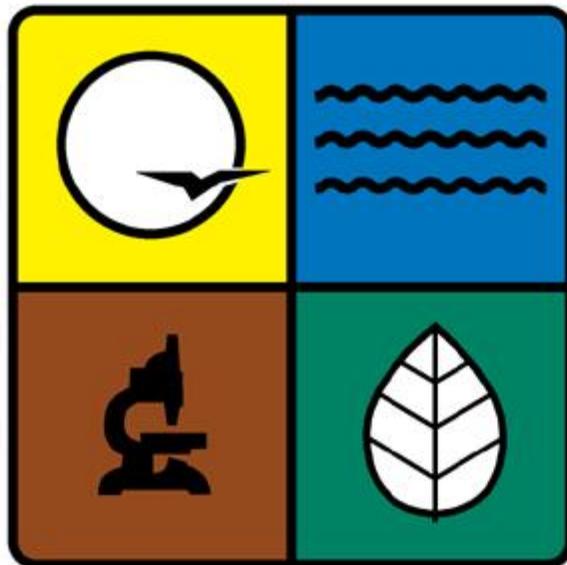


**Reasonably Available Control Technology
(RACT) Demonstration Update
for the
1997 8-Hour Ozone Standard
St. Louis Nonattainment Area**

**Missouri Air Conservation Commission
Adopted: April 28, 2011**



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I. INTRODUCTION & PURPOSE

This document is an amendment to the Reasonably Available Control Technology (RACT) Demonstration for the St. Louis non-attainment area which was adopted by the Missouri Air Conservation Commission (MACC) on December 7, 2006 and submitted to the U.S. Environmental Protection Agency (EPA) on January 5, 2007 for inclusion in the Missouri State Implementation Plan (SIP). This amended document updates the state's RACT demonstration for the St. Louis ozone nonattainment area (NAA) and satisfies the requirements of the federal 1990 Clean Air Act Amendments (CAAA) for moderate ozone nonattainment areas.

The purpose of the 2006 RACT demonstration submittal was to document that the Missouri Department of Natural Resources had reviewed Missouri's obligation to implement RACT on major air pollution sources in the Missouri portion of the St. Louis ozone nonattainment area and to certify that RACT controls previously instituted under the old 1-hour ozone standard still represented RACT for the 8-hour ozone standard. This document, in conjunction with other SIP revision submittals, demonstrated compliance with the general requirements of Section 172(c) of the CAAA which states:

Such plan provisions shall provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology) and shall provide for attainment of the national primary ambient air quality standards.

More specifically, sections 182(b)(2)(A) & (B) of the CAAA require moderate ozone nonattainment areas to implement RACT for all volatile organic compound (VOC) sources that are subject to a Control Techniques Guideline (CTG) issued by EPA, while section 182(b)(2)(C) requires moderate ozone nonattainment areas address RACT for all other "major stationary sources" of VOCs. Additionally, Section 182(f) provides that all SIP provisions applicable to major stationary sources of VOCs also apply to major stationary sources of Nitrogen Oxides (NO_x).

The St. Louis area is currently designated as a moderate nonattainment area under the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS). In order to be redesignated to attainment, the State of Missouri is required to make a clean data determination showing that all monitors located in the non-attainment area have design values in compliance with the NAAQS. Ozone monitoring data for the three-year period of 2007 through 2009 demonstrates that the air quality is in compliance with the 1997 8-hour ozone NAAQS in the St. Louis Missouri-Illinois NAA. On December 4, 2009, Missouri submitted a letter to the EPA advising them of the St. Louis NAA's 2007-2009 ozone air quality monitoring data and requesting the determination of attainment, also called a Clean Data Determination. Air Quality monitoring data for 2010 has demonstrated continued compliance with the NAAQS. On February 28, 2011, EPA proposed in the Federal Register, the Clean Data Determination based on 2008-2010 as the most recent three-year period of complete, quality assured ambient air quality data [76 FR 10815].

Section 182(f) also provides a mechanism based on attainment for exempting an area from these NO_x requirements. The process of this mechanism is referred to as a "NO_x waiver" request. The St. Louis ozone NAA consists of 9 counties, 4 of them are on the Illinois or "Metro-East"

side. Illinois and Missouri coordinate closely in ozone planning issues for the St. Louis region. Control strategy analysis and attainment demonstration modeling are similar for both the Missouri and Illinois side of the NAA. Illinois requested and received a NO_x waiver under the 1-hour ozone standard for the Metro-East area. Illinois has recently requested a NO_x waiver under the 1997 8-hour NAAQS. On December 8, 2010, EPA proposed approval of this request [75 FR 76332]. Approval for this proposal was finalized on February 9, 2011 [76 FR 9655]. In light of the fact that Missouri also has three years of clean ozone air quality data under the 1997 8-hour ozone standard, the Department similarly intends to request a NO_x waiver, concurrent to this document, to address NO_x RACT for the Missouri side of the St. Louis NAA. This NO_x waiver request will assert that the St. Louis area needs no additional NO_x controls to maintain the 1997 8-hour ozone standard for which we have requested, and are currently awaiting, a determination of attainment. Therefore, the remainder of this demonstration shall address our VOC RACT obligations.

RACT is defined as the lowest emissions limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53762; September 17, 1979). RACT requirements were included in the CAAA to assure that significant source categories at major sources of ozone precursor emissions are controlled to a “reasonable” extent, but not necessarily to Best Available Control Technology (BACT) levels or Lowest Achievable Emission Rate (LAER) expected of new sources or Maximum Achievable Control Technology (MACT) levels for certain sources of hazardous air pollutants (HAPs), many of which are also VOCs. The RACT plan, as part of a SIP revision, is periodically updated and revised. This document is one such revision.

In 2006-2008, EPA has issued 12 new Control Techniques Guidelines (CTG) in three groups. As stated above, states with a moderate ozone NAA must implement RACT for any sources of VOC emissions covered by a CTG in that NAA. Since these new CTGs were not considered in the 2006 RACT demonstration, and in an effort to ensure that RACT determinations for the St. Louis NAA are ongoing and continuous, the Department has developed this update to the 2006 RACT demonstration.

This update to the 2006 RACT Demonstration reviews all the St. Louis area VOC RACT rules to certify that they still satisfy requirements by the application of control technology that is reasonably available considering technological and economic feasibility or have been amended to current reasonably available control technology levels. This document verifies that several rules have been updated and several are concurrently being amended to keep the St. Louis area RACT regulations up-to-date. Rules concurrently being amended address a series of recently promulgated federal CTGs, which are considered to be “presumptive” RACT. The new CTG rule amendments not only significantly strengthen the RACT level for some existing rules’ source categories, but also add some additional VOC source categories to Missouri’s RACT plan.

II. NEW CONTROL TECHNIQUE GUIDELINES

The EPA has issued two types of ozone RACT guidance documents. CTG documents define RACT for existing facilities emitting large amounts of VOCs while Alternative Control

Technology (ACT) documents describe available control technologies, but do not define presumptive RACT levels, for existing facilities that emit large amounts of either ozone precursor, VOCs or NOx. CTGs are issued only for certain VOC source categories, are presumptive RACT and, according to Section 182(b)(2) of the CAAA, all states with moderate ozone nonattainment areas must adopt these standards, or equivalent standards from a RACT standpoint, for the applicable VOC sources in the nonattainment area. All CTG documents released prior to the 1997 8-Hour Ozone standard are called *Group I* CTGs. Section 183(c) of the CAAA states that the EPA “shall revise and update such documents as the Administrator determines necessary.” In 2006 through 2008, EPA released 12 new CTGs in three groups and the state is promulgating amendments to four existing rules to ensure that these CTGs are incorporated into the VOC RACT rules for the St. Louis moderate ozone nonattainment area. These 12 new CTGs are the only new CTG documents released since the implementation of the 1997 8-Hour Ozone NAAQS and were not available for consideration during the 2006 RACT review.

The four new rulemakings to address the new CTGs are being proposed concurrently with this RACT review and will be presented at public hearing at the Missouri Air Conservation Commission (MACC) Meeting on March 31, 2011. The proposed rule amendments are scheduled for adoption by the MACC on April 28, 2011 and published in the Missouri Code of State Regulations (CSR) on July 31, 2011, with an effective date of August 30, 2011. These four rules being proposed for amendment are:

- 10 CSR 10-5.330 *Control of Emissions From Industrial Surface Coating Operations*
- 10 CSR 10-5.340 *Control of Emissions From Rotogravure and Flexographic Printing*
- 10 CSR 10-5.442 *Control of Emissions from Lithographic Printing Operations*
- 10 CSR 10-5.455 *Control of Emissions from Solvent Cleanup Operations*

Table A lists the 12 new CTG documents by source category along with the corresponding proposed rule amendment. There was only one source category in this list of 12 new CTG documents for which the application of control strategies could not be addressed as outlined in the CTG: Fiberglass Boat Manufacturing. The state is issuing a negative declaration for this CTG category because no applicable sources were identified in the St. Louis Ozone nonattainment area. It is not necessary to make a RACT determinations for CTG/ACT source categories for which the state has made a negative declaration. Instead, Missouri will rely on the general VOC RACT rule (10 CSR 10-5.520 *Control of Volatile Organic Compound Emissions From Existing Major Sources*) to address these negative declaration categories, if any new major sources in these categories are identified in the future.

