation | 6-28-2017 | | | EPA proposed approval 7-6-2018 83 FR 31513 |
| 02-001 | Hitchiner Manufacturing | 6-20-2002 | 1-14-2013 | 77 FR 66388 | (b) |
| 01-002 | Hutchinson Sealing Systems, Inc. | 3-23-2012 | 1-14-2013 | 77 FR 66388 | Revision – original RACT order 8-8-02 EPA approved 2012 revision |
| 05-001 | Metal Works, Inc. | 12-22-2004 | 1-14-2013 | 77 FR 66388 | Currently being updated. |
| 03-001A | Parker Hannifin Corporation, Chomerics | 10-22-2014 | 10-28-2016 | 81 FR 59139 | Revision – original RACT order 7-18-02 approved 1-14-13 77 FR 66388 |
| 07-004 | Polyonics | 12-28-2007 | 1-14-2013 | 77 FR 66388 | (c) |

| RACT Order # | Company Name | State Effective Date | EPA Effective Date | FR Citation | Comment |
|---|---|---|---|---|---|
| 03-001 | Sturm, Ruger & Company, Inc. | 2-2-2017 | 4-30-2018 | 83 FR 13668 | Revision – original RACT order 12-1-03 approved 1-14-13 77 FR 66388 |
| 96-001 | Textile Tapes Corp. (now Jaeger USA Inc.) | 7-30-2015 | 10-28-2016 | 81 FR 59139 | Revision – original RACT order 10-4-96 approved 5-11-98 63 FR 11600 Revised 4-16-02 and 8-10-07. Both EPA approved 1-14-13 77 FR 66388 |
| 07-002 | TFX Medical, Inc. (now Teleflex Medical, Inc.) | 8-7-2007 | 1-14-2013 | 77 FR 66388 | (d) |
| 07-001 | Watts Regulator | 8-21-2015 | 10-28-2016 | 81 FR 59139 | Revision – original RACT order 3-21-07 approved 1-14-13 77 FR 66388 |
| **INACTIVE** | | | | | |
| 03-002 | Mectrol Corporation | 6/16/2003 | | | Withdrawn prior to EPA approval 7/2/2009. Closed. |
| 99-001 | Kalwall-Manchester | 11-20-2001 | 1-14-2013 | 77 FR 66388 | Withdrawal proposed approved by EPA 7-6-2018 83 FR 31513 |
| 94-001 | L.W. Packard | 5-5-1995 | 5-11-1998 | 63 FR 11600 | Closed (e) |

(a) The VOC RACT order for Anheuser-Busch (00-001) identifies pollution prevention and loss minimization techniques as well as compliance with Env-A 1222.[21] The VOC RACT order is incorporated into their most recent Title V permit amendment (May 2015) and is still applicable. Anheuser-Busch has reported VOC emissions below 50 TPY since 2005.

(b) Hitchiner Manufacturing limits VOC emissions to less than 50 TPY and generates 29 emission reduction credits (ERCs) annually as specified in their VOC RACT order (02-001) and is still applicable. This RACT order is incorporated into their most recent state permit amendment (April 2018), as is compliance with Env-A 1222. Hitchiner has reported VOC emissions reductions from 26.7 tons in 2008 to 3.8 in 2017.

(c) In accordance with their VOC RACT order (07-004), Polyonics must comply with VOC emission limit by using add-on controls, bubbling or the use of self-generated Discrete Emission Reductions (DERs). The RACT order is included in Polyonics' state permit dated October 2014, and is in compliance with Env-A 1207. Polyonics has reported VOC emissions of less than 1 TPY since 2008.

(d) Teleflex Medical is still operating under RACT order 07-002 as specified in their state operating permit issued in March 2015. In accordance with the order, the company operates a regenerative thermal oxidizer that reduces VOC emissions by 81% in addition

[21] Env-A 1222 MISCELLANEOUS AND MULTICATEGORY STATIONARY VOC SOURCES

to self-generating DERs. These requirements continue to meet RACT. Teleflex has reported less than 10 TPY of VOC emissions since 2008.

(e) NHDES will submit a written withdrawal request for this order.

### 5.1.4 Negative Declaration

Some VOC RACT controls have not been adopted in New Hampshire because there are not targeted emission sources in the state. NHDES hereby confirms negative declaration of the following VOC RACT controls:

| **Table 5-3 - Negative Declaration for VOC Source Categories** |
|---|
| 1) Control of Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds; EPA-450/2-77-025; October 1977. (Group I) (EPA 77 FR 66388) |
| 2) Control of Volatile Organic Emissions from Existing Stationary Sources, Volume V: Surface Coating of Large Appliances; EPA-450/2-77-034; December 1977. (Group I) (EPA 77 FR 66388) |
| 3) Control of Volatile Organic Emissions from Existing Stationary Sources, Volume VII: Factory Surface Coating of Flat Wood Paneling; EPA-450/2-78-032; June 1978. (EPA 77 FR 66388) |
| 4) Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment; EPA-450/2-78-036; June 1978. (Group II) (EPA 77 FR 66388) |
| 5) Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products; EPA-450/2-78-029; December 1978. (Group II) (EPA 77 FR 66388) |
| 6) Control of Volatile Organic Emissions from Manufacture of Pneumatic Rubber Tires; EPA-450/2-78-030; December 1978. (Group II) (EPA 77 FR 66388) |
| 7) Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners; EPA-450/3-82-009; September 1982. (Group III) (EPA 77 FR 66388) |
| 8) Control of Volatile Organic Compound Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins; EPA-450/3-83-008; November 1983. (Group III) (EPA 77 FR 66388) |
| 9) Control of Volatile Organic Compound Equipment Leaks from Natural Gas/Gasoline Processing Plants; EPA-450/2-83-007; December 1983. (Group III) (EPA 77 FR 66388) |
| 10) Control of Volatile Organic Compound Fugitive Emissions from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment; EPA-450/3-83-006; March 1984. (Group III) (EPA 77 FR 66388) |
| 11) Control of Volatile Organic Compound Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry; EPA-450/3-84-015; December 1984. (Group III) (EPA 77 FR 66388) |
| 12) SOCMI Distillation and Reactor Processes CTG (EPA 450/4-91-031, August 1993). (EPA 77 FR 66388) |
| 13) Shipbuilding/repair ACT (EPA 453/R-94-032, April 1994) and CTG, see 61 FR 44050, August 27, 1996. (EPA 77 FR 66388) |
| 14) Aerospace (CTG & MACT) (see 59 FR 29216, June 6, 1994); CTG (Final), EPA-453/R-97-004, December 1997. (EPA 77 FR 66388) |
| 15) Control Techniques for Organic Emissions from Plywood Veneer Dryers, EPA-450/3-83-012. May 1983. (EPA 77 FR 66388) |

