San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.1.1*

Last Update: 10/20/1997

Dry Cleaner - Perchloroethylene, Closed Loop with Primary and Secondary Controls

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
Perchloroethylene	Closed-loop machine with primary control system and secondary control system	Azeotropic control device with carbon adsorber	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.1.2*

Last Update: 4/8/2004

Petroleum Solvent Dry Cleaning

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	dry-to-dry machine vented to vapor control device		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.1*

Last Update: 3/23/2010

Automotive Spray Painting Operation, < 5.0 MMBtu/hr**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	HVLP spray guns, coatings, cleaning materials, and solvents compliant with District Rule 4612	VOC capture and control system	Other compliant coating methods as stated in Rule 4612
PM10	Spray Booth with Exhaust Filters; 95% control efficiency		Other compliant coating methods as stated in Rule 4612
NOx	Natural gas or LPG fired burner		

** This Determination is also applicable to automotive spray painting operations without a heat source

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.2*

Last Update: 7/15/1998

Group II Vehicles Spray Painting Operation - Vehicles requiring a Color Match

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use coatings with a VOC content of 3.5 lb/gal (less water and exempt compounds) or less, and Pretreatment Wash Primers with a VOC content of 6.0 lb/gal (less water and exempt compounds) or less, HVLP (or equivalent) spray equipment, and using an enclosed spray gun cleaning system	1. VOC capture and control with thermal/catalytic incineration using coatings with a VOC content of 3.5 lb/gal (less water and exempt compounds) or less and Pretreatment Wash Primers with a VOC content of 6.0 lb/gal (less water and exempt compounds) or less 2. VOC capture and control with thermal/catalytic incineration using coatings with a VOC content of 5.2 lb/gal (less water and exempt compounds) or less and Treatment Wash Primers with a VOC content of 6.2 lb/gal (less water and exempt compounds or less 3. VOC capture and control with carbon adsorption using coatings with a VOC content of 3.5 lb/gal (less water and exempt compounds) or less and Pretreatment Wash Primers with a VOC content of 6.0 lb/gal (less water and exempt compounds) or less 4. VOC capture and control with carbon adsorption using coatings with a VOC content of 5.2 lb/gal (less water and exempt compounds) or less and Pretreatment wash primers with a VOC content of 6.2 lb/gal (less water and exempt compounds) or less	
PM10	HVLP spray application	Spray booth with exhaust filters	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.3*

Last Update: 3/23/2010

Mobile Equipment Coating Operation - Multiple Location, <= 20,000 lb-VOC/year

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Coatings and cleaning materials, and solvents compliant with District Rule 4612, HVLP spray gun		
PM10	HVLP spray gun, 75% Transfer Efficiency		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.4*

Last Update: 12/23/1996

Trailer Coating Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Using topcoats with a low VOC content (2.8 lb/gal less water and exempt compounds) and pretreatment wash primers with a low VOC content (6.0 lb/gal less water and exempt compounds)	1. Thermal incineration with total enclosure (100% capture efficiency) 2. Catalytic incineration with total enclosure (100% capture efficiency) 3. Carbon adsorption with total enclosure (100% capture efficiency)	
PM10	HVLP spray application	Spray booth with exhaust filters	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.5*

Last Update: 9/27/2021

Limited Aircraft Coating Operation - Maintenance and Refinishing of Metal Parts on Aircraft, < 20 Gallons/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Using coatings compliant with SJVAPCD Rule 4605, except for the following coatings: Antichafe coatings < or = 420 g/l; high temperature coatings < or = 420 g/l; radiation effect coatings < or = 600 g/l; and metalized epoxy coatings < or = 700 g/l. HVLP application method or equivalent, and an enclosed gun cleaner or equivalent	1) 98% control (capture and control with thermal or catalytic oxidizer, or equal) 2) 95% control (capture and control with carbon adsorption, or equal)	
PM10	HVLP application method or equivalent	Enclosed spray booth with dry filters and use of HVLP application equipment	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.6*

Last Update: 9/27/2021

Aerospace Parts Coating Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	The use of coatings, cleaning materials, and solvents compliant with District Rule 4605 and use of HVLP application equipment	1) Thermal Oxidation 2) Catalytic Oxidation 3) Carbon Adsorption	
PM10	Enclosed paint booth with dry filters and use of HVLP application equipment		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.7*

