



North Carolina Department of Environment and Natural Resources  
Division of Air Quality

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Governor

B. Keith Overcash, P.E.  
Director

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Secretary

April 6, 2010

Stan Meiburg  
Acting Regional Supervisor  
U.S. Environmental Protection Agency, Region 4  
Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA 30303-8909

Subject: Group I Control Technology Guidelines and Nitrogen Oxide and Volatile Organic Compounds Reasonably Available Control Technology for Major Sources

Dear Mr. Meiburg:

The North Carolina Division of Air Quality (NCDAQ) has determined that there are four (4) Group I Control Technology Guidelines (CTGs) categories for which there are no major sources in the Charlotte-Gastonia-Rock Hill, NC-SC (referred to as the Metrolina area) 1997 8-hour ozone moderate nonattainment area. This determination was based upon review of emissions inventory data and through consultation with the NCDAQ and Mecklenburg County Air Quality permitting staff. Therefore, North Carolina is making a negative declaration for the following categories:

- Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment (EPA-450/2-78-036, 1978/06),
- Control of Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds (EPA-450/2-77-026, 1977/10),
- Control of Volatile Organic Compound Equipment Leaks from Natural Gas/Gasoline Processing Plants (EPA-450/3-83-007, 1983/12), and
- Control Techniques Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating) (61 FR-44050 8/27/96, 1996/08).

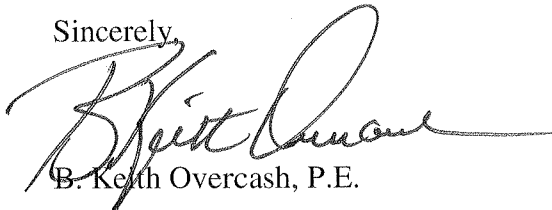
Additionally, please find attached the clarifying information your staff requested concerning how the NCDAQ has addressed the remaining Group I CTGs, as well as the Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC) Reasonably Available Control Technology (RACT) for major sources not covered by CTGs for the Metrolina area with respect to the 1997 8-hour ozone national ambient air quality standard (NAAQS). Some of the RACT rules to address the 1997 8-hour ozone NAAQS have been submitted to your agency and are still waiting for federal approval into the SIP. These include 15A North Carolina Administrative Code (NCAC) 2D .1402 and .1403, submitted on April 6, 2007, January 31, 2008 and February 3, 2010, and 15A NCAC 2D .0902 and .0909, submitted on April 6, 2007 and January 31, 2008.

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With the negative declarations in this letter, the NCDAQ believes that North Carolina has met the requirements for Group I CTGs and NO<sub>x</sub> and VOC RACT for major sources not covered by CTGs for the Metrolina area with respect to the 1997 8-hour ozone standard.

This letter and the attached information was noticed for public comment. The opportunity to request a public hearing, in accordance with the Code of Federal Regulations (CFR), 40 CFR 51.102, and the public comment period were noticed in the local newspaper on Friday, February 12, 2010. The public comment period was open from Friday, February 12, 2010, through Monday, March 22, 2010. There were no requests for a public hearing; therefore the hearing scheduled for March 22, 2010 was cancelled. The cancellation was communicated to the public on March 16, 2010, through the North Carolina Division of Air Quality's website. There were no comments received on this letter or the attached information. An electronic copy identical to the attachment to this letter is enclosed. If you have any questions regarding this submittal, please contact Laura Boothe at [Laura.Boothe@ncdenr.gov](mailto:Laura.Boothe@ncdenr.gov) or (919) 733-1488 or Michael Abraczinskas at [Michael.Abraczinskas@ncdenr.gov](mailto:Michael.Abraczinskas@ncdenr.gov) or (919) 715-3743. Thank you for your assistance with this matter.

Sincerely,



B. Keith Overcash, P.E.

BKO/lab

Attachment

cc: Carol Kemker, USEPA  
Dick Schutt, USEPA  
Michael Abraczinskas, NCDAQ  
Laura Boothe, NCDAQ  
Don Willard, LUESA

# **Clarifying Information for Group I Control Techniques Guidelines and Nitrogen Oxide and Volatile Organic Compounds Reasonably Available Control Technology for Major Sources**

## **Background**

On April 15, 2004, the USEPA designated areas as nonattainment for the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS). The Charlotte-Gastonia-Rock Hill, North Carolina-South Carolina area (referred to as the Metrolina area) was designated as a moderate nonattainment area and includes the entire counties of Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan and Union, Coddle Creek and Davidson Townships in Iredell County in North Carolina and the Rock Hill Metropolitan Planning Organization boundary in York County, South Carolina.

