Control Technique Guidelines in Regulation 7

Description of the issue

This strategy to reduce ambient ozone levels within the 8-hour ozone non-attainment area (NAA) considers changes that can be made to Regulation 7 to incorporate additional control technique guidelines (CTGs) specific to Volatile Organic Compounds (VOCs). The Colorado Air Pollution Control Division (APCD), Stationary Source Program (SSP) is assessing CTGs that have been incorporated into Regulation 7 for effectiveness, as well as those that have not for potential VOC emissions reductions. EPA publishes CTGs, which establish Reasonably Available Control Technology (RACT) for VOC emissions from different source categories. Currently adopted CTGs are only applicable in Colorado in the 1-hour ozone non-attainment area (Regulation 7, Section I.A.1.a). The APCD is considering applying CTGs that are currently in Regulation 7 to both the 1-hour and 8-hour ozone non-attainment areas and/or the entire state. The APCD's inventory reflects emissions from sources that are using the CTGs that have been incorporated into Regulation 7 for the 1-hour ozone NAA. CTGs that are not in the regulation are being assessed for any VOC emissions reductions benefit they may provide to both the 1-hour and 8-hour ozone NAA.

The APCD is investigating the need to incorporate additional CTGs based on the highest emitting source categories in the non-attainment area and the state. While the EPA has not updated many of the CTGs since the initial publication, the EPA has promulgated a number of New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) which include Maximum Achievable Control Technology (MACT) standards. For those CTGs that have been incorporated into Regulation 7, the APCD is evaluating whether or not these CTGs are still effective or if they have essentially been superceded by the promulgation of NSPS or NESHAPs. "Table 1 – *CTGs that have been incorporated in Regulation 7 (currently apply only to sources in the 1 hour ozone non-attainment area)"*shows those CTGs that are currently incorporated into Regulation 7 and apply in the 1-hour ozone NAA. "Table 2 – *CTGs that have not been incorporated into Regulation 7"* shows those CTGs that have not been incorporated into Regulation 7.

The APCD is also assessing the option to increase the stringency/threshold for CTGs. This could include adding sources that currently fall below the CTG applicability threshold or adding additional requirements for further VOC reductions.

Table 1 - CTGs that have been incorporated in Regulation 7
(currently apply only to sources in the 1 hour ozone non-attainment area)

EPA Publication Year	Description	Regulation 7 Section citation
1975	Design Criteria for Stage I Vapor Control Systems – Gasoline Service Stations *Note – This document is regarded as a CTG although it was never published with an EPA document number.*	VI
1976	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume I: Control Methods for Surface Coating Operations *Note – Although often listed with the CTGs for historical reasons, this document does not define RACT for any source. It is a compilation of control techniques.*	IX
1977	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks	IX (C,D,I,E,B)
1977	Control of Volatile Organic Emissions from Solvent Metal Cleaning	X
1977	Control of Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds	VIII
1977	Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals	XV
1977	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume III: Surface Coating of Metal Furniture	IX.H
1977	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume IV: Surface Coating of Insulation of Magnet Wire	IX.G
1977	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume V: Surface Coating of Large Appliances	I.X.F
1977	Control of Volatile Organic Emissions from Bulk Gasoline Plants	XV
1977	Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed-Roof Tanks	V
1977	Control of Volatile Organic Emissions from Use of Cutback Asphalt	XI
1978	Control Techniques for Volatile Organic Emissions from Stationary Sources *Note – This document is often listed with CTGs, but it does not define RACT for any particular source.*	XVI
1978	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products	IX.L
1978	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VII: Factory Surface Coating of Flat Wood Paneling	IX.M
1978	Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment	VIII.C
1978	Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products	XIV
1978	Control of Volatile Organic Emissions from Manufacture of Pneumatic Rubber Tires	IX.N
1978	Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VIII: Graphic Arts-Rotogravure and Flexography	XIII
1978	Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks	VI.B.2.c
1978	Control of Volatile Organic Emissions from Perchloroethylene Dry Cleaning Systems *Note – Perchloroethylene has been [exempted as a VOC – has it been exempted or identified as a negligibly reactive voc?], so this CTG is no longer relevant. However, there is a NESHAP for perchloroethylene dry cleaners.*	Removed from Regulation NESHAP Subpart M
1978	Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems	VI.D

Table 2 – CTGs that have not been incorporated into Regulation 7

EPA Publication Year	Description	Potential NSPS or NESHAP Regulations affecting the source categories
1982	Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners	NSPS JJJ
1983	Control of Volatile Organic Compound Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins	
1983	Control of Volatile Organic Compound Equipment Leaks from Natural Gas/Gasoline Processing Plants	MACT HH or HHH, NSPS KKK
1984	Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment	SOCMI MACT
1984	Control of Volatile Organic Compound Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry	SOCMI MACT
1993	Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations in Synthetic Organic Chemical Manufacturing Industry	SOCMI MACT
1996	Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations *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.*	NESHAP Subpart JJ
1994	Alternative Control Technology Document – Surface Coating Operations at Shipbuilding and Ship Repair Facilities *Note – For CTG, see 61 FR-44050, August 27,1996.*	
1996	Control Techniques Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating) *Note – See also EPA-453/R-94-032.*	
1994	Aerospace NESHAP *Note – See also EPA-453/R-97-004.*	NESHAP Subpart GG
1997	Aerospace (CTG & NESHAP) *Note – See also 59 FR-29216, June 6, 1994.*	NESHAP Subpart GG
2006	Control Techniques Guidelines for Industrial Cleaning Solvents	
2006	Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing	MACT KK
2006	Control Techniques Guidelines for Flexible Package Printing	NESHAP JJJJ&KK
2006	Control Techniques Guidelines for Flat Wood Paneling Coatings	MACT QQQQ – for major sources

There may be additional NSPS/NESHAPs that apply to the above-listed categories

Air Quality, Health And Welfare Benefit

The Division does not anticipate significant benefit to adopting additional CTGs due to the following:

- CTGs are not updated by EPA, and therefore become outdated
- CTGs may be supplemented by promulgated NSPS and NESHAPs
- New and modified minor VOC sources in the ozone non-attainment area are already subject to case-by-case RACT via Regulation 3
- Few sources are anticipated to be subject to the new CTGs, or if subject are anticipated to achieve insignificant environmental benefit
    - New CTGs include only work-practice standards and not add-on controls

- Difficult to measure reductions

Thus, the Division does not intend to further explore this strategy, with one exception. The Division does see value to applying those previously adopted CTGs to the entire non-attainment area (see "Expand Regulation 7 Applicability to the Entire Non-Attainment Area" Issue paper for further details).

That being said, it is understood that reducing direct emissions of VOCs will reduce ozone and some air toxics. This will reduce the incidence of human health impacts caused by ozone, such as pulmonary, cardiovascular, respiratory, and nervous system disease. Because ozone damages crops, forests, and other natural plant life, all would benefit if emissions are reduced. This strategy may also reduce emissions of methane, which contributes to climate change.

Program Costs

Costs associated with requiring controls for source categories and/or individual facilities have not yet been determined.

Implementation and Administration

This strategy has the potential to significantly increase the number of regulated sources, and has reporting, permitting, and/or compliance assurance impacts to the APCD.