

**Sacramento Nonattainment Area RACT Corrections  
for 1990-1996 15% VOC Reduction Demonstration**

When assessing VOC emission reductions creditable toward the 1990-1996 15 percent reductions required, there are specific restrictions as listed in section 182(b)(1)(D) of the Clean Air Act. There are certain post-1990 control benefits not creditable as reductions if they were already required prior to the enactment of the 1990 Clean Air Act Amendments. These measures include the federal motor vehicle control program, federal Reid vapor pressure fuel regulations, corrections to reasonably available control technology (RACT) rules, and corrections to motor vehicle inspection and maintenance (I/M) programs.

RACT rule corrections are assumed to reflect the entire VOC control category emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity factors and/or control implementation greater than RACT fix-up requirements. The total estimated corrections to RACT rules for the Sacramento nonattainment area are 2.48 tons per day (rounded up to 3 tons per day) and are summarized in the table below. More detailed documentation of each of the District RACT rule corrections are provided in following tables.

**Summary of RACT VOC Rule Corrections for 1990-1996**

<b>District Rule #</b>	<b>Rule Category</b>	<b>RACT VOC Correction (tons/day)</b>
SMAQMD #442	Architectural Coatings	0.24
SMAQMD #443	Leaks from Synthetic Organic Chemical and Polymer Manufacturing	0.06
SMAQMD #446	Storage of Petroleum Products	0.03
SMAQMD #447	Organic Liquid Loading	0.67
SMAQMD #448	Gasoline Transfer Into Stationary Storage Containers	0.27
SMAQMD #449	Transfer of Gasoline Into Vehicle Fuel Tanks	0.08
SMAQMD #451	Surface Coating of Miscellaneous Metal Parts and Products	0.55
SMAQMD #452	Can Coating	0.22
<b>Total SMAQMD RACT Corrections for 1990-1996</b>		<b>2.12</b>
PCAPCD #212	Storage of Petroleum Products	0
PCAPCD #223	Metal Can Coating	0.36
<b>Total Other District RACT Corrections for 1990-1996</b>		<b>0.36</b>
<b>Total Sacramento Nonattainment Area RACT Corrections for 1990-1996</b>		<b>2.48</b>

## **SMAQMD Architectural Coatings (Rule 442)**

SMAQMD Architectural Coatings ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. These emissions include architectural coatings and related process solvents (EIC 520-520-XXXX-0000).

1990 = 5.405 tpd

1995 = 5.168

1997 = 5.154

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 SMAQMD Architectural Coatings ROG Emissions are estimated by interpolating the average between 1995 and 1997.

1990-1996 Emission Reductions =  $5.405 - 5.161 = 0.24$  tpd

The SMAQMD Architectural Coatings Rule 442 was amended 10/2/90 (effective implementation date varies according to product) and 11/16/93. Rule 442 reduces VOC emissions from architectural coatings by mandating VOC content limits.

**SMAQMD Architectural Coatings 1990 RACT Correction = 0.24 tpd ROG**

## **SMAQMD Leaks from Synthetic Organic Chemical and Polymer Manufacturing (Rule 443)**

SMAQMD Leaks from Synthetic Organic Chemical and Polymer Manufacturing ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. The emissions for this category were not included in the 1990 inventory and are derived from the SMAQMD rule development staff report (8/1/90).

1990 = 0.08 tpd

1996 = 0.02

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 SMAQMD Leaks from Synthetic Organic Chemical and Polymer Manufacturing ROG Emissions are estimated from emissions inventory and control information in the SMAQMD rule development staff report (8/1/90).

1990-1996 Emission Reductions =  $0.08 - 0.02 = 0.06$  tpd

The SMAQMD Leaks from Synthetic Organic Chemical and Polymer Manufacturing Rule 443 was amended 9/25/90 and 11/16/93 (to revise test method requirements). Rule 443 reduces VOC emissions from leaks by mandating the capping of affected devices when not in use.