Last Update: 9/27/2021

Solid Dry Film Based Lubricant Coating Operations for Metal Parts and Products and Aerospace Assembly and Components

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Solvent-based solid film lubricant coatings with a VOC content, as applied, of 6.44 lb VOC/gal (excluding water and exempt solvents) or lower	1) VOC capture and thermal incineration system 2) VOC capture and catalytic incineration system 3) VOC capture and carbon adsorption system	
PM10	Enclosed paint spray booth with dry filters and use of HVLP gun or equivalent application equipment		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.8*

Last Update: 12/5/2003

Recreational Marine Vessel (Pleasure Craft) Coating

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of materials with VOC contents (less water and exempt compounds) as indicated, or lower: - antifouling coatings: aluminum substrate: 440 g/l, other substrates: 330 g/l, - high gloss coatings: 340 g/l** - extreme high gloss coatings: 490 g/l*** - pretreatment wash primers: 420 g/l - primers: 340 g/l - all other coatings: 340 g/l	1. VOC capture and control (thermal incineration, catalytic incineration, or equal) with a minimum overall control efficiency of 98%. 2. VOC capture and control (carbon adsorption or equal with a minimum overall control efficiency of 95%)	
PM10	Enclosed paint spray booth with particulate filters and HVLP application equipment (or equivalent)		

** high gloss coating: any coating that achieves at least 85% reflectance on a 60 degree meter when tested by ASTM Method D-523
***extreme high gloss coating: any coating that achieves at least 95% reflectance on a 60 degree meter when tested by ASTM Method D-523

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.9*

Last Update: 9/27/2021

Aerospace Parts Coating Operation - Plasma Spray Application

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	= or > 99.97% Control Efficiency (HEPA filtration system, MERV 17 filtration system, or equivalent)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.10*

Last Update: 9/19/2019

Motor Vehicle Chassis Coating Operation - Electrodeposition with Curing Oven

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	95% control (VOC capture and control system serving the coating tank and curing oven. Capture system vented to a thermal/catalytic oxidizer, or equal)	Ultra-low VOC coating, coatings with VOC content of 0.08 lb/gal or less (less water and exempt compounds)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.11*

Last Update: 4/30/2018

Motor Vehicle Assembly (OEM) Adhesives Application Operation - Glass Installation (Non-Spray Application)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Adhesives with a VOC content ≤ 250 g/l; Adhesive Primers with a VOC content ≤ 700 g/l	1) Thermal/Catalytic Inciineration (98% capture and control) 2) Carbon Adsorption (95% capture and control)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.2.12*

Last Update: 4/30/2018

Small Scale Motor Vehicle Assembly (OEM) Coating Operation with a Booth Heater, < 2,000 lb-VOC/year

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Coatings compliant with District Rule 4602	1) Thermal/Catalytic Incineration (98% capture and control) 2) Carbon Adsorption (95% capture and control)	
PM10	Spray Booth with Exhaust Filters (95% control efficiency)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.1*

Last Update: 3/18/1999

Metal Parts and Products Coating - Air Dried (excluding specialty coating as defined in Rule 4603)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Coatings with a VOC content of 2.8 lb/gal or less; HVLP (or equivalent) spray equipment; and an enclosed spray gun cleaning system	1. Thermal/catalytic incineration 2. Carbon adsorption	
PM10	Enclosed paint spray booth with particulate filters and HVLP application equipment (or other application methods listed in Rule 4603)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.2*

Last Update: 12/9/1997

Metal Parts and Products Coating - Heat Dried

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	HVLP guns, the use of an enclosed gun cleaner & coatings compliant with District Rule 4603	1. Thermal oxidation 2. Catalytic oxidation 3. Carbon adsorption 4. The use of an enclosed gun cleaner & low-VOC coatings (2.1 lb VOC/gal as applied)	Electrostatic Application
PM10	Enclosed paint booth with dry filters and use of HVLP gun		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.5*

Last Update: 4/21/2020

Metal Parts and Products Coating Operations (using specialty coatings as defined by Rule 4603) *RESCINDED*