| **Table 5-3 - Negative Declaration for VOC Source Categories** |
|---|
| 16) Alternative Control Technology Document – Halogenated Solvent Cleaners – EPA-450/3-89-030. August 1989. |
| 17) Alternative Control Technology Document – Organic Waste Process Vents – EPA-450/3-91-007, December 1990. (EPA 77 FR 66388) |
| 18) Polystyrene Foam Manufacturing – EPA-450/3-90-020, 1990. (EPA 77 FR 66388) |
| 19) Bakery Ovens ACT (EPA 453/R-92-017, December 1992) |
| 20) Industrial Wastewater CTG (draft) (EPA-453/D-93-056, September 1992); ACT: April 94 ACT consists of cover memo with option tables + CTG (draft). (EPA 77 FR 66388) |
| 21) Control of VOC Emissions from the Application of Agricultural Pesticides, EPA-450/R-92-011, March 1993. |
| 22) Control of Volatile Organic Compound Emissions from Batch Processes ACT (EPA 453/R-93-017 or EPA 453/R-93-020, February 1994) |
| 23) Ship building Coatings ACT, EPA 453/R-94-032, April 1994. [This was superseded by the Ship building CTG which was issued in August 1996.] |
| 24) Control Technique Guidelines for Large Appliance Coatings; EPA 453/R-07-004; September 2007. (EPA 77 FR 66921) |
| 25) Control Techniques Guidelines for Automobile and Light-Duty Truck Assemble Coatings; EPA 453/R-08-008; September 2008. (EPA 77 FR 66921) |
| 26) Control Techniques Guidelines for the Oil and Natural Gas Industry; EPA-453/B-16-001 *2016/10;* October 2016*. New Hampshire does not have any sources to which this CTG would be applicable. NHDES intends to submit a negative declaration should EPA not finalize the proposed withdrawal of the CTG.* |

## 5.2 Determination of NOx RACT Compliance

### 5.2.1 NOx RACT Rule

NHDES originally adopted regulations for the applicable source categories to meet RACT for the 1-hour ozone NAAQS. In 2002, NHDES readopted these regulations and updated the NOx regulation with respect to new turbines. On July 9, 2007, NHDES submitted revised portions of Env-A 1211 (then, NOx RACT rules) in conjunction with its RACT certification relative to the 1997 8-hour ozone standard. It was approved by EPA with an effective date of January 4, 2013.[22]

In 2011, New Hampshire submitted Chapter Env-A 1300, *Nitrogen Oxides (NOx) Reasonably Available Control Technology (RACT)*, formerly known as Env-A 1211**,** renumbered in a 2010 rulemaking. This rule establishes reasonably available control technology (RACT) standards for certain NOx-emitting sources located in New Hampshire, to comply with sections 172(c)(1) and 182(b)(2) of the Act. Sources include, but are not limited to:

- Utility boilers having a heat input rate of at least 50 million BTU per hour, including:
    - Wet-bottom utility boilers firing coal.
    - Dry-Bottom Utility Boilers Firing Coal and/or Oil.

[22] 77 FR 66388

- Utility Boilers Firing Oil, Gas, and/or Wood.

The rule also establishes emission standards and/or operating limits, testing, recordkeeping and recording requirements for other fuel burning equipment including steam electric boilers, industrial boilers, combustion turbines, stationary internal combustion engines, asphalt rotary dryers, incinerators, wallboard manufacturing facilities, emergency generators, auxiliary boilers and miscellaneous stationary sources.

In response to EPA comments relative to our NHDES' draft RACT SIP submission in the Findings of Failure document,[23] NHDES began a review of NOx emissions and emission controls for electric generating units and municipal waste combustors with the goal of amending changes to Env-A 1300 sufficient to satisfy RACT under the 2008 ozone NAAQS. The evaluation and regulation development was performed in conjunction with a stakeholder workgroup and commenced in 2017. In addition, Env-A 1300 is approaching its expiration date of 10/31/2018 and was scheduled for periodic review.