**SMAQMD Leaks from Synthetic Organic Chemical and Polymer Manufacturing  
1990 RACT Correction = 0.06 tpd ROG**

## **SMAQMD Storage of Petroleum Products (Rule 446)**

SMAQMD Storage of Petroleum Products ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. These emissions include working losses from bulk plant/terminal gasoline storage (EIC 330-384-1100-0000) and floating roof tanks - jet naphtha (EIC 330-324-1420-0000).

1990 = 0.117 tpd

1995 = 0.083

1997 = 0.086

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 SMAQMD Storage of Petroleum Products ROG Emissions are estimated by interpolating the average between 1995 and 1997.

1990-1996 Emission Reductions =  $0.117 - 0.084 = 0.03$  tpd

The SMAQMD Storage of Petroleum Products Rule 446 was amended 12/4/90 to add more stringent gap requirements for secondary seals and 11/16/93 to revise test method requirements.

**SMAQMD Storage of Petroleum Products 1990 RACT Correction = 0.03 tpd ROG**

## **SMAQMD Organic Liquid Loading (Rule 447)**

SMAQMD Organic Liquid Loading ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. These emissions include working losses from gasoline tank cars and trucks (EIC 330-390-1100-0000) and gasoline cargo tanks – pressure related fugitive losses (EIC 330-395-1100-0000).

1990 = 1.349 tpd

1995 = 0.779

1997 = 0.583

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 SMAQMD Organic Liquid Loading ROG Emissions are estimated by interpolating the average between 1995 and 1997.

1990-1996 Emission Reductions =  $1.349 - 0.681 = 0.67$  tpd

The SMAQMD Organic Liquid Loading Rule 447 was amended 4/30/91 to mandate the use of ARB certified vapor recovery systems for bulk organic liquid loading and 11/16/93 to revise test method requirements.

**SMAQMD Organic Liquid Loading 1990 RACT Correction = 0.67 tpd ROG**

## **SMAQMD Gasoline Transfer Into Stationary Storage Containers (Rule 448)**

SMAQMD Gasoline Stationary Storage Dispensing Tanks ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. These emissions include fuel dispensing tanks - working losses (EIC 330-374-1100-0000) and - breathing losses (EIC 330-376-1100-0000), and gasoline cargo tanks – vapor hose fugitive losses (EIC 330-396-1100-0000) and – product hose fugitive losses (EIC 330-397-1100-0000).

1990 = 0.885 tpd

1995 = 0.689

1997 = 0.534

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 SMAQMD Gasoline Stationary Storage Dispensing Tanks ROG Emissions are estimated by interpolating the average between 1995 and 1997.

1990-1996 Emission Reductions =  $0.885 - 0.611 = 0.27$  tpd

The SMAQMD Gasoline Transfer Into Stationary Storage Containers Rule 448 was amended 12/17/91 (effective implementation 12/17/92) to remove certain exemptions for non-retail facilities. Rule 448 reduces VOC emissions from gasoline transfer by mandating vapor recovery systems and vapor tight/leak free tanks.

**SMAQMD Gasoline Transfer Into Stationary Storage Containers 1990 RACT Correction = 0.27 tpd ROG**

## **SMAQMD Transfer of Gasoline Into Vehicle Fuel Tanks (Rule 449)**

SMAQMD Gasoline Vehicle Refueling ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. These emissions include gasoline vapor displacement losses (EIC 330-378-1100-0000) and gasoline vehicle refueling – spillage (EIC 330-380-1100-0000).

1990 = 0.994 tpd  
1995 = 0.984  
1997 = 0.841

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 SMAQMD Gasoline Vehicle Refueling ROG Emissions are estimated by interpolating the average between 1995 and 1997.

1990-1996 Emission Reductions =  $0.994 - 0.912 = 0.08$  tpd

The SMAQMD Transfer of Gasoline Into Vehicle Fuel Tanks Rule 449 was amended 12/17/91 (effective implementation varies from 12/17/91 to 12/17/93) to remove certain exemptions for non-retail facilities. Rule 449 reduces VOC emissions from gasoline transfer by mandating vapor recovery systems and vapor tight/leak free tanks.