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.6*

Last Update: 11/20/2010

Metal Products Coating - Shipping/Storage Containers

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Coating with a VOC content of 2.8 lb/gal (less water and exempt compounds) or less; HVLP (or equivalent) spray equipment	a) 98% control (thermal incineration, catalytic incineration, or equal) b) 95% control (carbon adsorption or equal) c) 90% control (regenerative thermal/catalytic incineration or equal)	
PM10	HVLP spray gun application equipment (or equivalent, or other application methods listed in Rule 4603)	Enclosed paint spray booth with particulate filters and utilizing an HVLP spray gun	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.7*

Last Update: 5/1/2020

Powder Coating Operation with Curing Oven

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Low VOC content coating with < 1.5% by weight, and use natural gas-fired curing oven	1) Thermal or Catalytic Incineration 2) Carbon Adsorption	
SOX	Use natural gas-fired curing oven		
PM10	Enclosed booth with 99% control efficiency, and use natural gas-fired curing oven		
NOX	Use natural gas-fired curing oven		
CO	Use natural gas-fired curing oven		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.8*

Last Update: 7/3/2001

Metal Product Coating - Large Steel Structures, < 64 lb VOC/day, Outdoor Coating Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of coatings with a VOC content (less water and exempt compounds) as indicated, or lower: - for General Coating: 2.5 lb/gal, - for General Coating, when the ambient temperature is at or below 60 F: 2.8 lb/gal, and - for Specialty Coatings - Extreme Performance or High-Gloss** 3.5 lb/gal and and use of an HVLP spray gun or equivalent application method.	1) Thermal incineration and total enclosure (100% capture efficiency), or equal. 2) Catalytic incineration and total enclosure (100% capture efficiency), or equal. 3) Carbon adsorption and total enclosure (100% capture efficiency), or equal. 4) Thermal incineration and open paint booth (65% capture efficiency), or equal. 5) Catalytic incineration and open paint booth (65% capture efficiency), or equal. 6) Carbon adsorption and open paint booth (65% capture efficiency), or equal.	
PM10	HVLP Gun	1. Enclose painting operation with dry filters and the use of HVLP application equipment. 2. Electrostatic application	

** Specialty Coatings are as defined by District Rule 4603 and use is limited to such applications which are approved by the APCO as requiring use of Specialty Coating.

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.9*

Last Update: 12/30/2020

Metal Product Coating - Large Steel Structures, Indoor Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of low VOC coatings (2.5 lb/gal less water and exempt compounds) and HVLP spray gun(s) or equivalent application method	1) Thermal incineration using coatings with a low VOC content (2.5 lb/gal less water and exempt compounds) and total enclosure (98% Control) 2) Catalytic incineration using coatings with a low VOC content (2.5 lb/gal less water and exempt compounds) and total enclosure (98% Control) 3) Carbon adsorption using coatings with a low VOC content (2.5 lb/gal less water and exempt compounds) and total enclosure (95% Control)	
PM10	HVLP Spray Gun(s)	Enclosed painting operation with filter(s) on exhaust vent (90% Control)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.10*

Last Update: 2/16/2001

Metal Products Coating - Sheet Metal for Can Manufacturing, Major Source for VOC

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	VOC capture and thermal incineration	VOC capture and catalytic incineration	
NOx	20 ppmv @ 3% O2 (Low-NOx Burners)	9 ppmv @ 3% (Ultra-Low NOx Burners, SCR, or equal)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.11*

Last Update: 9/29/1995

Metal Products Coating - Touch-up, 6.2 lb VOC/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Coating with 1.9 lb VOC/gal less water and exempt compounds, HVLP gun	1) Catalytic/thermal incineration using coatings with a VOC content of 1.9 lb/gal less water and exempt compounds 2) Catalytic/thermal incineration using coatings with a VOC content of 2.5 lb/gal less water and exempt compounds 3) Carbon adsorption using coatings with a VOC content of 1.9 lb/gal less water and exempt compounds 3) Carbon adsorption using coatings with a VOC content of 2.5 lb/gal less water and exempt compounds	Electrodeposition (powder coating)