### 5.2.2 NOx RACT Rule Revision 2018

In early 2018, NHDES initiated the rulemaking process to make the necessary revisions to Env-A 1300 NOx RACT rule. This began by the distribution of proposed revisions to EPA Region 1 and stakeholders comprised of NOx RACT source owners/operator and interested members of the general public. A stakeholder meeting was held on January 11, 2018 to review the changes. A public hearing on the NOx RACT Rule Initial Proposal (IP) was held on May 17, 2018. The Department received comments on the IP during the public comment period from Wheelabrator Technologies (Wheelabrator), GSP Merrimack (GSP), and the United States Environmental Protection Agency (EPA). A final hearing on New Hampshire's NOx RACT rule with the New Hampshire Joint Legislative Committee on Administrative Rules (JLCAR) was held on July 19, 2018. The rule was adopted final and became effective on August 15, 2018. Documents related to the rulemaking process, including a technical support document detailing the revisions to the rule are included in Appendices F, H and I. Based upon the comments received during the rulemaking process, a summary of the changes to Env-A 1300 include the following:[24]

- Streamline the annual performance tune-up on applicable boiler(s) to match federal requirements in 40 CFR 63, Subpart JJJJJJ and Subpart DDDDD.
- Lower the NOx emission standards for municipal waste combustors.
- Lower the NOx emission standards for older load shaving, gas-fired engines to match older prime power, gas-fired engine limits.
- Lower the NOx emission standards for older load shaving and older prime power, liquid-fired engines to 40 CFR 60, Subpart IIII Tier 2 levels.
- Lower the NOx emissions standards for wet bottom utility boilers firing coal.

### 5.2.3 Certification

[23] 82 FR 9158

[24] See Appendix F - CHANGES TO CHAPTER ENV-A 1300 NITROGEN OXIDES (NOx) REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT) TO MEET 2008 and 2015 OZONE STANDARDS - STATE IMPLEMENTATION PLAN REQUIREMENTS TECHNICAL SUPPORT DOCUMENT

Identification and certification/adoption of Env-A 1300 NOx RACT for meeting the 2008 and 2015 ozone standards is provided in Table 5.4 below:

**Table 5-4 - NOx RACT Source Categories and Applicable Rules**

| NOx ACT Document | State Regulatory Citation | State Effective Date | EPA SIP Approval Date |
|---|---|---|---|
| 1. ACT for NOx Emissions from Stationary Combustion Turbines (EPA-453/R-93-007) – January 1993. | Env-A 1211.06 Combustion Turbines<br><br>Env-A 1306<br><br>Env-A 1306 Stationary Combustion Turbines | 5-20-94;<br>10-31-02<br><br>10-31-10<br><br>*Final – effective 8-15-18* | 4-09-97<br>(62 FR 17087)<br><br>8/21/2014<br>(79 FR 49458) |
| 2. ACT for NOx Emissions from Stationary Internal Combustion Engines (EPA-453/R-93-032), July 1993 – [Updated September 2000.] | Env-A 1211.07 Stationary Internal Combustion Engines<br><br>Env-A 1307<br><br>Env-A 1307 | 5-20-94;<br>10-31-02<br><br>10-31-10<br><br>*Final – effective 8-15-18* | 4-09-97<br>(62 FR 17087)<br><br>8/21/2014<br>(79 FR 49458) |
| 3. ACT for NOx Emissions from Industrial, Commercial & Institutional Boilers - (EPA 453/R-94-022) March 1994. | Env-A 1211.05 Industrial Boilers<br><br>Env-A 1305<br><br>Env-A 1305 | 5-20-94;<br>5-1-97;<br>10-31-02<br><br>10-31-10<br><br>*Final – effective 8-15-18* | 4-09-97<br>(62 FR 17087)<br><br>8/21/2014<br>(79 FR 49458) |
| 4. ACT for NOx Emissions from Utility Boilers, EPA 453/R-94-023, March 1994. | Env-A 1211.03 Utility Boilers<br><br>Env-A 1303<br><br>Env-A 1303 | 5-20-94;<br>5-1-97;<br>10-31-02<br><br>10-31-10<br><br>*Final – effective 8-15-18* | 4-09-97<br>(62 FR 17087)<br><br>8/21/2014<br>(79 FR 49458) |

### 5.2.4 Source-specific

NHDES submits certain source-specific RACT determinations to EPA as SIP revisions. In instances where a facility's operations are not covered by any of the ACT documents, or where a facility cannot meet the applicable requirements due to technological or economic reasons, they may

implement a modified control technique approved by the department and the EPA in accordance with the RACT order provisions of Env-A 1316.02 through Env-A 1316.06. Table 5.5 below lists the current active NOx RACT orders. New Hampshire has evaluated all existing NOx RACT Orders based on a review of existing control technology at applicable New Hampshire facilities, comparable control technology and NOx RACT emission rates in other states and NOx emissions trends. Where necessary updates to existing NOx RACT Orders have been made and formal requests for withdrawals of NOx RACT Orders that are no longer valid have been submitted. Information relative to New Hampshire's review is detailed below.

**Table 5-5 - NOx RACT Orders**

| RACT Order # | Company Name | State Effective Date | EPA Effective Date | FR Citation | Comment |
|---|---|---|---|---|---|
| **ACTIVE** | | | | | |
| 05-001 | Anheuser Busch, Inc. | 1-17-2018 | | | Revision submitted 4-27-18. Original RACT 5-19-05 EPA approved 1-14-13 77 FR 66388 |
| 97-003 | Gorham Paper & Tissue | 10-19-2012 | 10-20-2014 | 79 FR 49458 | Revision – original RACT (for Crown Vantage) submitted 9-24-97 approved 7-13-98 63 FR 26455 |
| 04-001 | Newington Energy, LLC | 6-20-2007 | 1-14-2013 | 77 FR 66388 | Revision – original RACT submitted 9-9-02. (a) |
| 06-001 | PSNH (Now Granite Shore Power) - Schiller Station - Unit #5 | 8-4-2006 | 1-14-2013 | 77 FR 66388 | Still meets RACT. |
| | Granite Shore Power Units #4 and #6 | | | | Currently in development. (b) |
| 97-001 | PSNH (Now Granite Shore Power) Merrimack | 4-14-1997 | 7-13-1998 | 63 FR 26455 | To be withdrawn. (c) |
| 98-001 | PSNH (Now Granite Shore Power) Merrimack/Schiller/ Newington | 4-14-1998 | 1-16-2001 | 65 FR 68078 | To be withdrawn. (d) |
| 01-001 | Waste Mgmt. of NH, Inc.-Turnkey | 3-29-2012 | 1-14-2013 | 77 FR 66388 | Revision – original submitted 8-26-02 approved updated order 1-14-13 77 FR 66388 |
| **INACTIVE** | | | | | |
| 95-003 | Waterville Valley Ski Area | 9-19-1995 | 6-9-1997 | 62 FR 17087 | To be withdrawn. (e) |
| 95-001 | Groveton Paper Board | 5-10-1995 | 6-9-1997 | 62 FR 17087 | Closed (f) |
| 95-011 | Hampshire Chemical Corporation | 5-6-1997 | 7-13-1998 | 63 FR 26455 | Closed (f) |
| 95-002 | Plymouth Cogen Limited Partnership | 9-12-1995 | 6-9-1997 | 62 FR 17087 | Closed (f) |