However, for some CTGs, the presumptive RACT applicability level may drop below the “major” level established for all other RACT analyses. For VOC emissions in moderate ozone nonattainment areas, a source’s “major” threshold is the potential-to-emit (PTE) 100 tons per year (tpy). The CTG document for fiberglass boat manufacturing recommends an applicability threshold based on total actual VOC emissions from all relevant fiberglass boat manufacturing and cleaning operations of 2.7 tons per 12-month rolling period. Any such source at this applicability level could very easily be a “non-major” source. If any such applicable source were found to be operating in the St. Louis NAA, the state would consider, at that time, to pursue a

rulemaking to establish RACT equivalent to the CTG. To this end, the state is committed to a periodic and ongoing review of all RACT sources, both CTG and non-CTG, to ensure that no RACT-applicable sources have been overlooked or have become established since the last review. Such a review was completed for the 2006 RACT demonstration document. Furthermore, this document contains, herein, another such review of potentially applicable RACT sources.

Since RACT requirements primarily apply to major stationary sources, if a major stationary source of VOC emissions was to be constructed in the St. Louis nonattainment area it would have to undergo New Source Review (NSR) and be subject to the Lowest Achievable Emissions Rate (LAER). LAER is considered to be significantly more stringent than RACT. Additionally, under NSR, any new such source would have to obtain offsets for any emissions of VOCs and undergo an alternate site analysis. NSR is a CAAA requirement and is incorporated into the Missouri State Implementation Plan via Missouri's rule 10 CSR 10-6.060. Section III.A.3. of this document further discusses controls for new major sources.

The concurrent proposed revisions to the four St. Louis area VOC RACT rules are consistent with the recommendations provided in the 11 applicable CTGs. Therefore, the limits and standards being established in these CTG rule amendments are equivalent to the presumptive RACT levels recommended in the applicable federal Group II-IV CTG documents and the state determines them to be RACT for all corresponding applicable sources in the St. Louis NAA.

The revised RACT rules represent a substantial strengthening of the St. Louis RACT plan in terms of all the following:

- additional VOC RACT sources due to significantly lower applicability limits
- additional sources due to new CTG source categories
- lower emission limits
- significant new VOC emission reductions.

III. RACT DEMONSTRATION

EPA has not provided any unique guidance for preparing the RACT portion of the SIP revisions for the 1997 8-hour ozone standard and has asked states to rely on previously published guidance. To make it convenient to show how the RACT review requirements have been satisfied, this document is structured as follows:

By VOC categories:

- Identification of all source categories within St. Louis requiring RACT, including all CTG sources (i.e., subject to an EPA Control Techniques Guideline document), ACT sources (i.e., covered by an EPA ACT document) and other major non-CTG/ACT sources;
- Identification of the RACT rules for all CTG and ACT sources located within the St. Louis NAA, with confirmation that the rules meet RACT requirements; and
- Submittal of negative declarations where there are no applicable facilities within the ozone nonattainment area subject to a CTG or ACT.

By Individual VOC Sources:

- Identification of all appropriate individual industrial sources with air permits located in the St. Louis NAA as documented in the Missouri Emission Inventory System (MOEIS), and
- A review of the operating permits of each of the sources to identify the applicable RACT rules.

Please note that the following discussion refers to VOC RACT only, as Missouri intends to submit a NO_x waiver stating that no additional NO_x controls are necessary to maintain the 1997 8-hour NAAQS. Missouri has achieved three years of clean data under this standard and has requested a Clean Data Determination from the EPA. More information on this subject is found in Section 1: *Introduction & Purpose* above.

A. RACT Determination by Source Categories

1. CTG and ACT Source Categories

The EPA has issued CTG documents defining presumptive RACT for existing facilities that emit large amounts of VOCs, and ACT documents that describe available control technologies, but do not define presumptive RACT levels for existing facilities that emit large amounts of VOC & NO_x. The state must establish a level of VOC control equivalent, from a RACT perspective, to that prescribed by the CTGs, while the state uses ACTs as an aid in identifying available control technologies when creating RACT rules or when RACT determinations on major stationary sources of VOC (or NO_x) in the St. Louis NAA. Pursuant to Section 183(c) of the CAAA, ACT documents “*identify alternative controls for all categories of stationary sources of volatile organic compounds and oxides of nitrogen which emit, or have the potential to emit 25 tons per year or more of such air pollutant.*”

a. CTG/ACT Evaluation

For each of the CTG/ACT categories, Table B provides a description of the processes that are applicable and a reference to the individual CTG/ACT documents, a list of the Missouri RACT rules that specifically apply to these sources, the dates that the rules were initially effective and most recently amended, and a summary of the determination that the Missouri rules satisfy the requirements of RACT. These determinations were based on a review of each CTG/ACT document in comparison to the existing RACT rules. The review was conducted by examining the rules to assure that assumptions had not changed, and that the general requirements remain currently reasonable considering technological and economic feasibility. A more detailed discussion of our examination of reasonably available technologies is in section III.A.4. of this document. The State of Missouri certifies that the emission control standards established by the rules in these tables represent RACT for each of these VOC source categories.

b. CTG Sources Categories

For the purposes of this review, VOC sources covered by either a CTG or an ACT shall be referred to as *VOC CTG sources*. Table B presents the VOC CTG source categories, CTG/ACT reference documents, and the applicable Missouri rules for all VOC CTG source categories. Table B demonstrates that Missouri has satisfied the requirements of Sections 182(b)(2)(A) &

(B) of the CAAA by implementing RACT for all VOC sources covered by a CTG issued before and after the Clean Air Act amendment of 1990.

If there are no sources located in the nonattainment area for a particular CTG source category, then a negative declaration has been noted in Table B in the rule field and RACT determination summary columns. These source categories have all been reviewed for this revision and the state has identified no applicable sources located in the ozone nonattainment area within that category. A more detailed discussion of negative declarations and Missouri's commitment to review and address the establishment or discovery of any new applicable RACT sources in the St. Louis NAA is in section II. of this document. Also see section III.A.2. below for more information on how the general RACT rules might apply.

2. Non-CTG/ACT Sources

Major sources not subject to CTGs, but for which RACT is required, are referred to as non-CTG/ACT sources. To address these sources, Missouri promulgated 10 CSR 10-5.520 *Control of Volatile Organic Compound Emissions From Existing Major Sources*. All major sources of VOC located in the ozone nonattainment area that are not subject to individual RACT rules and have the potential to emit 100 tons or more per year of VOC are subject to this generic RACT rule. Sources regulated under this rule must submit a detailed engineering RACT study for each VOC emission unit at the facility. The St. Louis ozone nonattainment area's current definition of "Major Source", which is 100 tpy PTE, is the same threshold as under the previous 1-hour ozone standard. Using that threshold, no sources have been identified that are subject to this generic RACT rule. Table D lists all the major sources (and several intermediate permit sources) for VOC in the St. Louis NAA. By demonstrating that RACT has been applied to all major sources of VOC in the St. Louis NAA, this table supports the state's certification that the requirements of Section 182(b)(2)(C) has been met. Additional notes on how all these sources were reviewed for RACT is in Section III.B. of this document below.

3. Sources Subject to MACT, NSPS, NESHAPS, & LAER

There are other regulatory mechanisms that affect sources in the St. Louis ozone nonattainment area. These include Maximum Achievable Control Technology (MACT), federal New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), and Lowest Achievable Emission Rate (LAER). Some elements of these programs satisfy the RACT requirements for certain sources. These standards, as well as the corresponding state rules, are continuously updated. The applicable NESHAPS, MACT and NSPS are identified in Table D for certain individual sources in an effort to provide a complete listing of each facility's regulatory obligations.

MACT is the emission standard for sources of air pollution requiring the maximum reduction of HAPs emissions, taking cost and feasibility into account. Under the CAAA, the MACT must not be less than the average emission level achieved by controls on the best performing twelve percent (12%) of existing sources, by category, of industrial and utility sources. This level of

control is beyond just reasonably available. Moreover, insofar as most HAPs are also VOCs and that controls for these HAPs also control all VOCs since the currently available equipment most often does not differentiate between HAP and non-HAP VOCs, MACT for these HAPs is indeed relevant to any RACT plan. Therefore, emission sources subject to more stringent MACT requirements were determined to also fulfill RACT requirements.

10 CSR 10-6.060 Section (7) *Construction Permits Required* specifies requirements for new, replacement, or modified major emissions units in Missouri's nonattainment areas (like the St. Louis 8-hour ozone nonattainment area). The rule requires that such units be constructed using LAER if they are projected to emit increased amounts of VOC. LAER is an emission limitation based on the maximum degree of emission reduction achievable through application of production processes and available methods, systems, and techniques. LAER does not permit emissions in excess of those allowed under any applicable federal Clean Air Act provision. There have been no sources permitted in the nonattainment area that were subject to major review since the 2006 RACT demonstration or the previous one-hour ozone RACT demonstration.