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.12*

Last Update: 8/2/1995

Metal Products Coating - High Gloss, Air-Dried,= or < 30 lb/day Facility-wide VOC coating emissions

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	HVLP spray guns, coatings compliant with District rules and enclosed paint gun cleaners	VOC capture and control system	Electrostatic application
PM10	Spray booth with exhaust filters		Electrostatic application

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.13*

Last Update: 5/16/2001

Metal Products Coating - Metal Frames and Exterior Wooden Wall Panels for Modular Buildings

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Metal frames: use of Rule 4603 compliant coatings Exterior wooden wall panels: use of Rule 4606 compliant coatings (This control is Achieved in Practice only for facilities subject to Rule 4603/4606)	1. Exterior wooden wall panels: use of pigmented topcoats with a VOC content of 1.1 lb/gal or less (less water and exempt compounds) 2. Metal frames: use of Rule 4603 compliant coatings Exterior wooden wall panels: use of Rule 4606 compliant coatings (Control 2 is Technologically Feasible only for those facilities not subject to Rule 4603/4606)	
PM10	Use of HVLP or District Rule 4603/4606 compliant coating application methods (This control is Achieved in Practice only for facilities subject to Rule 4603/4606)	Use of HVLP or District Rule 4603/4606 compliant coating application methods (This control is Technologically Feasible only for those facilities not subject to Rule 4603/4606)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.14*

Last Update: 7/14/2005

Side Seam Stripe Spray Coating Operation for 3-Piece Metal Can Manufacturing at a Facility-wide Can Manufacturing Rate of >= 180,000 Can/hr

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	VOC capture and control system at the side seam stripe coater with a fume hood (71% capture efficiency) and the curing tunnel exhaust stack all vented to a thermal r catalytic oxidizer (70% overall control efficiency).	1. VOC capture and control system at the side seam stripe coater and the can conveyor (between the coater an curing tunnel) with a total enclosure (100% capture efficiency) and the curing tunnel exhaust stack all vented to a thermal or catalytic oxidizer (98% overall control efficiency). 2. VOC capture and control system at the side seam stripe coater and the can conveyor (between the coater and curing tunnel) with a total enclosure (100% capture efficiency) and the curing tunnel exhaust stack all vented to a carbon adsorption system (95% overall control efficiency). 3. VOC capture and control system at the side seam stripe coater and the can conveyor (between the coater and curing tunnel) with a fume hood (95% capture efficiency) and the curing tunnel exhaust stack all vented to a thermal or catalytic oxidizer (93% overall control efficiency). 4. VOC capture and control system at the side seam stripe coater and the can conveyor (between the coater and curing tunnel) with a fume hood (95% capture efficiency) and the curing tunnel exhaust stack all vented to a carbon adsorption system (90% overall control efficiency).	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.15*

Last Update: 11/4/2003

Dip Coating of Steel Joists

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of coatings with a maximum VOC content of 3.32 lb/gal for coatings with a viscosity, as applied, of less than or equal to 45.6 centistokes at 78 F and an average dry-film thickness of less than or equal to 2.0 mils, or 2.8 lb/gal for coatings with a viscosity, as applied, of more than 45.6 centistokes at 78 For an average dry-film thickness of greater than 2.0 mils with no additional control	Use of Achieved-in-Practice BACT plus VOC capture and control system achieving overall control efficiency of at least 95% with one of the following: a) catalytic oxidizer, thermal oxidizer with low NOx burner, or thermal oxidizer and concentrator b) carbon adsorption c) refrigeration/condensation d) biofiltration	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.16*

Last Update: 11/4/2003

Coated Steel Storage/Drying Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1) VOC capture and control system achieving overall control efficiency of at least 95% with one of the following: a) catalytic oxidizer, thermal oxidizer with low NOx burner, or thermal oxidizer and concentrator b) carbon adsorption c) refrigeration/condensation d) biofiltration 2) open storage/drying	

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***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.17*

Last Update: 3/13/2008

"Bright Dip" Aluminum Surface Finishing Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
NOx	97% capture (dip tank vented to fume hood) and 70% control (fume hood vented to packed tower scrubber or equivalent)		
HNO3	97% capture (dip tank vented to fume hood) and 96% control (fume hood vented to packed tower scrubber or equivalent)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.3.18*