a) This RACT order is applicable to eight fuel gas heaters with low NOx burners and still meets RACT.
b) This RACT order is anticipated to be finalized prior to the RACT certification SIP submittal in September 2018.
c) The NOx RACT Order for Merrimack Station (97-001) established emission caps for MK1 and MK2 separately and jointly. These will be superseded by the 2018 revision to Env-A 1300. Additionally, the creation and use of DERs as established in the order are superseded by NOx budget and trading programs applicable to the state's EGUs [25] that were created after this order was developed. Therefore, NHDES requested RACT Order ARD-97-001 be withdrawn from the SIP in a submission dated 8/16/2018.
d) This RACT order (98-001) is no longer applicable. The order establishes a 15.4 ton per day limit on MK2 that will be superseded by the Env-A 1300 revision. It also established an ozone season cap for the years 1999-2002 that is no longer applicable. In addition, it established ozone season and non-ozone season caps that are now obsolete because of the NOx budget and trading programs.[26] A new RACT order will be implemented to Schiller Station units #4 and #6. A permit condition will be added to the Newington Station permit that will require the submittal of a RACT analysis within six months if the station predicts it will exceed an 8% annual capacity factor while burning fuel oil. Therefore, NHDES requested RACT Order ARD-98-001 be withdrawn from the SIP in a submission dated 8/16/2018.
e) The basis and resulting conditions of the existing NOx RACT Order are no longer valid because Waterville Valley has since applied for and obtained a General State Permit for Emergency Generators in accordance with New Hampshire Code of Administrative Rules Env-A 610 GENERAL STATE PERMITS AND GENERAL PERMITS UNDER TITLE V. All of the remaining internal combustion engines at the facility are now considered emergency generators and operate in accordance with the requirements of the facility's General State Permit (GSP-EG-0280) issued on February 12, 2009 and reissued on December 20, 2010, March 17, 2014 and May 27, 2015. In addition, the General State Permit requires the facility to comply with a facility-wide NOx emissions cap of 50 tons per year. The additional operating limits associated with the small residential boilers at the facility is no longer necessary since the facility has opted to accept the 50 tons per year NOx emission cap contained in the General State Permit. The original basis of the fuel caps contained in the NOx RACT Order were created to establish the facility as a minor source in accordance with NH's Title V Operating Permit Program (i.e.: facility-wide NOx emissions cap below 100 tons per year). Since that time, Waterville Valley has converted a number of their internal combustion engines to electric compressors, actual NOx emissions have significantly decreased to 2.2 tons per year as reported in 2013, and facility-wide NOx emissions are permitted to be below 50 tons per year. Therefore, NHDES requested RACT Order ARD-95-003 be withdrawn from the SIP in a submission dated 8/16/2018.
f) NHDES will submit written withdrawal requests for these orders.

[25] Env-a 2900 SULFUR DIOXIDE AND NITROGEN OXIDES ANNUAL BUDGET TRADING AND BANKING PROGRAM and Env-A 3200 NOx BUDGET TRADING PROGRAM
[26] Ibid.

### 5.2.5 Negative Declaration

Some NOx RACT controls have not been adopted in New Hampshire because there are not targeted emission sources in the state. NHDES made the negative declaration of the following NOx RACT controls:

| **Table 5-6 - Negative Declaration for NOx Source Categories** |
|---|
| 1) NOx Emissions from Nitric and Adipic Acid Manufacturing Plants; EPA 453/3-91-026; 1991/12. |
| 2) NOx Emissions from Process Heaters; EPA 453/R-93-034; 1993/09 (Updated September 2000. |
| 3) NOx Emissions from Cement Manufacturing; EPA 453/R-94-004; 1994/03 (Updated September 2000) |
| 4) NOx Control Technologies for the Cement Industry: Final Report; EPA 453/R-00-002; 2000/09. |
| 5) Alternative Control Techniques Document – NOx Emissions from Glass Manufacturing; EPA 453/R-94-037; 1994/06. |
| 6) Alternative Control Techniques Document – NOx Emissions from Iron and Steel Mills; EPA 453/R-94-065; 1994/09. |

## 6.0 ADDITIONAL CONTROL MEASURES

### 6.1 Compliance and Enforcement Strategies

NHDES requires facilities with devices subject to Env-A 1300 to determine compliance with the RACT requirements, where an emission limit is not directly specified, by performing periodic tune-ups. The tune-up requirements have been updated to incorporate by reference procedures specified in 40 CFR 63, Subpart JJJJJ National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources or 40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters. Additionally, tune-ups must be performed while burning the type of fuel, or fuels in the case of boilers that routinely burn two types of fuels, that provide the majority of the heat input over the 12 months prior to the tune-up.