4. St. Louis NAA RACT Rules

The purpose of Missouri's RACT rules in the St. Louis area is to establish reasonable controls on the emissions of ozone precursors. In many cases the rules establish emission limitations directly from EPA's published CTGs. As part of Missouri's rulemaking process, EPA has typically been directly involved, either as a stakeholder or to provide guidance and comments on specific technical issues. EPA's involvement has helped guide Missouri in developing emissions limitations in these rules that fulfill the RACT requirements. Some of the RACT rules were approved some time ago (as early as the 1970's) and EPA's involvement in those rulemakings is unknown. In addition, many of the RACT rules have been amended over the years, and the amendments often have been for purposes other than adjusting the limits. In these cases, EPA has not provided specific comments or guidance about whether the amendments were in keeping with RACT. This was not the basis or purpose of these amendments. All of Missouri's St. Louis NAA RACT rules that are included in Table C were submitted to EPA for review and inclusion into the SIP, with the exception of the four concurrently proposed rule amendments addressing the latest round of CTGs.

As required by the CAAA, EPA maintains a RACT, BACT, LAER clearinghouse for states to report and compare the appropriate corresponding "state of the art" control technologies. Missouri has reviewed the clearinghouse and was not able to identify any applicable reasonable control technologies that have not already been implemented as part of this RACT plan. For more information, visit EPA's RACT, BACT, LAER clearinghouse (RBLC) website: <http://cfpub1.epa.gov/RBLC/>

Table C is a summary of all the St. Louis Ozone NAA's RACT rules and supports that the state has satisfied all RACT requirements. Bold entries in the notes field represent recent updates, improvements or strengthening of the RACT rule and demonstrate that Missouri's implementation of new reasonably available control technologies is ongoing and continuous.

Over the years, many new RACT rules have been added. Many others have been expanded with new source categories or have had stricter limits applied. Some of the RACT rules, especially those in the surface coating and graphic arts categories, have been updated more than once. A few rules originated a number of years ago with no updates. This does not mean they have not been revisited for RACT. On the contrary, it means that the state has reviewed the rules and determined that the level of controls present still represents RACT. As stated above, the state has been unable to identify any RACT that has not been addressed or implemented already. In some of these cases, “early” RACT reduced emissions reductions from these source categories to such an extent that there was little room left for improvement. For example, many VOC RACT strategies control VOC emissions by eighty percent (80%) or more.

Sections 183(a) & (c) of the CAAA, authorizes the EPA to issue or revise CTG and ACTs, respectively, “as necessary”. As demonstrated herein, Missouri has implemented or addressed all current CTGs and ACTs in its St. Louis NAA RACT plan. For any rules that apply to CTG / ACT source categories that have not been revised or updated, the EPA, therefore, has also been unable to identify any newly available reasonable control technologies deemed as necessary.

In this regard, during the public hearing / comment period for the adoption of the 2006 RACT demonstration, EPA commented that EPA’s review and acceptance of rules into the SIP that occurred many years ago, does not mean that the rules meet the current definition of RACT. EPA asked for further justification on why these older rules still meet RACT requirements. As a result of that comment, the state added language to the proposed document to support the state’s assertion that the limits in these rules continue to represent RACT, just as is being done in this revision. It should be noted though, that the EPA, in its comments, did not identify or suggest any rules that appeared to require improvements to fulfill current RACT requirements. To this end, in addition to reviewing the RBLC, the state is required to review all public hearing comments from all rulemakings and has found no suggestions from the EPA or the public for new RACT that is not already being addressed.

B. RACT Determination of Individual Sources

A review of operating permits in St. Louis indicates that there are fifty-six (56) sources located in the nonattainment area that are classified as active Part 70 major sources for VOCs. Part 70 Sources are those sources that have the potential to emit more than the major source levels (100 tons per year of VOC). A list of these sources is provided in Table D. Seventeen (17) additional active intermediate sources with significant emissions of VOCs were also included in Table D as part of the analysis. Sources with intermediate operating permits are those that, by permit condition, limit their annual emissions to less than the major source level.

1. Methods

The primary management system of electronic emission data in Missouri is the Missouri Emission Inventory System. The databases in this system were queried for all active sources located in the St. Louis nonattainment area that were classified as Part 70 or intermediate sources. For this 2011 update to the RACT demonstration, the query was limited to those sources that were active in 2008. 2008 is the most recent year that staff was confident that the

data was correct and had been quality assured in time for the review and development of this document.

2. Summary of Table of all St. Louis NAA RACT sources

For each of the seventy-one (71) sources identified through this process, the most current operating permit was reviewed. The operating permit lists all of the applicable regulations. Table D lists all of the seventy-on (71) sources and the RACT rules that apply to them.

In addition to listing the RACT rules that were applicable to each major source, the NESHAP, MACT, and NSPS rules that were applicable to that facility were also listed in Table D. Table D demonstrates that Missouri has implemented RACT for all major stationary sources of VOC pursuant to Sections 182(b)(2)(C) and 182(f) of the CAAA.

3. No New Major Sources

The number of major sources of VOC in the nonattainment area has decreased since the last RACT review was conducted under the 1-hour ozone obligation. The department's Air Pollution Control Program has not issued any major construction permits in the nonattainment area since before 1995, which was prior to the previous 1-hour RACT review.

4. Major Source Threshold Unchanged from 1-hour to 8-hour.

The major source threshold for moderate nonattainment areas under the 1997 8-hour ozone NAAQS like St. Louis has not changed from the major source limits under the old 1-hour ozone standard. Major sources subject to RACT rules will continue to be subject to those same rules because the applicability does not change. These rules continue to serve as reasonable controls for these sources.

IV. CONCLUSION

Missouri has achieved more than three years of clean data under the 1997 8-hour NAAQS and has requested a Clean Data Determination from the EPA. To address NO_x RACT, Missouri intends to request a NO_x waiver stating that no additional NO_x controls are necessary to maintain this standard.

Based on the evaluations described in this document, Missouri certifies that the current complement of St. Louis RACT rules that apply to VOC sources located in the St. Louis NAA fulfill the RACT requirements for the 8-hour ozone NAAQS. This determination is based on source category rules and general RACT rule 10 CSR 10-5.520.

This 2011 RACT SIP Demonstration was an evaluation of current air pollution rules that apply in the Missouri portion of the St. Louis ozone NAA and results in a substantially strengthened RACT plan due primarily to the four rule amendments being promulgated concurrently that cover 11 new or upgraded VOC CTG source categories.

V. TABLES

Table A: New Control Techniques Guidelines (CTG)

New Control Technique Guideline (CTG)	Rule Amendment 10 CSR 10-	Summary of Updates to state rule
Group II		
Industrial Cleaning Solvents EPA-453/R-06-001 09/2006	5.455	Revamped: new applicability, new sources and new limits.
Offset Lithographic and Letterpress Printing EPA-453/R-06-002 09/2006	5.442	New limits & lowered applicability. Also, add letterpress (new category).
Flexible Package Printing EPA-453/R-06-003 09/2006	5.340	Add flexible package printing subcategory & lower applicability.
Flat wood Paneling Coatings EPA-453/R-06-004 09/2006	5.330	New source category.
Group III		
Paper, Film and Foil Coatings EPA-453/R-07-003 09/2007	5.330	New source category.
Large Appliance Coatings EPA-453/R-07-004 09/2007	5.330	New limits.
Metal Furniture Coatings EPA-453/R-07-005 09/2007	5.330	New limits.
Group IV		
Miscellaneous Metal and Plastic Parts Coatings EPA-453/R-08-003 09/2008	5.330	New limits.
Fiberglass Boats Manufacturing EPA-453/R-08-004 09/2008	None	Negative declaration. There are no applicable sources in St. Louis NAA.
Miscellaneous Industrial Adhesives EPA-453/R-08-005 09/2008	5.330	New source category.
Automobile and Light-Duty Truck Assembly Coatings EPA-453/R-08-006 09/2008	5.330	New limits.
Protocol for Determining the Daily VOC emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations EPA-453/R-08-002 09/2008	5.330	Update of protocol for determining VOC emission rates.

Table B: VOC Source Categories, CTG/ACT List, and Applicable Rules

CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Coatings and Solvents						
Aerosol Coatings		Applies to the manufacturer or importer of an aerosol coating product and a distributor of an aerosol coating product if it is named on the label or if it specifies the formulation of the product.	N/A, Federal requirement			Regulated under 40 CFR 59, Subpart E. Establishes the product-weighted reactivity limits regulated entities must meet in order to comply with the national rule for VOCs emitted from aerosol coatings. Requirements satisfy RACT.
Aerospace Manufacturing and Rework Operations & Coating Operations	<i>Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations</i> (EPA-453/R-97-004, Dec. 1997)	Applies to aerospace coatings and cleaning solvents used at aerospace manufacturing and rework operations including contractors and subcontractors.	10 CSR 10-5.295 Control of Emissions From Aerospace Manufacture and Rework Facilities	Feb. 29, 2000	Feb. 29, 2000	5.295 establishes VOC content limits for various coatings. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(GG).
Architectural and Industrial Maintenance Coatings		Applies to the manufacturer or importer of coatings used to beautify and protect homes, office buildings, factories, pavements, curbs, and their appurtenances on a variety of surfaces - metal, wood, plastic, concrete, wallboard, etc. These coatings are applied to the interior and exterior of homes and offices, factory floors, bridges, traffic signs, roofs, swimming pools, driveways, etc.	N/A, Federal requirement			Regulated under 40 CFR 59, Subpart D. Sets VOC content limits on coating. Requirements satisfy RACT.
Automobile Refinishing Coatings	<i>Alternative Control Techniques Document – Automobile Refinishing</i> (EPA-453/R-94-031, April 1994)	Applied to coatings used for automobile refinishing operations	N/A, Federal requirement			40 CFR 59, Subpart B was issued in 1998 after the ACT. The provisions of this rule satisfy RACT.