Last Update: 10/4/2011

Metal Product Coating - Metal Rod Dip Coating, Air-Dried

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Dip coating with materials in compliance with Rule 4603 and leak-free dip tank covered when not in use	1. VOC capture and incineration or carbon adsorption with overall capture/destruction efficiency of > or = 90% and use of materials in compliance with Rule 4603 and leak-free dip tank covered when not in use	

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***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.4.1*

Last Update: 10/16/1996

Wood Products Coating Operation - Non-Continuous Batch Coating

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Utilizing HVLP or equivalent application equipment and using coatings compliant with District Rule 4606	1. 100% capture efficiency (closed-face booth) with thermal/catalytic incineration, and using coatings with a VOC content (less water and exempt compounds) of 4.6 lb/gal for clear topcoats, 5.0 lb/gal for high-solids coatings, 4.6 lb/gal for sanding sealers, 2.2 lb/gal for water based pigmented primers and 2.4 lb/gal for water based pigmented topcoats 2. 100% capture efficiency (closed-face booth) with carbon adsorption, and using coatings with a VOC content (less water and exempt compounds) of 4.6 lb/gal for clear topcoats, 5.0 lb/gal for high-solids coatings, 4.6 lb/gal for sanding sealers, 2.2 lb/gal for water based pigmented primers and 2.4 lb/gal for water based pigmented topcoats 3. Utilizing HVLP or equivalent application equipment and coatings with a VOC content (less water and exempt compounds) of 4.6 lb/gal for clear topcoats, 3.2 lb/gal for high-solids coatings, 4.6 lb/gal for sanding sealers, 0.68 lb/gal for water based pigmented primers, and 1.62 lb/gal for water based pigmented	
PM10	Enclosed spray booth with exhaust filters and HVLP or equivalent application equipment		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.4.2*

Last Update: 5/12/2000

Wood Products Coating Operation - Continuously-fed Booth, = or < 5000 square feet material coated/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. 65% capture efficiency (open-faced booth) with thermal/catalytic incineration, and the use of coatings with a VOC content (less water and exempt compounds) of 4.6 lb/gal for clear topcoats, 3.2 lb/gal for high-solid coatings, and 4.6 lb/gal for sanding sealers 2. 65% capture efficiency (open-faced booth) with carbon adsorption, and the use of coatings with a VOC content (less water and exempt compounds) of 4.6 lb/gal for clear topcoats, 3.2 lb/gal for high-solid coatings, and 4.6 lb/gal for sanding sealers 3. 65% capture efficiency (open-faced booth) with thermal/catalytic incineration, and the use of typical coatings for this source and category of operation 4. 65% capture efficiency (open-faced booth) with carbon adsorption, and the use of typical coatings for this source and category of operation 5. Coatings with a VOC content (less water and exempt compounds) of 4.6 lb/gal for clear topcoats, 3.2 lb/gal for high-solid coatings, and 4.6 lb/gal for sanding sealers, using HVLP spray equipment	
PM10	HVLP spray equipment or equivalent	Spray Booth exhausted to a particulate filter with a minimum cross-section face velocity of 100 ft/min and use of HVLP application equipment	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.4.3*

Last Update: 11/13/2000

Wood Products Coating Operation - Custom Replica Furniture, < or = 400 lb VOC/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of coating(s) with a VOC content (less water and exempt compounds) as indicated, or lower: - For Sanding Sealers and Clear Topcoats: 5.7 lb/gal - For High-solids Stain and Pigmented Coatings: 5.0 lb/gal and use of HVLP application equipment, or equivalent method, and a enclosed spray gun cleaner if using a VOC containing solvent.	1. VOC capture and control with thermal incineration. 2. VOC capture and control with catalytic incineration. 3. VOC capture and control with carbon adsorption.	
PM10	Enclosed coating operation with exhaust filters and HVLP spray equipment		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.4.4*

Last Update: 3/6/1997

Wood Products Coating Operation - Exterior Wooden Wall Panels for Modular Buildings