Env-A 800 requires sources to conduct NOx testing every three years to determine compliance with the NOx RACT requirements, unless the facility employs a certified continuous emissions monitor. Any compliance testing conducted at the facilities must follow an approved protocol and be witnessed by NHDES personnel.

Facilities subject to RACT must meet the recordkeeping and reporting requirements of Env-A 900, including the submittal of annual emission inventories. NHDES also monitors compliance with RACT requirements through permit deviation reports, Title V operating permit annual compliance certification reports and periodic facility inspections.

On March 12, 2003, NHDES submitted the readopted Env-A 800 to EPA for SIP approval, and submitted revisions thereto on July 9, 2007, and again on October 31, 2016. On May 11, 2017, NHDES submitted the readopted Env-A 900 to EPA and it was approved in March 2018.[27]

## 7.0 CERTIFICATION

As described in Section 2.0, all areas of New Hampshire are designated unclassifiable/ attainment for the 2008 and 2015 8-hour ozone NAAQSs. Ozone monitoring data from around the state show that all areas continue to meet the standard. Additionally in this submittal, NHDES certifies that New Hampshire's RACT regulations in CHAPTER Env-A 1200 and CHAPTER Env-A 1300, New Hampshire's Consumer Product Rule in CHAPTER Env-A 4100 and Architectural and Industrial Maintenance Rule in CHAPTER Env-A 4200 included herein, and all VOC and NOx RACT Orders are considered to be RACT under the 8-hour ozone NAAQS promulgated in 2008. We also certify that the above referenced rules and orders meet the revised 2015 8-hour ozone NAAQS.

NHDES certifies that New Hampshire's existing NOx and VOC RACT regulations satisfy RACT requirements under the 2008 and 2015 8-hour ozone NAAQS. New Hampshire's RACT rules meet federal requirements because NHDES developed RACT regulations for each applicable source category listed in EPA's Control Techniques Guidelines (CTGs) and Alternative Control Techniques (ACTs) for which the state has a major source, and because NHDES also subjects any major source not covered by a CTG or ACT document to RACT requirements. New Hampshire's RACT regulations are either as stringent as or more stringent than the control measures described in the CTG and ACT documents issued before the date of this SIP revision. New Hampshire has also adopted additional regulations consistent with the Ozone Transport Commission's Consumer Products Model Rule and Architectural and Industrial Maintenance Model Rule. These rules are codified in New Hampshire Administrative Rules Env-A 4100 and Env-A 4200 respectively. New Hampshire is in the process of completing a revision to its NOx RACT regulations that has involved an extensive public process. Revisions to New Hampshire's NOx RACT regulations were adopted final and became effective on August 15, 2018. Revisions to New Hampshire's NOx RACT regulation include addressing EPA's comments relative to NOx emission standards for municipal waste combustors and utility boilers firing coal. Once NH's rule certification process is complete, NH will submit the NOx RACT regulation to EPA as a SIP revision.

New Hampshire's regulations also allow the use of source-specific RACT orders to fulfill RACT requirements. RACT orders are for miscellaneous or multi-category NOx and VOC sources wishing to meet the RACT order compliance option. RACT orders are also for sources seeking alternative emission limits. For the latter, sources must achieve the same or greater emission control as specified in the RACT regulations. A VOC and/or NOx source seeking an alternative emission limit must evaluate the economic and technical feasibility of various VOC and/or NOx control options. New Hampshire has evaluated all existing VOC and NOx RACT Orders based on

[27] 82 FR 24057

a review of existing control technology at applicable New Hampshire facilities, comparable control technology and RACT emission rates in other states and VOC and NOx emissions trends. Where necessary updates to existing VOC and NOx RACT Orders have been made and are addressed in more detail in Section 5.1.3. and Section 5.2.4.

In summary, NHDES certifies that New Hampshire's current RACT rules meet federal requirements for RACT under the 2008 and 2015 8-hour ozone standards. Because an implementation rule for the 2015 ozone NAAQS has not been finalized yet by EPA, NHDES commits to revisiting this certification and supplementing it as needed for the 2015 standard.

## 8.0 ADDITIONAL CONTROL MEASURES

The Ozone Transport Commission is evaluating additional control measures that the region and/ or states may pursue to achieve further emission reductions. Possible future control measures may be more stringent than or supplemental to the basic RACT requirements. If NHDES chooses to adopt any such control measures, they may be included in future SIP revisions.

## 9.0 ADMINISTRATIVE MATERIALS

This SIP submittal references existing regulations that New Hampshire has adopted to meet RACT requirements. These regulations became effective on the dates indicated in the summary tables 5.1 and 5.4. The evidence of the rule adoption for each regulation was included in the original SIP submittal for the regulation. Refer to the EPA approval dates in tables 5.1 and 5.4. Appendix A contains a table that identifies NOx and VOC emissions from major sources as reported in the National Emissions Inventory. NHDES has the legal authority to develop and adopt these regulations pursuant to RSA 125 C:6. Refer to Appendix B for a copy of this state law. This certification was subject to a public hearing process, and an opportunity was provided to solicit input from the public as to whether opportunities exist for New Hampshire to modify any of its RACT requirements. Appendix C includes a copy of the public notice of the comment period and public hearing for this SIP revision. The public notice for this SIP revision appeared in the *Union Leader*, a statewide newspaper, on July 13, 2018. Appendix D contains the public hearing certification, and Appendix E comments received on this SIP revision and NHDES's responses thereto. Appendix F is technical support document describing in detail the changes made the state's NOx RACT. NHDES's VOC RACT rule (Env-A 1200) is provided in Appendix G. Provided in Appendix H is New Hampshire's revised NOx RACT rule (Env-A 1300) as submitted as a final version to the State's Office of Legislative Services (OLS). Two additional regulatory steps are required before the rule is deemed official, or "certified". These steps will not result in any substantive changes to the final rule. This process may take an additional several weeks. New Hampshire commits to submitting the certified version as a SIP amendment once the regulatory process is complete. Comments and NHDES's responses to the revision of Env-A 1300 are provided in Appendix I. OTC model rules adopted by New Hampshire, Env-A 4100, Consumer Products, and Env-A 4200 Architectural and Industrial Maintenance Coatings are included in Appendices J and K respectively.