Table B: VOC Source Categories, CTG/ACT List, and Applicable Rules

CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Automobile and Light-Duty Truck Assembly Coatings	<i>Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks</i> (EPA-450/2-77-008, May 1977) <i>Control Techniques Guidelines for Automobile and Light-Duty Truck Assembly Coatings</i> (EPA 453/R-08-006, Sept. 2008)	For automobile & light truck coating, applies to all objects surface coated in automotive and light duty truck assembly plants.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed for revision pending the adoption of the amendment filed Dec. 1, 2010. 5.330 sets VOC content limits for various auto & light truck manufacturing operations and specifies work practices. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(III) and NSPS rule 10 CSR 10-6.070, subpart (3)(MM).
Can Coatings	<i>Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks</i> (EPA-450/2-77-008, May 1977)	Applies to sheet basecoat and overvarnish, two piece can exterior basecoat and overvarnish, two and three-piece can interior body spray, two-piece can exterior end spray or roll coat, three piece can side seam spray, and end sealing compound.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	5.330 sets VOC limits for coatings and allows use of control systems. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(KKKK) and NSPS rule 10 CSR 10-6.070, Subpart (3)(WW)
Coil Coatings	<i>Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks</i> (EPA-450/2-77-008, May 1977)	Applies to the surface coating of any flat metal sheet or strip that comes in rolls or coils.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	5.330 sets VOC limits for coatings and allows use of control systems. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(SSSS) and NSPS rule 10 CSR 10-6.070, subpart (3)(TT)

Table B: VOC Source Categories, CTG/ACT List, and Applicable Rules

CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Fabric Coatings	<i>Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks</i> (EPA-450/2-77-008, May 1977)	Applies to the coating of textile substrates by dipping or by means of a knife or roll.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	5.330 sets VOC limits for coatings and allows use of control systems. Requirements satisfy RACT. Also regulated under MACT 10 CSR 10-6.075, subpart (3)(OOOO).
Flat Wood Paneling Coatings	<i>Control Techniques Guidelines for Flat Wood Paneling Coatings</i> (EPA-453/R-06-004, Sept. 2006)	Applies to the coating of printed interior panels made of hardwood plywood and thin particle board, natural finish hardwood plywood panels, hardboard paneling with Class II finishes, exterior siding, and tileboard.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed to be added to this rule pending the adoption of the amendment filed Dec. 1, 2010. 5.330 sets VOC limits for coatings, allows use of control systems, and specifies work practices.. Requirements satisfy RACT. Also regulated under MACT rule 40 CFR 63, Subpart QQQQ.
Flexible Package Printing	<i>Control Techniques Guidelines for Flexible Package Printing</i> (EPA-453/R-06-003, Sept. 2006)	Applies to inks, coatings, adhesives, and cleaning materials used in flexible packaging printing operations.	10 CSR 10-5.340 Control of Emissions From Rotogravure and Flexographic Printing Operations	Sept. 12, 1980	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed to be added to this rule pending the adoption of the amendment filed Dec. 1, 2010. 5.340 sets VOC content limits for flexible package printing operations. Requirements satisfy RACT.
Flexographic and Rotogravure Printing	<i>Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VIII: Graphic Arts-Rotogravure and Flexography</i> (EPA-450/2-78-033, Dec. 1978)	Applies to graphic arts operations that use the flexographic and rotogravure printing processes as applied to both publication and packaging printing.	10 CSR 10-5.340 Control of Emissions From Rotogravure and Flexographic Printing Facilities	Sept. 12, 1980	Pending adoption: Public hearing scheduled for March 31, 2011	CTG provides estimates for a variety of controls; Rule satisfies RACT by establishing specific emission reduction requirements for various printing operations. Also regulated under NSPS rule 10 CSR 10-6.070, subpart (3)(QQ)

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CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Ink and Paint Manufacturing	Control of VOC from Ink and Paint Manufacturing (EPA 453 3-92-013).	Applies to products of the paint manufacturing industry, including architectural coatings, product coating for original equipment manufacturers, and special-purpose coatings. Also applies to ink manufacturing, including letterpress inks, lithographic and offset inks, gravure inks, and flexographic inks.	10 CSR 10-5.390 Control of Emissions From Manufacture of Paints, Varnishes, Lacquers, Enamels and Other Allied Surface Coating Products	Mar. 11, 1984	Aug. 30, 2000	5.390 establishes equipment operation practices to reduce emissions. No new cost data is available. Requirements satisfy RACT.
Large Appliance Coatings	<i>Control of Volatile Organic Emissions from Existing Stationary Sources – Volume V: Surface Coating of Large Appliances</i> (EPA-450/2-77-034 Dec. 1977) <i>Control Techniques Guidelines for Large Appliance Coatings</i> (EPA 453/R-07-004 Sept. 2007)	Applies to the coating of large appliances, such as doors, cases, lids, panels and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dish washers, trash compactors, air conditioners, and similar products.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations,	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed for revision pending the adoption of the amendment filed Dec. 1, 2010. 5.330 sets VOC limits for coatings, allows use of control systems, specifies work practices, and specifies application equipment. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(NNNN) and NSPS rule 10 CSR 10-6.070, subpart (3)(SS).
Magnet Wire, Surface Coating	<i>Control of Volatile Organic Emissions from Existing Stationary Sources, Volume IV: Surface Coating of Insulation of Magnet Wire</i> (EPA-450/2-77-033, Dec. 1977)	Applies to the coating of electrically insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	5.330 sets a VOC limit of 1.7 lbs./gallon. for the coating of other metal products. Requirements satisfy RACT.

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CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Miscellaneous Industrial Adhesives	<i>Control Techniques Guidelines for Miscellaneous Industrial Adhesives</i> (EPA 453/R-08-005, Sept. 2008)	Applies to miscellaneous adhesive application processes.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed to be added to this rule pending the adoption of the amendment filed Dec. 1, 2010. 5.330 sets VOC limits for coatings, allows use of control systems, specifies work practices, and specifies application equipment. Requirements satisfy RACT.
Miscellaneous Metal and Plastic Parts Coatings	<i>Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products</i> (EPA-450/2-78-015, June 1978) <i>Alternative Control Techniques Document – Surface Coating of Automotive/Transportation and Business Machine Plastic Parts</i> (EPA-453/R-94-017, Feb. 1994) <i>Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings</i> (EPA 453/R-08-003, Sept. 2008)	Applies to surface coating of miscellaneous metal and plastic parts.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed for revision pending the adoption of the amendment filed Dec. 1, 2010. 5.330 sets VOC limits for coatings, allows use of control systems, specifies work practices, and specifies application equipment. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subparts (3)(MMMM) and (3)(PPPP) and NSPS Rule 10 CSR 10-6.070 subpart (3)(TTT).

Table B: VOC Source Categories, CTG/ACT List, and Applicable Rules

CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Metal Furniture Coatings	<p><i>Control of Volatile Organic Emissions from Existing Stationary Sources, Volume III: Surface Coating of Metal Furniture</i> (EPA-450/2-77-032, Dec. 1977).</p> <p><i>Control Techniques Guidelines for Metal Furniture Coatings</i> (EPA 453/R-07-005, Sept. 2007).</p>	Applies to surface coating of metal furniture by metal furniture manufacturers.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed for revision pending the adoption of the amendment filed Dec. 1, 2010. 5.330 sets VOC limits for coatings, allows use of control systems, specifies work practices, and specifies application equipment. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(RRRR) and NSPS rule 10 CSR 10-6.070, subpart (3)(EE).
Offset Lithographic Printing and Letterpress Printing	<p><i>Alternative Control Techniques Document: Offset Lithographic Printing – Supplemental Information Based on Public Comment on Draft Control Techniques Guidance announced in Federal Register November 8, 1993</i> (EPA-453/R-94-054, June 1994)</p> <p><i>Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing</i> (EPA-453/R-06-002, Sept. 2006)</p>	Applies to graphic arts operations that use offset lithographic printing and letterpress printing.	10 CSR 10-5.442 Control of Emissions From Lithographic and Letterpress Printing Operations	May 28, 1995	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed for revision pending the adoption of the amendment filed Dec. 1, 2010. 5.442 sets VOC content limits for offset lithographic and letterpress printing operations. Requirements satisfy RACT