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Utilizing HVLP application equipment or other application methods listed in District Rule 4606 and using coatings compliant with District Rule 4606 (only for those facilities subject to Rule 4606)	Utilizing HVLP or equivalent application equipment and water based pigmented topcoats with a VOC content (less water and exempt compounds) of 1.1 lb/gal or less	
PM10	Utilizing HVLP application equipment or other application methods listed in District Rule 4606		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.1*

Last Update: 1/21/1998

Paper Roll-Coating - Heatset

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of coatings/inks with a VOC content compliant with Rule 4607 (Graphic Arts) [This control is achieved in practice only for facilities subject to District Rule 4607]	1. VOC capture and incineration using coatings/inks with a VOC content compliant with District Rule 4607 (Graphic Arts) 2. VOC capture and carbon adsorption using coatings/inks with a VOC content compliant with District Rule 4607 (Graphic Arts) 3. Use of low-VOC, water based coatings, with a maximum VOC content of 0.3 lb/gal for colored and functional coatings (less water and exempt compounds), and 0.74 lb/gal for specialty coatings (less water and exempt compounds)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.2*

Last Update: 3/12/1998

Coating Operation - Large Concrete Structure Manufacturing, Outdoor Application

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		Using water based coatings with a VOC content of 0.6 lb/gal less water and exempt compounds or less and utilization of HVLP application equipment	
PM10		Utilization of HVLP application equipment	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.3*

Last Update: 5/4/1995

Coating Operation - Fiberglass Utility Poles, = or > 90 lb/day of VOC emissions

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Low VOC coatings - 10% VOC by wt, HVLP application equipment, enclosed equipment cleanup or water based detergent	1. Capture and incineration 2. Capture and Carbon adsorption	
PM10	Enclosed spray booth with exhaust filters and HVLP application equipment		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.4*

Last Update: 12/16/1999

Plastic Parts and Products Coating

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	The use of HVLP spray guns, an enclosed gun cleaner, and low-VOC coatings (2.8 lb VOC/gal, as applied, less water and exempt solvents)	1. Thermal oxidation with an enclosed booth (100% capture efficiency). 2. Catalytic oxidation with an enclosed booth (100% capture efficiency). 3. Carbon adsorption with an enclosed booth (100% capture efficiency). 4. The use of HVLP spray guns, an enclosed gun cleaner, and low-VOC coatings (1.1 lb VOC/gal, as applied, less water and exempt solvents)	
PM10	Enclosed paint booth with dry filters and use of HVLP spray guns		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.5*

Last Update: 10/16/2002

Coating Operation - Small Concrete Products

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of material(s) with a VOC content (less water and exempt compounds) as indicated, or lower: - For Glossy finish: 2.8 lb/gal - For Matte Finish: 1.7 lb/gal - For Waterproofing Sealer: 3.3 lb/gal and use of HVLP application equipment, or equivalent method, and a enclosed spray gun cleaner if using a VOC-containing solvent.	1) Capture and control using an enclosed booth, or equivalent, and thermal incineration system. 2) Capture and control using an enclosed booth, or equivalent, and catalytic incineration system. and use of HVLP application equipment, or equivalent method, and a enclosed spray gun cleaner if using a VOC-containing solvent.	
PM10	Use of HVLP application equipment, or equivalent method.	Enclosed spray booth, or equivalent, with particulate filters.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.6*

Last Update: 4/8/2020

Coating Operation - Clay-Based, Cat Litter, Heat Dried

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of low VOC coating (0.69 lb/gal less water and exempt compounds) or less	1) Capture and control of VOCs using a thermal or catalytic incineration system 2) Capture and control of VOCs using carbon adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.7*

Last Update: 7/10/2003

Coating of Flat Sheet Glass (for non-transparent coatings)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Use of HVLP application equipment, or equivalent, and use of an enclosed spray booth, or equivalent, with dry particulate filters		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.8*

Last Update: 3/3/2008

Weatherproofing Coating Application (Electronic Components)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Dip coating and the use of weatherproofing coatings with VOC contents of 6.9 lb/gal or less (as applied, less water and exempt compounds)	1. Silicone Based Coatings 2. Capture and Thermal Oxidation 3. Capture and Catalytic Oxidation 4. UV Curable Coatings 5. Capture and Carbon Adsorption 6. Water Based Coatings	None