# Appendix A
# NOx and VOC RACT Sources and Reported Annual Emissions

| Source # | County | Source Name | NOx Annual Emissions (tons) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1996 | 1999 | 2002 | 2005 | 2008 | 2011 | 2014 | 2017 |
| 3300100027 | Belknap | American Wood Pellets, Inc. | 7.3 | 7.5 | 9.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3300300019 | Carroll | Pinetree Power - Tamworth | 303.2 | 248.6 | 312.2 | 335.1 | 158.6 | 104.7 | 114.4 | 110.0 |
| 3300500011 | Cheshire | Cheshire Medical Center | 68.7 | 59.5 | 10.0 | 10.4 | 9.0 | 9.5 | 7.5 | 4.4 |
| 3300700001 | Coos | Gorham Paper & Tissue LLC | 981.2 | 1011.1 | 140.6 | 948.3 | 220.5 | 40.6 | 42.5 | 55.6 |
| 3300700010 | Coos | DG Whitefield LLC (formerly Whitefield P&L) | 191.0 | 205.0 | 202.2 | 58.8 | 68.6 | 79.6 | 83.9 | 74.6 |
| 3300700092 | Coos | Groveton Acquisition LLC (formerly Wassau Paper) | 291.2 | 357.4 | 76.4 | 56.8 | 3.7 | -- | -- | -- |
| 3300790137 | Coos | Burgess Biopower | -- | -- | -- | -- | -- | -- | 125.9 | 195.0 |
| 3300900003 | Grafton | Dartmouth-Hitchcock Medical Center | 33.3 | 37.1 | 33.9 | 56.3 | 56.6 | 61.4 | 19.9 | 18.4 |
| 3300900020 | Grafton | Dartmouth College | 103.1 | 112.9 | 152.2 | 118.0 | 103.2 | 110.5 | 84.7 | 82.9 |
| 3300900021 | Grafton | Bridgewater Power Company | 189.3 | 176.1 | 169.7 | 208.5 | 67.1 | 60.8 | 59.0 | 65.3 |
| 3300900026 | Grafton | Pinetree Power - Bethlehem | 276.8 | 230.8 | 209.4 | 237.8 | 107.1 | 68.7 | 91.8 | 86.7 |
| 3300900029 | Grafton | Indeck Energy - Alexandria LLC | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 63.7 | 76.8 | 24.3 |
| 3300900115 | Grafton | Plymouth Cogeneration LP | 40.0 | 49.6 | 48.9 | 42.3 | 18.5 | 21.0 | -- | -- |
| 3301100017 | Hillsborough | Anheuser-Busch, Inc. | 92.8 | 89.1 | 83.9 | 140.7 | 42.7 | 34.4 | 27.2 | 27.3 |
| 3301100019 | Hillsborough | Hampshire Chemical | 64.0 | 58.8 | 7.1 | -- | -- | -- | -- | |
| 3301100049 | Hillsborough | Velcro USA, Inc. - Manchester | 107.1 | 94.1 | 12.3 | 15.0 | 10.5 | 11.8 | 5.6 | 8.0 |
| 3301100070 | Hillsborough | Monadnock Paper Mill | 57.5 | 58.8 | 53.0 | 51.9 | 45.0 | 44.6 | 42.1 | 26.6 |
| 3301100064 | Hillsborough | Hitchiner Manufacturing - Old Wilton Rd | -- | -- | -- | 3.0 | 6.5 | 6.6 | 6.4 | 5.5 |
| 3301300026 | Merrimack | PSNH - Merrimack Station | 13585.7 | 8146.0 | 3845.8 | 5034.2 | 3160.8 | 2953.7 | 1689.1 | 412.0 |
| 3301300032 | Merrimack | Concord Steam | 58.9 | 52.0 | 46.1 | 39.2 | 46.7 | 45.3 | 40.8 | 15.0 |
| 3301300101 | Merrimack | Bio-Energy Corporation | 144.1 | 141.6 | 37.3 | -- | -- | -- | -- | |
| 3301300102 | Merrimack | Wheelabrator Concord Company LP | 324.5 | 331.6 | 281.1 | 292.2 | 357.2 | 355.5 | 351.2 | 341.0 |
| 3301500012 | Rockingham | PSNH - Schiller Station | 2013.0 | 1791.1 | 1859.5 | 1751.7 | 1139.4 | 613.1 | 512.5 | 268.0 |
| 3301500047 | Rockingham | Nextera Energy Seabrook LLC | 11.1 | 17.3 | 20.3 | 24.8 | 15.5 | 22.6 | 15.6 | 17.0 |
| 3301500054 | Rockingham | PSNH - Newington Station | 1292.3 | 2219.9 | 948.6 | 1762.9 | 109.3 | 121.4 | 181.4 | 36.7 |
| 3301500076 | Rockingham | Foss Manufacturing | 149.1 | 151.6 | 84.9 | 72.7 | 29.5 | 19.2 | 26.0 | 20.8 |
| 3301500077 | Rockingham | Georgia-Pacific Gypsum | 29.8 | 49.6 | 31.0 | 40.9 | 25.9 | 29.8 | 33.1 | 29.4 |
| 3301590782 | Rockingham | Granite Ridge Energy LLC | -- | -- | 83.9 | 124.4 | 145.4 | 123.5 | 124.2 | 79.7 |
| 3301590793 | Rockingham | Essential Power Newington LLC | -- | -- | 122.9 | 93.5 | 97.3 | 107.7 | 64.4 | 42.1 |
| 3301700003 | Strafford | Turnkey Recycling Enterprises | 65.0 | 90.3 | 96.5 | 106.6 | 106.2 | 42.3 | 45.7 | 38.3 |
| 3301700009 | Strafford | University Of New Hampshire - Durham | 66.9 | 63.1 | 60.7 | 68.0 | 29.8 | 39.2 | 35.9 | 40.2 |
| 3301900001 | Sullivan | APC Paper Company | 33.4 | 37.2 | 39.2 | 41.5 | 49.5 | 41.3 | 17.9 | 11.3 |