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CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Paper, Film, and Foil Coatings	<p><i>Control of Volatile Organic Emissions from Existing Stationary Sources – Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks</i> (EPA-450/2-77-008, May 1977)</p> <p><i>Control Techniques Guidelines for Paper, Film, and Foil Coatings</i> (EPA 453/R-07-003, Sept. 2007)</p>	Applies to paper, film, and foil coating operations, with the exception of coating units with potential to emit below twenty-five (25) tons per year of VOC from coating, prior to controls; coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press that is part of a printing process; and size presses and on-machine coaters on papermaking machines that apply sizing or water-based clays.	10 CSR 10-5.330 Control of Emissions From Industrial Surface Coating Operations	July 12, 1979	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed for revision pending the adoption of the amendment filed Dec. 1, 2010. 5.330 sets VOC limits for coatings, allows use of control systems, and specifies work practices. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(JJJ) and NSPS rule 10 CSR 10-6.070, subpart (3)(RR).
Shipbuilding	<p><i>Control Techniques Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating)</i> (61 FR 44050, Aug. 27, 1996)</p> <p><i>Alternative Control Technology Document – Surface Coating Operations at Shipbuilding and Ship Repair Facilities</i> (EPA-453/R-94-032, April, 1994)</p>	Applies to any marine or fresh-water metal hulled vessel used for military or commercial operations, including self-propelled vessels and those towed by other craft. This definition includes, but is not limited to, all military vessels, commercial cargo and passenger ships, ferries, barges, tankers, container ships, patrol and pilot boats, and dredges. Pleasure craft, such as recreational boats and yachts, are not included.	No applicable sources in the St. Louis ozone non-attainment area. Regulated under MACT rule 10 CSR 10-6.075, subpart (3)(II).			
Solvent Cleaners	<p><i>Alternative Control Technology Document – Halogenated Solvent Cleaners</i> (EPA-450/3-89-030, Aug. 1989)</p>		10 CSR 10-6.075 Maximum Achievable Control Technology Regulations	Dec 30, 1996	May 30, 2010	Subpart (3)(T) of 6.075 applies to degreasers using solvents that contain ≥ 5 percent of any of six halogenated solvents and requires specific work practices and equipment designs. Requirements satisfy RACT.

Table B: VOC Source Categories, CTG/ACT List, and Applicable Rules

CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Solvent Cleanup Operations	<i>Alternative Control Techniques Document – Industrial Cleaning Solvents</i> (EPA-453/R-94-015, Feb. 1994) <i>Control Techniques Guidelines for Industrial Cleaning Solvents</i> (EPA-453/R-06-001, Sept. 2006)	Applies to solvent cleaning operations that emit more than three tons of VOCs per year.	10 CSR 10 5.455 Control of Emissions from Industrial Solvent Cleaning Operations	May 28, 1995	Pending adoption: Public hearing scheduled for March 31, 2011	The limits for this source category are proposed for revision pending the adoption of the amendment filed Dec. 1, 2010. 5.455 controls emissions of VOCs from the use, storage, and disposal of industrial cleaning solvents. Specifies work practice standards, limitations on VOC content of the cleaning material, and alternative limit on composite vapor pressure of the cleaning material. Allows the use of add-on controls that will allow for an overall VOC emission reduction of at least 85 %. Requirements satisfy RACT.
Solvent Metal Cleaning	<i>Control of Volatile Organic Emissions from Solvent Metal Cleaning</i> (EPA-450/2-77-022, Nov. 1977)	Applies to cold cleaners, open top vapor degreasers, and conveyORIZED degreasers which use volatile solvents to clean metal parts.	10 CSR 10-5.300 Control of Emissions From Solvent Metal Cleaning	June 11, 1979	Nov. 30, 2006	5.300 sets VOC limits on cleaning solvents & requires appropriate operations. Requirements satisfy RACT.
Traffic Markings	<i>Reduction of Volatile Organic Compound Emissions from the Application of Traffic Markings</i> (EPA-450/3-88-007, Aug. 1988)	Applies to traffic marking materials, such as solvent-borne paints, waterborne paints, thermoplastics, preformed tapes, field-reacted materials, and permanent markers.	N/A, Federal requirement			40 CFR 59, Subpart D was issued in 1998 after the ACT. The provisions of this rule satisfy RACT.
Wood Furniture Manufacturing	<i>Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations</i> (EPA-453/R-96-007, April 1996)	Applies to any facility that finishes wood furniture, or performs cleaning or wash off associated with wood furniture finishing operations.	10 CSR 10-5.530 Control of Emissions From Wood Furniture Manufacturing Operations	Feb. 29, 2000	Feb. 29, 2000	5.530 sets VOC content limits for various applications and work practice standards. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(JJ).

Table B: VOC Source Categories, CTG/ACT List, and Applicable Rules

CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Petroleum						
Bulk Gasoline Plants	<i>Control of Volatile Organic Emissions from Bulk Gasoline Plants</i> (EPA-450/2-77-035, Dec. 1977)	Applies to bulk plants with daily throughputs of 76,000 liters (20,077 gal.) gasoline or less.	10 CSR 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer	March 14, 1967	Aug. 30, 1999	5.220 requires equipment specifications and operating procedures in accordance with the CTG. Requirements satisfy RACT.
Gasoline Dispensing Stage II Vapor Recovery	Stage II Gasoline Dispensing Facilities (EPA 450 3-91-022a).	Applies to gasoline dispensing into motor vehicles at gasoline dispensing facilities.	10 CSR 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer	March 14, 1967	Sept. 30, 2007	Guidance recommends establishing equipment requirements, maintenance and exemption levels, and testing and recordkeeping requirements. These elements are all provided in 5.220. Requirements satisfy RACT.
Gasoline Service Stations	<i>Design Criteria for Stage I Vapor Control Systems - Gasoline Service Stations</i> (EPA-450/R-75-102, Nov. 1975)	Applies to filling of gasoline storage tanks from gasoline tanker trucks.	10 CSR 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer	March 14, 1967	Sept. 30, 2007	Section (4) of 5.220 requires service station operators to accept product deliveries by trucks equipped with appropriate vapor recovery systems. Requirements satisfy RACT.
Leaks from Petroleum Refinery Equipment	<i>Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment</i> (EPA-450/2-78-036, June 1978)	Applies to leaks equipment such as pumps, compressors, flanges, valves and, pressure relief devices.	No applicable sources in the St. Louis ozone non-attainment area.			
Petroleum Liquid Storage in External Floating Roof Tanks	<i>Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks</i> (EPA-450-2/78-047, Dec. 1978)	Applies to external floating roof tanks larger than 150,000 liters (~40,000 gal. Or 950 bbls.) storing petroleum liquids.	10 CSR 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer	March 14, 1967	Sept. 30, 2007	5.220 requires equipment specifications and operating procedures in accordance with the CTG. Requirements satisfy RACT.

Table B: VOC Source Categories, CTG/ACT List, and Applicable Rules

CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds	<i>Control of Refinery Vacuum Producing Systems, Wastewater Separators, and Process Unit Turnarounds</i> (EPA-450/2-77-025, Oct. 1977)	Applies to non-condensables from vacuum producing systems, wastewater separators, and all pressurized process units.	CSR 10-6.070 New Source Performance Regulations	April 11, 1980	May 30, 2010	Regulated under NSPS rule 10 CSR 10-6.070, subpart (3)(QQQ). Requirements satisfy RACT.
			10 CSR 10-6.075 Maximum Achievable Control Technology Regulations	Dec. 30, 1996	May 30, 2010	Regulated under MACT rule 10 CSR 10-6.075, subparts (3)(CC) and (3)(VV) CC and VV. Requirements satisfy RACT.
Storage of Petroleum Liquids in Fixed-Roof Tanks	<i>Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed Roof Tanks</i> (EPA-450/2-77-036, Dec. 1977)	Applies to storage vessels with capacities greater than 150,000 liters containing petroleum liquids with a true vapor pressure greater than 10.5 KPa. Exempts fixed roof tanks with capacities less than 1,600,000 liters used to store produced crude or condensate prior to lease custody transfer.	10 CSR 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer	March 14, 1967	Sept. 30, 2007	5.220 requires equipment specifications and operating procedures in accordance with the CTG. Requirements satisfy RACT.
Tank Truck Gasoline Loading Terminals	<i>Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals</i> (EPA-450/2-77-026, Oct. 1977)	Applies to tank truck terminals with daily throughputs greater than 76,000 liters (20,077 gal.).	10 CSR 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer	March 14, 1967	Sept. 30, 2007	5.220 requires tanks at gasoline bulk plants to be equipped with vapor loss control devices. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(R) and NSPS rule 10 CSR 10-6.070, subparts (3)(K), (3)(Ka), (3)(Kb), and (3)(XX).
Tank Trucks, Gasoline, and Vapor Collection Systems	<i>Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems</i> (EPA-450/2-78-051, Dec. 1978)	Applies to gasoline tank trucks that are equipped with vapor collection systems and the vapor collection systems at bulk terminals, bulk plants and service stations.	10 CSR 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer	March 14, 1967	Sept. 30, 2007	5.220 requires leak testing. Also regulated under NSPS rule 40 CFR 60, Subpart XX and MACT rule 40 CFR 63, Subpart XX