**SMAQMD Transfer of Gasoline Into Vehicle Fuel Tanks 1990 RACT Correction = 0.08 tpd ROG**

## **SMAQMD Surface Coating of Miscellaneous Metal Parts and Products (Rule 451)**

SMAQMD Miscellaneous Metal Parts and Products Coatings ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. These emissions include metal parts and products coatings (EIC 230-230-9000-0000).

1990 = 0.983 tpd

1995 = 0.392

1997 = 0.467

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 SMAQMD Miscellaneous Metal Parts and Products Coatings ROG Emissions are estimated by interpolating the average between 1995 and 1997.

1990-1996 Emission Reductions =  $0.983 - 0.429 = 0.55$  tpd

The SMAQMD Surface Coating of Miscellaneous Metal Parts and Products Rule 451 was amended 2/23/93 (effective implementation 5/24/93). Rule 451 reduces VOC emissions from metal parts and products coating processes by mandating coating VOC content limits and low emission equipment for application and clean-up in a shop environment.

**SMAQMD Surface Coating of Miscellaneous Metal Parts and Products 1990 RACT Correction = 0.55 tpd ROG**

## **SMAQMD Can Coating (Rule 452)**

SMAQMD Can Coating ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. These emissions include can and coil coatings – coatings unspecified (EIC 230-228-9000-0000) and can and coil coatings – basecoats unspecified (EIC 230-228-9057-0000).

1990 = 0.519 tpd

1995 = 0.362

1997 = 0.235

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 SMAQMD Can Coating ROG Emissions are estimated by interpolating the average between 1995 and 1997.

1990-1996 Emission Reductions =  $0.519 - 0.298 = 0.22$  tpd

The SMAQMD Can Coating Rule 452 was amended 8/21/90 and 11-16-93. Rule 452 reduces VOC emissions from can coating processes by mandating coating VOC content limits or equivalent control methods, and clean-up requirements.

**SMAQMD Can Coating 1990 RACT Correction = 0.22 tpd ROG**

## **PCAPCD Storage of Petroleum Products (Rule 212)**

PCAPCD Storage of Petroleum Products ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. These emissions include working losses from bulk plant/terminal gasoline storage (EIC 330-384-1100-0000) and fixed roof tanks – gasoline RVP 13 (EIC 330-328-1130-0000).

1990 = 0.061 tpd

1995 = 0.107

1997 = 0.105

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 SMAQMD Storage of Petroleum Products ROG Emissions are estimated by interpolating the average between 1995 and 1997.

1990-1996 Emission Reductions =  $0.061 - 0.106 = -0.045$  tpd, so assume 0 tpd

The PCAPCD Storage of Petroleum Products Rule 212 was amended 9/25/90 and 11/03/94.

**PCAPCD Storage of Petroleum Products 1990 RACT Correction = 0 tpd ROG**

## **PCAPCD Metal Can Coating (Rule 223)**

PCAPCD Metal Can Coating ROG Emissions in tons per day (summer planning inventory) based on CCOS Inventory Version 2.11 (Rf#932PEI), dated 1/28/04. These emissions include can and coil coatings – coatings unspecified (EIC 230-228-9000-0000) and can and coil coatings – oil based coatings unspecified (EIC 230-228-9100-0000).

1990 = 0.652 tpd

1995 = 0.295

1997 = 0.295

RACT Corrections are assumed to reflect the entire VOC emission reductions between 1990 and 1996, even though some of the VOC reduction may be due to economic activity growth factors and/or control implementation greater than RACT fix-up requirements. The 1996 PCAPCD Metal Can Coating ROG Emissions are estimated by interpolating the average between 1995 and 1997.

1990-1996 Emission Reductions =  $0.652 - 0.295 = 0.36$  tpd

The PCAPCD Metal Can Coating Rule 223 was amended 9/25/90 and 10-6-94. Rule 223 reduces VOC emissions from can coating processes by mandating coating VOC content limits and test method requirements.

**PCAPCD Metal Can Coating 1990 RACT Correction = 0.36 tpd ROG**

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