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.9*

Last Update: 3/20/2008

Vinyl Window and Patio Door Assembly Glazing Table

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	utilize glazing material with VOC content, excluding water and exempt compounds, equal to or less than 15 g/l (0.125 lb/gal)	1. 98% control (thermal incineration, catalytic incineration, or equal) 2. 95% control (carbon adsorption or equal)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.5.10*

Last Update: 9/20/2016

Glass Bottle Coating Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Application methods and coatings compliant with District Rule 4610	1) Capture and control with thermal/catalytic incineration 2) Capture and control with carbon adsorption	
PM10	Enclosed booth with paticulate control filters, or equivalent		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.6.1*

Last Update: 8/24/2018

Motor Vehicle Gasoline Storage and Dispensing Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	CARB certified Phase I and Phase II vapor recovery system; Or CARB certified Phase I vapor recovery system AND a vehicle fleet where 100% of the vehicles are equipped with Onboard Refueling Vapor Recovery (ORVR) systems and the operator also owns the gasoline dispensing operation that serves the fleet AND CARB certified Non Vapor Recovery (NVR) Low Permeation (LP) hoses; Or CARB certified Phase I vapor recovery system and E85 fuel dispensing with no Phase II vapor recovery system.		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.6.3*

Last Update: 10/30/1997

Motor Vehicle Gasoline Storage and Dispensing Operation - Bulk plants with Diesel fuel switch loading

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	CARB certified 95% effective Vapor Recovery		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.6.4*

Last Update: 8/24/2018

Non-Motor Vehicle Fuel Storage and Dispensing Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	CARB certified Phase I vapor recovery system		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.6.5*

Last Update: 8/24/2018

Aviation Fuel Dispensing Facility

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	CARB certified Phase I vapor recovery system		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.6.6*

Last Update: 5/24/2018

LPG Cylinder Refilling System

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of CARB-certified low emission adaptor (maximum loss of 1.18 cc of LPG per disconnect)	1) 98% Capture and Control (Thermal Incineration, Catalytic Incineration, or equivalent) 2) 95% Capture and Control (Carbon Adsorption or equivalent)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.1*

Last Update: 6/25/1999

Offset Lithographic Printing - Publication Printing, High-end Graphics, Heatset using with a Drying Oven

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Using low VOC fountain solutions and inks compliant with District Rule 4607 (Graphic Arts) (This control is achieved in practice only for facilities subject to Rule 4607.)	1. VOC capture and incineration using high-end graphics heatset inks with a VOC content < 45% by weight (less water and exempt compounds) and fountain solutions with a VOC content of < 15% by volume 2. VOC capture and carbon adsorption using high-end graphics heatset inks with a VOC content of < 45% by weight (less water and exempt compounds) and fountain solutions with a VOC content of < 15% by volume 3. Using low VOC fountain solutions and inks compliant with District Rule 4607 (Graphic Arts)	
NOx	Natural gas fuel used in the drying oven		
CO	Natural gas fuel used in the drying oven	Catalytic Oxidation	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.2*

Last Update: 10/15/2010

Offset Lithographic Printing - Non-heat Set Press

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Using materials with the following VOC contents: Inks: less than 5% VOC by weight (less water and exempt compounds) or less than 30% VOC by weight (less water and exempt compounds) for high end graphics Fountain Solutions: less than 5% by volume for coldset web offset lithographic, less than 5% by volume for sheet-fed offset lithographic with maximum sheet size greater than 11x17 inches, and less than 8% by volume for high end graphics	VOC capture and incineration; or VOC capture and carbon adsorption and using materials with the following VOC contents: - Inks:less than 5% VOC by weight (less water and exempt compounds) or less than 30% VOC by weight (less water and exempt compounds) for high end graphics - Fountain Solutions: less than 5% by volume for coldset web offset lithographics, less than 5% by volume for sheet-fed offset lithographic with maximum sheet size greater than 11x17 inches, and less than 8% by volume for high end graphics	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.4*