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CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Volatile Organic Liquid Storage In Floating and Fixed Roof Tanks	<i>Alternative Control Techniques Document – Volatile Organic Liquid Storage In Floating and Fixed Roof Tanks</i> (EPA 453 R-94-001, Jan. 1994)	Applies to storage tanks in all industries, but primarily in the petroleum refineries, pipelines, chemical plants, liquid terminals	10 CSR 10-5.500 Control of Emissions From Volatile Organic Liquid Storage	Feb. 29, 2000	Feb. 29, 2000	5.500 requires equipment specifications and operating procedures in accordance with the CTG. Requirements satisfy RACT.
			10 CSR 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer	March 14, 1967	Sept. 30, 2007	5.220 requires Volatile Organic Liquid storage tanks to be equipped with appropriate vapor loss control devices. Requirements satisfy RACT.
Other						
Agricultural Pesticides	<i>Control of VOC Emissions from the Application of Agricultural Pesticides</i> (EPA-453/R-92-011, Mar. 1993)	Applies to pesticides used for agricultural purposes.	No applicable sources in the St. Louis ozone non-attainment area.			
Batch Processes	<i>Control of Volatile Organic Compound Emissions from Batch Processes ACT</i> (EPA-453/R-93-020, Feb. 1994)	Applies to plastic materials and resins, pharmaceuticals, gum and wood chemicals, cyclic crudes and intermediates, industrial organic chemicals, and agricultural chemicals.	10 CSR 10-5.540 Control of Emissions From Batch Process Operations	Feb. 29, 2000	Feb. 29, 2000	5.540 requires percent VOC reductions at different efficiencies dependent upon flow classification. Requirements satisfy RACT.
Commercial Bakeries	<i>Alternative Control Technology Document – Bakery Ovens</i> (EPA 453 R-92-017, Dec. 1992)	Applies to commercial bakery operations.	10 CSR 10-5.440 Control of Emissions from Bakery Ovens	May 28, 1995	Dec. 30, 1996	5.440 requires an 80 percent VOC reduction efficiency. Requirements satisfy RACT.
Cutback Asphalt	<i>Control of Volatile Organic Emissions from Use of Cutback Asphalt</i> (EPA-450/2- 77-037, Dec. 1977)	Applies to use of cutback asphalt used for roadway paving.	10 CSR 10-5.310 Liquefied Cutback Asphalt Paving Restricted	July 12, 1979	Mar. 11, 1989	5.310 prohibits the use of cutback asphalt paving during the ozone season. Requirements satisfy RACT.

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CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Ethylene Oxide – Sterilization and Aeration	<i>Alternative Control Technology Document – Ethylene Oxide Sterilization / Fumigation Operations</i> (EPA 450 3-89-007, Mar. 1989)	Applies to ethylene oxide used as a sterilant/fumigant in production of medical equipment supplies, in miscellaneous sterilization and fumigation operations, and at hospitals.	10 CSR 10-6.075 Maximum Achievable Control Technology Regulations	Dec. 30, 1996	May 30, 2010	Subpart (3)(O) of 6.075 requires 99% emission reductions. Requirements satisfy RACT.
Fiberglass Boat Manufacturing	<i>Control Techniques Guidelines for Fiberglass Boat Manufacturing Materials</i> (EPA 453/R-08-004, Sept. 2008)	Applies to the use of gel coats, resins, and application equipment cleanup at fiberglass boat manufacturing operations.	No applicable sources in the St. Louis ozone non-attainment area.			
Large Petroleum Dry Cleaners	Control of Volatile Organic Compound Emissions from Large Petroleum Dry Cleaners (EPA-450/3-82-009, Sept. 1982)	Applies to petroleum solvent dry cleaning facilities that consume 123,000 liters or more of petroleum solvent per year.	10 CSR 10-6.075 New Maximum Achievable Control Technology Regulations	Dec. 30, 1996	May 30, 2010	Subpart (3)(M) of 6.075 requires equipment, work practices and other operational requirements. Requirements satisfy RACT.
Leather Tanning and Finishing Operations	Leather Tanning and Finishing Operations (EPA 453 R-93-025).	Applies to leather finishing operations.	10 CSR 10-6.075 Maximum Achievable Control Technology Regulations	Dec. 30, 1996	May 30, 2010	Subpart (3)(TTTT) of 6.075 establishes VOC emission rates per square feet of leather for various tanning operations. Requirements satisfy RACT.
Manufacture of Pneumatic Rubber Tires	<i>Control of Volatile Organic Emissions from Manufacture of Pneumatic Rubber Tires</i> (EPA-450/2-78-030, Dec. 1978)	Applies to manufacturing processes; undertread cementing, tread-end cementing, bead dipping, and green tire spraying.	No applicable sources in the St. Louis ozone non-attainment area.			

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CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Natural Gas/Gasoline Processing Plants	<i>Control of Volatile Organic Compound Equipment Leaks from Natural Gas/Gasoline Processing Plants</i> (EPA-450/3-83-007, Dec. 1983)	Applies to facilities engaged in the separation of natural gas liquids from field gas and/or fraction of the liquids into natural gas products, such as ethane, propane, butane and natural gasoline. It is not applicable to compressor stations, dehydration units, sweetening units, field treatment, underground storage facilities, liquefied natural gas units and field gas gathering systems unless they are located at a gas plant.	No applicable sources in the St. Louis ozone non-attainment area.			
Perchloroethylene Dry Cleaning Systems	<i>Control of Volatile Organic Emissions from Perchloroethylene Dry Cleaning Systems</i> (EPA-450/2-78-050, Dec. 1978)	Applies to all dry cleaning systems that use perchlorethylene.	10 CSR 10-6.075 Maximum Achievable Control Technology Regulations	Dec. 30, 1996	May 30, 2010	Perchloroethylene is no longer considered a VOC. Subpart (3)(M) of 6.075 requires equipment, work practices and other operational requirements. Requirements satisfy RACT.
Pharmaceutical Products	<i>Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products</i> (EPA-450/2-78-029, Dec. 1978)	Applies to facilities and operations that synthesize pharmaceutical products.	10 CSR 10-5.350 Control of Emissions From Manufacture of Synthesized Pharmaceutical Products	Sept. 12, 1980	Mar. 11, 1989	5.350 establishes performance specifications for condensers or equivalent requirements for other VOC control techniques. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subpart (3)(GGG).
Plywood Veneer Dryers	<i>Control Techniques for Organic Emissions from Plywood Veneer Dryers</i> (EPA-450/3-83-012, May 1983)	Applies to softwood plywood manufacturing operations.	No applicable sources in the St. Louis ozone non-attainment area.			

Table B: VOC Source Categories, CTG/ACT List, and Applicable Rules

CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
<p>Polyester Resin</p>	<p><i>Control of Volatile Organic Compound Emissions from Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins</i> (EPA-450/3-83-008, Nov. 1983)</p> <p><i>Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment</i> (EPA-450/3-83-006, Mar. 1984)</p> <p><i>Control of VOC Emissions from Polystyrene Foam Manufacturing</i> (EPA 450 3-90-020, Sept. 1990)</p>	<p>Applies to the manufacturing of high-density polyethylene, polypropylene, and polystyrene.</p> <p>Applies to emissions from equipment used in synthetic organic chemical polymers and resins.</p> <p>Applies to polystyrene foam manufacturing.</p>	<p>10 CSR 10-5.410 Control of Emissions From Manufacture of Polystyrene Resin</p>	<p>May 11, 1985</p>	<p>Mar. 11, 1989</p>	<p>5.410 establishes a 0.24-pound per 2000 pound polystyrene production VOC limit. Requirements satisfy RACT. Also regulated under MACT rule 10 CSR 10-6.075, subparts (3)(U), (3)(HH), (3)(JJJ), and (3)(MMMMM).</p>

Table B: VOC Source Categories, CTG/ACT List, and Applicable Rules

CTG Source Category	CTG/ACT Reference Document	CTG/ACT Applicability	Missouri Rule	Original Effective Date	Date Last Amended	8-Hour RACT Determination
Synthetic Organic Chemical Manufacturing	<p><i>Control of Volatile Organic Compound Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry</i> (EPA-450/3-84-015, Dec. 1984)</p> <p><i>Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations in Synthetic Organic Chemical Manufacturing Industry</i> (EPA-450/4-91-031, Aug. 1993).</p>	Applies to processes used in synthetic organic chemical manufacturing.	10 CSR 10-5.420 Control of Equipment Leaks From Synthetic Organic Chemical and Polymer Manufacturing Plants	Sept. 26, 1986	Mar. 11, 1989	5.420 provides for control of leaks from these facilities. Requirements satisfy RACT. Also regulated under NSPS rule 10 CSR 10-6.070, subpart (3)(RRR) and MACT rule 10 CSR 10-6.075, subparts (3)(F) and (3)(G).
Synthetic Organic Chemical and Polymer Manufacturing Equipment, Equipment Leaks from	<p><i>Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical Polymer and Resin Manufacturing Equipment</i> (EPA-450/3-83-006, Mar. 1984)</p>	Applies to leaks of process fluids (gaseous or liquid) from plant equipment such as pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, and cooling towers.	10 CSR 10-5.550 Control of Volatile Organic Compound Emissions From Reactor Processes and Distillation Operations Processes in the Synthetic Organic Chemical Manufacturing Industry	Feb. 29, 2000	Feb. 29, 2000	5.550 provides for appropriate control of leaks from these facilities. Requirements satisfy RACT.