Under Section 182(b)(2) and 182(f) of the Clean Air Act (CAA), states are required to revise their state implementation plans (SIP) to require that Reasonably Available Control Technology (RACT) apply to both Control Technique Guideline (CTG) sources and major non-CTG sources of volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>). CTGs sources are those emissions sources for which the United States Environmental Protection Agency (USEPA) issues control techniques guidelines. Non-CTG sources are those major sources which are not subject to CTGs, but for which RACT is required. Using a phased approach, the USEPA has issued CTGs defining RACT for those categories of sources that emit the greatest amounts of VOC emissions in four groups. This document summarizes how the North Carolina Division of Air Quality (NCDAQ) has addressed the CTG categories included through Group I for which a negative declaration is not being made, as well as the NO<sub>x</sub> and VOC RACT for non-CTG major sources.

For moderate nonattainment areas, major sources subject to RACT are those sources with the potential to emit (PTE) 100 tons per year or greater of VOC or NO<sub>x</sub>. The USEPA defines RACT as “the lowest achievable emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.”

## **North Carolina RACT Rules**

North Carolina RACT requirements consist of a combination of CTG category specific rules and case by case RACT rule provisions. North Carolina’s VOC RACT rules are found in 15A North Carolina Administrative Code (NCAC) 02D .0900, which initially became effective July 1, 1979. The NO<sub>x</sub> RACT rules are found in 15A NCAC 2D .1400, which initially became effective April 1, 1995. These original sets of rules have been amended and new rules adopted numerous times since their initial adoption. These rules have already been submitted to the USEPA for approval into the SIP for each of these amendments as they occurred over time.

Most recently RACT related rule submissions for SIP approval have dealt with extending applicability to the areas designated nonattainment under the 1997 8-hour ozone standard and incorporation of contingency measures. As described in the June 15, 2007 attainment demonstration submittal (resubmitted November 12, 2009), the State’s RACT rules were amended effective March 1,

2007 for purposes of the 1997 8-hour ozone standard and required major sources of VOC and NO<sub>x</sub> in the North Carolina portion of the Metrolina nonattainment area to apply RACT and to establish the associated compliance schedule.

The State rules have previously gone through North Carolina's standard Administrative Procedures Act (APA) process including a 60 day public comment period prior to adoption and approval by the State's Environmental Management Commission (EMC) and Rules Review Commission (RRC). These rules have already been submitted to the USEPA for approval as part of the SIP as detailed in this supplement.

## **NO<sub>x</sub> RACT for Major Sources**

North Carolina's NO<sub>x</sub> RACT rules consist of a combination of category specific rules and case by case RACT provisions which have been adopted, amended, and submitted to the USEPA over time for approval. On April 6, 2007 and January 31, 2008, the NCDAQ submitted to USEPA for approval rule amendments addressing NO<sub>x</sub> RACT requirements for major sources. The April 6, 2007 revisions consisted of amendments to 2D .1402, Applicability, to require major sources in the moderate nonattainment area to apply RACT and to 2D .1403, Compliance Schedules, to establish the RACT compliance deadline of April 1, 2009. The January 31, 2008 submittal consisted of amendments to 2D .1402 to establish as a contingency measure major source applicability of RACT requirements to sources from 50 to 100 tons per year potential to emit PTE of NO<sub>x</sub> and to .1403 to establish a compliance schedule for such sources should the area become a serious nonattainment area.

In addition to applicability and compliance schedule rules, 2D .1400 contains category specific RACT rules provisions, which include 2D .1407, Boilers and Indirect-Fired Process Heaters, 2D .1408, Stationary Combustion Turbines, and 2D .1409, Stationary Internal Combustion Engines, and initially became state effective as of July 18, 2002. Additionally, 2D .1413, Sources Not Otherwise Listed In This Section, requires major sources of NO<sub>x</sub> for which there is not a specific RACT rule in Section .1400 to apply case by case RACT which initially became state effective April 1, 1995, was amended effective July 18, 2002 and was most recently SIP approved December 27, 2002 (67 FR 78987).

Under the final Phase 2 8-hour ozone standard implementation rule (70 FR 71652), the USEPA determined that NO<sub>x</sub> RACT requirements have been satisfied for sources subject to the state's emission cap-and-trade program that meets the NO<sub>x</sub> SIP Call requirements or, in states achieving Clean Air Interstate Rule (CAIR) reductions solely from electric generating units, the CAIR NO<sub>x</sub> requirements. The North Carolina EMC adopted NO<sub>x</sub> SIP Call rules in 2000 which have previously approved by the USEPA. Consistent with the USEPA CAIR requirements, the NO<sub>x</sub> SIP Call rules have been replaced by the North Carolina Clean Air Interstate Rules (CAIR), 15A NCAC 02D .2400. The North Carolina CAIR rules initially became state effective July 1, 2006 and most recent revisions were SIP approved effective November 30, 2009.