| Source # | County | Source Name | NOx Annual Emissions (tons) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1996 | 1999 | 2002 | 2005 | 2008 | 2011 | 2014 | 2017 |
| 3301900029 | Sullivan | Wheelabrator Claremont Company LP | 174.8 | 186.9 | 186.2 | 185.8 | 185.4 | 185.8 | -- | -- |
| 3301900030 | Sullivan | Durgin & Crowell Lumber Company | 73.0 | 82.7 | 88.9 | 90.6 | 5.9 | 4.9 | 5.6 | 7.0 |
| 3301900031 | Sullivan | Springfield Power & LLC (formerly Hemphill P&L) | 176.4 | 184.6 | 202.4 | 221.3 | 85.5 | 78.2 | 72.5 | 78.5 |
| | | **TOTAL** | **21,004** | **16,342** | **9,556** | **12,230** | **6,503** | **5,495** | **4,004** | **2,222** |

| Source # | County | Source Name | VOC Annual Emissions (tons) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1996 | 1999 | 2002 | 2005 | 2008 | 2011 | 2014 | 2017 |
| 3300190220 | Belknap | Scotia Technology | -- | -- | -- | -- | -- | 0.9 | 0.9 | 0.1 |
| 3300300071 | Carroll | Yield House Industries | 5.9 | 1.0 | 4.9 | -- | -- | -- | | |
| 3300390151 | Carroll | White Mountain Oil & Propane Company | -- | -- | 1.7 | 2.1 | 1.8 | 3.0 | 2.2 | 2.2 |
| 3300500007 | Cheshire | Teleflex Medical Incorporated | -- | 8.6 | 13.3 | 14.2 | 2.1 | 5.3 | 4.2 | 5.5 |
| 3300500009 | Cheshire | Famm Steel, Inc. | -- | -- | -- | -- | -- | -- | -- | |
| 3300590276 | Cheshire | Polyonics, Inc. | -- | -- | 4.4 | 7.8 | 0.2 | 0.5 | 0.7 | 0.4 |
| 3300700003 | Coos | Brown Street Furniture | 60.3 | 45.2 | 31.4 | 20.0 | 13.7 | 5.3 | -- | |
| 3300700091 | Coos | PAK 2000 | 68.3 | 2.0 | 1.0 | 1.2 | 0.7 | 1.0 | 0.9 | 0.3 |
| 3300900001 | Grafton | LW Packard - Ashland | 33.9 | 1.8 | 0.9 | -- | -- | -- | -- | |
| 3300900002 | Grafton | Freudenberg NOK - Bristol | 21.7 | 10.5 | 4.2 | 5.3 | 2.4 | 2.0 | 4.7 | 7.0 |
| 3300900008 | Grafton | Upper Valley Press, Inc. | -- | 13.4 | 19.6 | 25.8 | 18.8 | 19.9 | 19.4 | 16.8 |
| 3300900038 | Grafton | Dartmouth Printing Company | 26.8 | 26.8 | 29.3 | 8.3 | 7.5 | 12.4 | 14.1 | 13.9 |
| 3300900040 | Grafton | New Hampshire Industries | 13.2 | 15.2 | 4.9 | 4.0 | 2.6 | 1.9 | 2.6 | -- |
| 3301100017 | Hillsborough | Anheuser-Busch Incorporated | 59.7 | 46.0 | 50.1 | 47.2 | 46.3 | 42.5 | 40.3 | 46.1 |
| 3301100021 | Hillsborough | Crane Security Technologies, Inc. | 10.5 | 25.6 | 32.9 | 5.7 | 7.9 | 4.8 | 1.1 | 6.9 |
| 3301100031 | Hillsborough | Crane Security Technologies, Inc. | -- | -- | -- | -- | -- | -- | 2.0 | -- |
| 3301100049 | Hillsborough | Velcro USA, Inc. - Manchester | 15.4 | 20.2 | 14.7 | 25.3 | 22.6 | 16.9 | 17.5 | 15.4 |
| 3301100064 | Hillsborough | Hitchiner Manufacturing - Old Wilton Rd | 859.5 | 72.3 | 46.1 | 24.7 | 26.7 | 3.6 | 11.8 | 3.8 |
| 3301100070 | Hillsborough | Monadnock Paper Mill | 19.6 | 18.3 | 5.8 | 2.3 | 8.1 | 1.6 | 2.9 | 3.9 |
| 3301100072 | Hillsborough | Nashua Corporation - Merrimack | 117.8 | 89.9 | 63.0 | 46.8 | 27.7 | 18.1 | 3.4 | - |
| 3301100076 | Hillsborough | Kalwall Corporation - Manchester | 61.0 | 81.5 | 44.3 | 40.3 | 52.2 | 33.9 | 31.6 | 29.9 |
| 3301100093 | Hillsborough | Batesville Casket Company | 148.8 | 148.4 | 122.6 | 97.3 | -- | -- | -- | |
| 3301100115 | Hillsborough | Chomerics Laminates(Parker Hannafin) | 11.2 | 3.2 | 4.6 | 2.2 | 7.0 | 5.9 | 5.5 | 4.8 |
| 3301100129 | Hillsborough | Warwick Mills | 0.1 | 0.0 | 0.0 | 0.1 | 16.3 | 1.3 | 0.7 | 0.7 |
| 3301100165 | Hillsborough | Saint Gobain Performance Plastics | 1.5 | 2.0 | 14.0 | 37.5 | 30.5 | 30.5 | 22.3 | 9.4 |
| 3301100252 | Hillsborough | Diacom | -- | -- | -- | -- | -- | -- | -- | 10.1 |
| 3301191131 | Hillsborough | Presstek, Inc. | -- | -- | 1.9 | 1.9 | 1.7 | 1.8 | 1.7 | 0.4 |