Table C: Summary of St. Louis Area VOC RACT Rules

Items in bold indicate a recent upgrade to RACT

Rule # 10 CSR 10-	Rule Purpose	Applicability / Notes
5.220	Restricts VOC emissions from the handling of petroleum liquids. Stage I & II Vapor Recovery. Gasoline Distribution / Dispensing.	See Applicability. Update currently in development or become statewide rule. See also MACTs: 6.075(3)Subpart BBBB, CCCCC. New sources may be subject to 6.070(3)Subpart XX.
5.295	Reduces VOC emissions from aerospace manufacture facilities.	All aerospace mfr & rework facilities with VOC potential to emit (PTE) > 25 tons per year (tpy). See also MACT, 6.075(3)Subpart GG.
5.300	Reduces VOC emissions from solvent metal cleaning operations.	All installations that emit VOC's from solvent metal cleaning / degreasing & certain other operations. Might also be subject to MACT, 6.075(3) Subpart T.
5.310	Restricts VOC emissions from cutback paving operations during ozone season.	Applicators of liquefied cutback asphalt during ozone months.
5.320	Restricts VOC emissions from Perchloroethylene Dry Cleaning Installations.	Rescinded in 2003 in favor of stricter MACT: 6.075(3)Subpart M. MACT rule strengthened again in 2006 (71 FR 42724).
5.330	Restricts VOCs from industrial surfacing coating operations. Concurrent amendment will include several new source categories & stricter limits.	> 2.5 tpy VOC. Currently being amended due to updated CTG. May also be subject to various MACTs including: 6.075(3) Subpart 4K, 4M, 4N, 4O, 4P, 4Q, 4R, & 4S.
5.340	Restricts VOC emissions from rotogravure and flexographic printing facilities. Concurrent amendment will add flexible package printing presses, lower applicability & stricter limits.	> 100 tpy VOC PTE uncontrolled. Currently being amended due to updated CTG. New applicability: sources >3 tpy. New sources: subject to NSPS, 6.070(3)Subpart QQ.
5.350	Restricts VOC emissions from the manufacture of synthesized pharmaceutical products.	> 15 lbs/day VOC. May also be subject to MACT, 6.075(3)Subpart GGG.
5.360	Reduces VOCs from polyethylene bag sealing operations.	> 100 tpy VOC PTE uncontrolled
5.370	Restricts VOCs from deadener and adhesive applications.	> 100tpy VOC PTE uncontrolled
5.390	Reduces VOCs from the manufacture of paints and other surface coating products.	> 100 tpy VOC PTE uncontrolled
5.410	Restricts VOC emissions from the manufacture of polystyrene resin. Limited to 0.24 lbs/day per tons of resin.	All polystyrene resin mfr installations.
5.420	Controls leaks of VOC's from synthetic organic material and polymer manufacturing equipment.	Polymer Processing potential > 980 tpy light liquid and gaseous VOC. New sources: 6.070(3)Subpart VV & VVa.
5.430	Limits VOC emissions from the surface coating of chrome-plated plastic parts. Limit is now 3.5 lbs/gal VOC (was 6.4 lbs/gal VOC).	Rescinded in 2009. Reverts to stricter surface coat category limit in 5.330.
5.440	Restricts emission of VOC from bakery ovens at commercial bakeries.	> 100 tpy VOC PTE

Table C: Summary of St. Louis Area VOC RACT Rules, cont.

Items in bold indicate a recent upgrade to RACT

Rule # 10 CSR 10-	Rule Purpose	Applicability / Notes
5.442	Restricts VOC emissions from lithographic printing operations. Concurrent amendment will add letterpress printing, lower applicability & stricter limits.	> 100 tpy VOC PTE. Currently being amended due to updated CTG. New applicability: sources >3 tpy VOC. May also be subject to MACT 6.075(3)Subpart KK.
5.450	Limits the VOC content of traffic coatings.	All manufacturers, sellers, suppliers and applicators of traffic marking coatings.
5.451	Restricts VOC emissions from aluminum foil rolling mills.	All AL foil rolling facilities with PTE VOCs > 100 tpy.
5.455	Reduces VOC's from cleanup operations. Concurrent amendment = lower applicability & stricter work practices.	Cleaning VOCs > 500lbs/day (>100 tpy). Currently being amended due to updated CTG. New applicability: solvent use >3 tpy.
5.490	Restricts non-methane organic compound emissions (primarily VOCs) from municipal solid waste landfills.	Municipal solid waste landfills. See also statewide rule 6.310. New sources subject to 6.070(3) Subpart Cc.
5.500	Limits the VOC emissions from installations with volatile organic liquid storage vessels by incorporating RACT.	See Applicability.
5.520	Reduces VOCs from other major sources. General VOC RACT rule.	PTE VOC > 100 tpy.
5.530	Limits VOC emissions from wood furniture manufacturing operations by incorporating RACT.	All wood furniture manufacturing installations with PTE VOCs > 25 tpy. May also be subject to MACT, 6075(3)Subpart JJ.
5.540	Limits VOC emissions from batch process operations by incorporating RACT.	All batch processes with PTE VOCs > 100 tpy.
5.550	Limits VOC emissions from reactor processes and distillation operations.	See Applicability.
6.070	New Source Performance Standards. Restricts VOC and other categories.	Various. Continuously updated.
6.075	Maximum Achievable Control Technology. Restricts Hazardous Air Pollutants (HAPs) from numerous source categories. Many HAPs are VOCs.	Various. Continuously updated.
6.080	Emission Standards for HAPs. Restricts HAPs from numerous source categories. Many HAPs are VOCs.	Various. Continuously updated.

Table C: Summary of St. Louis Area VOC RACT Rules, cont.

Items in bold indicate a recent upgrade to RACT

Rule # 10 CSR 10-	Rule Purpose	Applicability / Notes
6.330	Restriction of VOCs and other pollutants from batch-type charcoal kilns. Limits represent Best Available Control Technology (BACT).	All batch-type charcoal kilns. 99% VOC control efficiency represents BACT. BACT is stricter than RACT.

Table D: RACT, NESHAP, & NSPS Regulations Applicable to Major Sources in St. Louis NAA

Facility	FIP	Plant	SIC Code	SIC Description	OP Type	NESHAPS & MACTs	NSPS	RACT Rules 10 CSR 10-
AERO METAL FINISHING	099	0114	3471	Electroplating, Plating, Polishing, Anodizing, Coloring	INT	N		5.330
AEROFIL TECHNOLOGY INC	071	0151	7389	Business Services, NEC (Packaging and Labeling Services)	P70		Kb	5.300
ALLIED HEALTH CARE PRODUCTS	510	1460	3841	Surgical and Medical Instruments and Apparatus (except tranquilizer guns and operating room tables)	P70	A, T		5.300
AMERENUE (LABADIE)	071	0003	4911	Electric Services (hydroelectric power generation)	P70	ZZZZ		5.300
AMERENUE (RUSH ISLAND)	099	0016	4911	Electric Services (hydroelectric power generation)	P70	A, B, ZZZZ, DDDDD		5.220, 5.300
AMERENUE (SIOUX)	183	0001	4911	Electric Services (hydroelectric power generation)	P70	ZZZZ		5.220, 5.300
AMERENUE (MERAMEC)	189	0010	4911	Electric Services (hydroelectric power generation)	P70	ZZZZ		5.220, 5.300
AMERENUE (HOWARD BEND)	189	0023	4911	Electric Services (hydroelectric power generation)	P70			5.220, 5.300
ANHEUSER-BUSCH INC	510	0003	2082	Malt Beverages (MALT Extract)	P70	MMMM		5.300, 5.330
BARNES JEWISH HOSPITAL	510	0204	8062	General Medical and Surgical Hospitals	P70		Dc, Kb	5.220, 5.300
BELT SERVICE CORP	189	1012	3052	Rubber and Plastics Hose and Belting	P70	OOOO		5.300
BFI MISSOURI PASS LANDFILL	189	0281	4953	Refuse Systems (solid waste landfills)	P70	AAAA	Cc	5.490
BOEING COMPANY	183	0010	37	Aircraft Manufacturing	P70	T, GG, JJ, ZZZZ	Kb	5.220, 5.295, 5.300, 5.450
BRENNTAG MID-SOUTH INC	510	1093	5169	Chemicals and Allied Products, NEC (Agents and Brokers)	P70		Kb	5.220
BRIDGETON LANDFILL, LLC	189	0312	4953	Refuse Systems (solid waste landfills)	P70		CC	5.490
BULL MOOSE TUBE CO	071	0087	3317	Steel Pipe and Tube Manufacturing	INT			5.300, 5.330

Table D: RACT, NESHAP, & NSPS Regulations Applicable to Major Sources in St. Louis NAA