The NCDAQ has submitted amendments to 15A NCAC 2D .1402 and .1403, to meet the NO<sub>x</sub> RACT requirements relative to the 1997 8-hour ozone standard, on the April 6, 2007, January 31, 2008, and February 3, 2010. These amendments still require federal approval into the SIP.

## VOC RACT for Major Sources

In addition to CTG source category specific rules, North Carolina also has provisions for case by case VOC RACT determinations. 15A NCAC 2D .0951, Miscellaneous Volatile Organic Compound Emissions, applies to all facilities in the Metrolina nonattainment area that use volatile organic compounds as solvents, carriers, material processing media, or industrial chemical reactants, or in other similar uses, or that mix, blend, or manufacture volatile organic compounds for which there is no other applicable emissions control rule in 2D .0900. It requires that the facility install and operate RACT or limit VOC emissions from coating lines not otherwise covered by a specific 2D .0900 rule. This case by case RACT rule would apply for any category where North Carolina does not have a category specific RACT rule regardless of whether USEPA has a CTG for that category or not. The amendment adding the requirement to apply RACT was SIP approved 6-27-2001 (66 FR 34117) and is the latest version of this rule.

For three (3) CTG categories, the NCDAQ applied 2D .0951, Miscellaneous Volatile Organic Compound Emissions, and 2D .0958, Work Practice Standards, as listed in Table 1 below. 2D .0958, Work Practice Standards, is a statewide rule and applies to all facilities that use volatile organic compounds as solvents, carriers, material processing media, or industrial chemical reactants, or in other similar uses or that mix, blend or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions. 2D .0958 was adopted, became state effective July 1, 2000, and was SIP approved June 27, 2001 effective August 27, 2001 (66 FR 34117).

**Table 1. CTG Categories Covered by Case by Case RACT Rule Provisions**

CTG	State Rule	Original Effective Date	Effective Date of Most Recent Change	SIP Approval Date of Most Recent Change
Control of Volatile Organic Compound Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry (EPA-450/3-84-015, 1984/12)	No category specific rule; 2D .0951 case by case RACT provision applies.  02D .0958 Work Practice Standards also applicable.	7/1/1994	7/1/2000	6/27/2001 66 FR 34117
Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations (EPA-453/R-96-007, 1996/04)	No category specific rule; 2D .0951 case by case RACT provision applies.  02D .0958 Work Practice Standards also applies for sources not subject to MACT.	7/1/1994	7/1/2000	6/27/2001 66 FR 34117
Aerospace (CTG & MACT) (EPA-453/R-97-004, 1997/12)	No category specific rule; 2D .0951 case by case RACT provision applies.  02D .0958 Work Practice Standards also applies.	7/1/1994	7/1/2000	6/27/2001 66 FR 34117

Table 2 below lists the applicable pre-1990 through post 1990 Group I USEPA CTGs, corresponding North Carolina rules, original effective date, most recent amendment date, and SIP approval date relevant to the 1997 8-hour ozone standard.

**Table 2. CTG Documents and Corresponding North Carolina Rules**

CTG	State Rule	Original Effective Date	Effective Date of Most Recent Change	SIP Approval Date of Most Recent Change
Design Criteria for Stage I Vapor Control Systems – Gasoline Service Stations (EPA-450/R-75-102, 1975/11)	15A NCAC 02D .0928 Gasoline Service Stations Stage I	07/01/79	07/01/96	08/01/97 62 FR 41277
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, 1977/05)	15A NCAC 02D .0917 Automobile and Light-duty Truck Manufacturing	07/01/79	07/01/96	08/01/97 62 FR 41277
	15A NCAC 02D .0918 Can Coating			
	15A NCAC 02D .0919 Coil Coating			
	15A NCAC 02D .0920 Paper Coating			
	15A NCAC 02D .0921 Fabric and Vinyl Coating			
Control of Volatile Organic Emissions from Solvent Metal Cleaning (EPA-450/2-77-022, 1977/11)	15A NCAC 02D .0930	07/01/79	03/01/91	06/23/94 59 FR 32362
Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals (EPA- 450/2-77-026, 1977/12)	15A NCAC 02D .0927 Bulk Gasoline Terminals	07/01/79	01/01/07	10/31/07 72 FR 61531
Control of Volatile Organic Emissions from Existing Stationary Sources – Volume III: Surface Coating of Metal Furniture (EPA-450/2-77-032, 1977/12)	15A NCAC 02D .0922 Metal Furniture Coating	07/01/79	07/01/96	08/01/97 62 FR 41277
Control of Volatile Organic Emissions from Existing Stationary Sources – Volume IV: Surface Coating of Insulation of Magnet Wire (EPA -450/2-77-033, 197/12)	15A NCAC 02D .0924 Magnet Wire Coating	07/01/79	07/01/96	08/01/97 62 FR 41277
Control of Volatile Organic Emissions from Existing Stationary Sources – Volume V: Surface Coating of Large Appliances (EPA-450/2-77-034, 1977/12)	15A NCAC 02D .0923 Surface Coating of Large Appliances	07/01/79	07/01/96	08/01/97 62 FR 41277