| Source # | County | Source Name | VOC Annual Emissions (tons) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1996 | 1999 | 2002 | 2005 | 2008 | 2011 | 2014 | 2017 |
| 3301191256 | Hillsborough | Textiles Coated International | -- | -- | -- | -- | 0.3 | 0.5 | 4.5 | 5.4 |
| 3301191265 | Hillsborough | Worthen Industries, Inc. - Nylco Division | -- | -- | -- | -- | 2.5 | 4.5 | 5.5 | 6.9 |
| 3301300031 | Merrimack | Polyclad Laminates/Tannery | 21.5 | 12.0 | 2.5 | 0.5 | -- | -- | -- | |
| 3301300050 | Merrimack | Watts Regulator Company | 4.1 | 4.9 | 13.7 | 10.5 | 8.6 | 10.6 | 6.4 | 5.5 |
| 3301300061 | Merrimack | Structures Unlimited | 10.4 | 8.3 | 7.1 | 6.8 | 7.4 | 2.3 | 2.9 | 3.3 |
| 3301300062 | Merrimack | Concord Litho Company | 42.1 | 29.6 | 13.0 | 10.0 | 13.8 | 9.7 | 11.9 | 5.6 |
| 3301300110 | Merrimack | Polyclad Laminates/Industrial | 7.7 | 11.6 | 6.9 | 6.7 | -- | -- | -- | |
| 3301300111 | Merrimack | Elektrisola Incorporated | 66.7 | 58.7 | 28.6 | 31.5 | 11.2 | 9.4 | 12.0 | 8.7 |
| 3301300119 | Merrimack | Environmental Soils Management, Inc. | 1.5 | 1.3 | 2.3 | 1.8 | 3.7 | 4.5 | 2.0 | 1.7 |
| 3301390445 | Merrimack | Quality Wood Priming | -- | -- | 29.4 | 35.0 | 18.2 | 0.9 | 1.5 | 1.7 |
| 3301500023 | Rockingham | Metal Works, Inc. | 0.1 | 10.5 | 6.6 | 9.4 | 3.2 | 1.9 | 3.9 | 3.3 |
| 3301500041 | Rockingham | Sprague Operating Resources LLC | 0.0 | 41.3 | 39.7 | 27.6 | 2.3 | 0.7 | 0.7 | 0.6 |
| 3301500046 | Rockingham | Hutchinson Sealing Systems | 51.2 | 39.2 | 15.7 | 24.5 | 21.9 | 11.2 | 19.2 | 14.0 |
| 3301500058 | Rockingham | Venture Holdings/Bailey Manufacturing | 553.2 | 611.1 | 396.4 | -- | -- | -- | -- | -- |
| 3301500076 | Rockingham | Foss Manufacturing | 21.6 | 31.9 | 10.1 | 5.5 | 1.7 | 1.2 | 1.1 | 0.7 |
| 3301500090 | Rockingham | Johnson & Johnston | 27.2 | 28.9 | 18.2 | -- | -- | -- | -- | -- |
| 3301590556 | Rockingham | Gates Mectrol, Inc. | 3.7 | 12.3 | 8.3 | 9.7 | 11.9 | -- | -- | -- |
| 3301590778 | Rockingham | Novel Iron Works | -- | -- | 11.4 | 7.7 | 7.1 | 11.0 | 4.9 | 5.4 |
| 3301590969 | Rockingham | Ckm Electrostatic Coatings LLC | -- | -- | -- | -- | 3.3 | 3.3 | -- | -- |
| 3301700002 | Strafford | Collins & Aikman Automotive - Dover | 69.1 | 29.3 | -- | -- | -- | -- | -- | -- |
| 3301700010 | Strafford | Tape-O-Corporation | 61.9 | 56.0 | 45.5 | 27.1 | 18.0 | 15.6 | 13.1 | -- |
| 3301700027 | Strafford | Collins & Aikman Automotive - Farmington | 36.5 | 35.5 | 19.1 | 4.1 | -- | -- | -- | -- |
| 3301700039 | Strafford | Textile Tapes Corporation | 26.1 | 43.6 | 7.3 | 10.2 | 8.3 | 16.4 | 8.9 | 7.7 |
| 3301790151 | Strafford | Trelleborg Sealing Solution | 15.6 | 21.4 | 2.9 | 3.1 | 1.6 | -- | -- | -- |
| 3301900030 | Sullivan | Durgin & Crowell Lumber Company | -- | -- | -- | -- | -- | -- | -- | 21.6 |
| 3301990135 | Sullivan | Canam Bridges | -- | 0.0 | 0.0 | 0.0 | 0.0 | 9.1 | 2.3 | 4.7 |
| | | **TOTAL** | **2,649** | **1,719** | **1,200** | **652** | **442** | **326** | **291** | **274** |

Shading indicates that source is discontinued or is no longer subject to RACT.