Facility	FIP	Plant	SIC Code	SIC Description	OP Type	NESHAPS & MACTs	NSPS	RACT Rules 10 CSR 10-
CANAM STEEL CORP	071	0014	3441	Fabricated Structural Metal	P70			5.300, 5.330
CHRYSLER ASSEMBLY SOUTH PLANT	189	0002	3711	Motor Vehicles and Passenger Car Bodies (automobiles)	P70	A, IIII	A, MM	5.220, 5.300, 5.330, 5.370, 5.442
CHRYSLER CORP. NORTH PLANT	189	0231	3711	Motor Vehicles and Passenger Car Bodies (automobiles)	P70	A, IIII	A, Dc, MM	5.220, 5.300, 5.330, 5.442
DOE RUN COMPANY	099	0003	3339	Primary Smelting and Refining of Nonferrous Metals, Except Copper and Aluminum	P70	A, TTT	B, R	5.300
DOW CHEMICAL COMPANY THE	099	0014	3086	Plastics Foam Products (Polystyrene Foam Products)	P70	H, JJJ		5.410
ELANTAS PDG. INC.	510	0096	2851	Paints, Varnishes, lacquers, Enamels and Allied Products	P70		Dc, Kb	5.220, 5.300, 5.390
ELEMENTIS SPECIALTIES INC	510	0066	2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products	P70			5.300, 5.520
ENERGY CENTER (THE)	510	1505	4911	Electric Services (fossil fuel power generation)	P70		Kb	5.300
ENGINEERED COIL CO.	099	0052	3585	Air Conditioning Warm Air Heating & Commercial Industrial Refrigeration Equipment Manufacturing.	INT	T		5.300, 5.330
FOL TAPE LLC	189	0315	3231	Glass Products Made of Purchased Glass	P70			5.330
FRED WEBER INC SANITARY LANDFILL	189	0308	4953	Refuse Systems (solid waste landfills)	P70		CC	5.490
GENERAL MOTORS	183	0076	3711	Motor Vehicles and Passenger Car Bodies (automobiles)	P70			5.220, 5.330, 5.455
GKN AEROSPACE SERVICES INC	189	1489	3728	Aircraft Parts and Auxiliary Equipment, NEC (fluid power aircraft subassemblies)	P70	T, GG,	Db, MM	5.295, 5.300, 5.450
GOODWIN PRINTING CO.	510	1055		Commercial Printing Lithographic	INT			5.442
GRAPHIC PACKAGING INTERNATIONAL	071	0031	2657	Folding Paperboard Boxes, Including Sanitary (except paperboard backs for blister or skin packages)	P70			5.300, 5.442

Table D: RACT, NESHAP, & NSPS Regulations Applicable to Major Sources in St. Louis NAA

Facility	FIP	Plant	SIC Code	SIC Description	OP Type	NESHAPS & MACTs	NSPS	RACT Rules 10 CSR 10-
GREIF - FENTON	189	0226	3412	Metal Shipping Barrels, Drums, Kegs, and Pails	P70			5.330, 5.450
HERMANN OAK LEATHER CO.	510	0391	3111	Leather Tanning and Finishing	INT			5.300
HERTZ ST. LOUIS ONE, LLC	510	2378	4911	Electric Services (Fossil fuel power generation)	P70			5.300
ICL PERFORMANCE PRODUCTS LP	510	0070	2819	Industrial Inorganic Chemicals, NEC (except activated carbon and charcoal, alumina, recovering sulfur from natural gas, and inorganic dyes)	P70			5.300
INTERSTATE BRANDS CORPORATION	510	0938	20	Baking, Frying	INT			5.440
J S ALBERICI CONSTRUCTION	510	1642	1611	Highway and Street Construction Except Elevated Highways	INT			5.220, 5.300, 5.330
JW ALUMINUM	510	0118	3497	Metal Foil and Leaf (laminated aluminum foil rolls and sheets for flexible packaging uses)	P70	A, RRR	Kb	5.300, 5.451
MAGNET LLC	071	0153	2396	Automobile Trimmings Apparel Findings & Related Product Manufacturing	INT			5.380, 5.442
MALLINCKRODT INC.	510	0017	2834	Pharmaceutical Preparations Manufacturing	P70			5.350
MARQUETTE TOOL & DIE	510	0162	3544	Special Dies & Tools, Die Sets, Jigs & Fixtures, and Molds (Industrial Molds)	P70	T		5.300
MCDONNELL DOUGLAS CORP./BOEING COMPANY	189	0230	3721	Aircraft (except research and development not producing prototypes)	P70	N, T, GG, JJ, PPPPP, YYYY	Dc, Kb	5.295, 5.300, 5.330, 5.450
MEMC - ST. PETERS	183	0027	3674	Semiconductors and Related Devices	INT			5.220, 5.450
MERAMEC INDUSTRIES INC	071	0068	3089	Plastics Products, NEC (plastics sausage casings)	P70			5.300, 5.330
METAL CONTAINER CORPORATION	099	0044	3411	Metal Cans	P70		WW	5.330
METROPOLITAN ST. LOUIS SEWER DISTRICT	189	1205	4952	Sewerage Systems	P70			5.220, 5.300

Table D: RACT, NESHAP, & NSPS Regulations Applicable to Major Sources in St. Louis NAA

Facility	FIP	Plant	SIC Code	SIC Description	OP Type	NESHAPS & MACTs	NSPS	RACT Rules 10 CSR 10-
METROPOLITAN ST. LOUIS SEWER DISTRICT	510	0053	4952	Sewerage Systems	P70	C, E	O, Dc	5.220, 5.300
MID-WEST INDUSTRIAL CHEMICAL	510	1077	2891	Adhesives and Sealants	P70			5.390
MSD - COLDWATER CREEK	189	1210	4952	Sewerage Systems	P70			5.300
MSD - LEMAY WASTEWATER TREATMENT	189	0217	4952	Sewerage Systems	P70	C, E	O	5.220, 5.300
NEW WORLD PASTA	510	2433	2098	Macaroni, Spaghetti, Vermicelli and Noodles	P70		Dc	5.300
OAK RIDGE LANDFILL, VEOLIA	189	0310	4953	Refuse Systems (solid waste landfills)	P70		WWW	5.300, 5.490
PQ CORPORATION (THE)	510	0809	2819	Industrial Inorganic Chemicals, NEC (recovering sulfur from natural gas)	P70		Dc	5.300
PRECOAT METALS	510	0027	3479	Coating, Engraving, and Allied Services, NEC (Except jewelry, silverware, and flatware engraving and etching)	P70		Dc, TT	5.300, 5.330
PRINTPACK INC	189	0208	2671	Packaging Paper and Plastics Film, Coated and Laminated (except single-web and multi-web plastics packaging film and sheet)	P70	A		5.300, 5.340, 5.450
REICHHOLD INC.	189	1097	2821	Plastics Material Synthetic Resin & Non-Vulcanizable Elastomer Manufacturing	INT			5.450, 5.540
RIVER CEMENT COMPANY	099	0002	3241	Hydraulic Cement Manufacturing	P70	A, LLL	F, Y	5.300
SAINT-GOBAIN CONTAINERS INC	099	0068	3221	Glass Containers	P70		CC	5.300
SIGMA - ALDRICH MFG LLC	510	0697	2869	Industrial Organic Chemicals, NEC (Except Aliphatics, Carbon Bisulfide, Ethyl Alcohol, Cyclopropane, Diethylcyclohexane, Naphthalene, Sulfonic Acid, Synthetic Hydraulic Fluids, and Fluorocarbon Gases)	P70	GGG	Dc	5.350, 5.540
SOUTHWESTERN BELL TELEPHONE COMPANY	510	2545	4813	Telephone Communications, Except Radiotelephone (Except Resellers)	P70		Kb	5.300

Table D: RACT, NESHAP, & NSPS Regulations Applicable to Major Sources in St. Louis NAA

Facility	FIP	Plant	SIC Code	SIC Description	OP Type	NESHAPS & MACTs	NSPS	RACT Rules 10 CSR 10-
SPORLAN VALVE DIVISION	071	0132	3491	Industrial Valves	P70			5.300, 5.330
SSM DEPAUL HEALTH CENTER	189	1029	8062	Hospitals - General medical and Surgical	INT			5.300, 5.450
ST. LOUIS METALLIZING COMPANY	510	0175	3479	Coating, Engraving, and Allied Services, NEC (Except jewelry, silverware, and flatware engraving and etching)	P70	T		5.300
STEELWELD EQUIPMENT - ST. CLAIR	071	0020	3713	Truck and Bus Body Manufacturing	INT			5.330
SULLIVAN PRECISION METALS FINISHING CO.	071	0131	3471	Electroplating Plating Polishing Anodizing & Coloring	INT	N		5.295
TRIGEN-ST. LOUIS ENERGY CORP	510	0038	4961	Steam and Air Conditioning Supply	P70		Db, GG	
TRUE MANUFACTURING CO.	183	01 84	3585	Air Conditioning Warm Air Heating & Commercial Industrial Refrigeration Equipment Manufacturing.	INT		SS	5.220, 5.300, 5.330
U. S. PAINT CORPORATION	510	0097	2851	Paint Varnish Lacquer Enamel & allied Product Manufacturing	INT			5.442
U. S. RINGBINDER CORP	510	1123	2782	Blankbooks, Loose-leaf Binders and Devices (checkbooks)	P70	A, T		5.300
UNION PACIFIC RAILROAD CO	099	0011	3743	Railroad Equipment (Except Locomotive Fuel Lubricating or Cooling Medium Pumps)	P70			5.220, 5.330
WASHINGTON UNIV MED SCHOOL - BOILER PLANT	510	0040	8062	Hospitals - General medical and Surgical	P70		Dc	5.300
WASHINGTON UNIVERSITY	189	0042	8221	Colleges, Universities, and Professional Schools	INT		Dc	5.300
WOODBIDGE CORPORATION	183	0129	3086	Plastics Foam Products (Polystyrene Foam Products)	INT			5.300