**Table 2. CTG Documents and Corresponding North Carolina Rules (Continued)**

CTG	State Rule	Original Effective Date	Effective Date of Most Recent Change	SIP Approval Date of Most Recent Change
Control of Volatile Organic Emissions from Bulk Gasoline Plants (EPA-450/2-78-035, 1977/12)	15A NCAC 02D .0926 Bulk Gasoline Plants	07/01/79	07/01/96	08/01/97 62 FR 41277
Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed-Roof Tanks (EPA-450/2-77-036, 1977/12)	15A NCAC 02D .0925 Petroleum Liquid Storage in Fixed Roof Tanks	07/01/79	03/01/91	06/23/94 59 FR 32362
Control of volatile Organic Emissions from Use of Cutback Asphalt (EPA-450/2-77-037)	15A NCAC 02D .0931 Cutback Asphalt	07/01/79	12/01/89	06/23/94 59 FR 32362
Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products (EPA -450/2-78-015, 1978/06)	15A NCAC 02D .0934 Coating of Miscellaneous Metal Parts and Products	07/01/80	07/01/96	08/01/97 62 FR 41277
Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VII: Factory Surface Coating of Flat Wood Paneling (EPA-450/2-78-032, 1978/06)	15A NCAC 02D .0935 Factory Surface Coating of Flat Wood Paneling	07/01/80	07/01/96	08/01/97 62 FR 41277
Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products (EPA-450/2-78-029, 1978,12)	15A NCAC 02D .0947 Manufacture of Synthesized Pharmaceutical Products	07/01/94	07/01/94	05/05/95 60 FR 22284
Control of Volatile Organic Emissions from Manufacture of Pneumatic Rubber Tires (EPA-450/2-78-030, 1978/12)	15A NCAC 02D .0937 Manufacture of Pneumatic Rubber Tires	07/01/80	07/01/96	08/01/97 62 FR 41277
Control of Volatile Organic Emissions from Existing Stationary Source – Volume VIII: Graphic Arts- Rotogravure and Flexography (EPA-450/2-78-033, 1978/12)	15A NCAC 02D .0936 Graphic Arts	07/01/80	12/01/93	06/23/94 59 FR 32362
Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks (EPA-450/2-78-050, 1978/12)	15A NCAC 02D .0933 Petroleum Liquid Storage in External Floating Roof Tanks	07/01/80	06/01/05	02/01/96 62 FR 3589

**Table 2. CTG Documents and Corresponding North Carolina Rules (Continued)**

CTG	State Rule	Original Effective Date	Effective Date of Most Recent Change	SIP Approval Date of Most Recent Change
Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems (EPA -450/2-78-051, 1978/12)	15A NCAC 02D .0932 Gasoline Truck Tanks and Vapor Collection Systems	07/01/80	08/01/08	10/31/07 72 FR 61531
Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners (EPA -450/3-82-009, 1982/09)	15A NCAC 02D .0945 Petroleum Dry Cleaning	05/01/85	06/01/08	11/19/86 51 FR 41786
Control of Volatile Organic Compound Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins (EPA -450/3-83-008, 1983/11)	15A NCAC 02D .0944 Manufacture of Polyethylene, Polypropylene, and Polystyrene	05/01/85	05/01/85 3/14/85	11/19/86 51 FR 41786
Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment (EPA-450/3-83-006, 1984/03)	15A NCAC 02D .0943 Synthetic Organic Chemical and Polymer Manufacturing	05/01/85 03/01/91	06/01/08 03/01/91	06/23/94 59 FR 32362

The NCDAQ submitted amendments to USEPA on April 6, 2007 and January 31, 2008, to 15A NCAC 2D .0902 and .0909, to meet the VOC RACT requirements relative to the 1997 8-hour ozone standard. These amendments still require federal approval into the SIP.

## Conclusion

Based upon staff review, North Carolina has adopted applicable rules addressing all Group I CTG categories adopted by USEPA for which there are existing sources in the North Carolina portion of the Charlotte-Gastonia-Rock Hill nonattainment area. In addition, North Carolina has case by case RACT rule provisions applicable to both CTG and non-CTG sources for which there is not a category specific rule. North Carolina's RACT obligations relative to the 1997 8-hour ozone standard and Group I CTG requirements are satisfied through the combination of the category specific RACT rules, the rules requiring case by case RACT determinations, and negative declarations for those categories for which there are no applicable sources in the North Carolina portion of the Charlotte-Gastonia-Rock Hill nonattainment area.