Last Update: 9/22/2006

Flexographic Printing - Corrugated Boxes, High End Graphics

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of inks with a VOC content not exceeding 1.1 lb/gal (less water & exempt compounds) for high-end graphics and use of inks with a VOC content not exceeding 2.5 lb/gal (less water & exempt compounds) for metallic inks	1) capture of VOCs and thermal or catalytic oxidation. 2) capture of VOCs and carbon absorption 3) capture of VOCs and regenerative thermal oxidizer 4) use of inks with VOC content not exceeding 0.88 lb/gal (less water and exempt compounds) for high-end graphics printing	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.5*

Last Update: 2/25/1998

Flexographic printing - Heatset inks on low-porosity glossy paper and plastic film

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1. Inks with a VOC content of = or < 2.5 lb/gal (less water and exempt compounds)	1. VOC capture and control with incineration 2. VOC capture and control with carbon adsorption 3. Inks with a VOC content of = or < 2.4lb/gal (less water and exempt compounds)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.6*

Last Update: 1/21/1998

Screen Printer with natural gas-fired dryer

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of inks with a VOC content compliant with Rule 4607 (Graphic Arts) [This control is achieved in practice only for facilities subject to District Rule 4607]	1. VOC capture and incineration using inks with a VOC content compliant with District Rule 4607 (Graphic Arts) 2. VOC capture and carbon adsorption using inks with a VOC content compliant with District Rule 4607 (Graphic Arts)	1. Use of water based inks 2. Use of ultraviolet (UV) curable inks

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.7*

Last Update: 8/9/2002

Screen Print - Ultraviolet (UV) coating with Curing Lamp(s)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	UV curing unit using inks with a VOC content not to exceed 3% by weight (less water and exempt compounds).		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.8*

Last Update: 11/20/1996

Printing Operation - Data and Communication Cable Insulation,

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. Thermal incineration with total enclosure (100% capture efficiency) 2. Catalytic incineration with total enclosure (100% capture efficiency) 3. Carbon adsorption with total enclosure (100% capture efficiency) 4. Low VOC inks with a VOC content not exceeding 4.4 lb/gal (less water and exempt solvents)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.9*

Last Update: 10/7/1999

Flexographic Printer - High-end graphics printing on Clay coated Paper, = or < 23 tons VOC/year

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Using materials with a VOC content, less water and exempt compounds, as indicated, or lower • for metallic inks: 3.3 lb/gal • for non-metallic inks: 1.0 lb/gal • varnish: 0.63 lb/gal and practicing evaporation minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers.	1. VOC Capture and thermal oxidation. 2. VOC Capture and thermal oxidation. 3. VOC Capture and carbon adsorption	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.10*

Last Update: 4/27/2020

Printing Plate Manufacturing

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of processor solvents with a VOC content, less water and exempt compounds, of 7.3 lb/gal, or lower, and practicing evaporation minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers	1) VOC capture and thermal oxidation 2) VOC capture and catalytic oxidation 3) VOC capture and carbon adsorption	

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***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.11*

Last Update: 7/31/2000

Rotogravure Printing Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Inks with a VOC content of < 2.5 lb/gal (Less water and exempt compounds)	1. Inks with a VOC content of = or < 5% by weight (less water and exempt compounds.) 2. VOC capture and control with carbon adsorption. 3. VOC capture and control with thermal incineration.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.12*

Last Update: 4/17/2001

Flexographic Printing - High-end graphics, Heat-set Inks, on High-Porosity Material

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of coating(s) with a VOC content (less water and exempt compounds) as indicated, or lower: - Fluorescent Inks: 2.5 lb/gal. - Thermal Inks: 0.3 lb/gal. - Other Inks: 2.4 lb/gal.	1. Capture and control with a thermal oxidizer. 2. Capture and control with carbon adsorption.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.13*

Last Update: 11/8/2002

Glass and Plastic Bottle Printing – Heat-dried

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Using materials with a VOC content, less water and exempt compounds, as indicated, or lower • High-end graphics, screen printing: 3.3 lb/gal • High-end graphics, non-screen printing: 2.5 lb/gal • Non-high-end graphics: 3% by weight (UV-cured inks). and practicing evaporation minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers.	1. Capture and control with a thermal oxidizer. 2. Capture and control with carbon adsorption.	
PM10	For spray applications: Enclosed booth with particulate control filters, or equal.		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.14*

Last Update: 11/9/2004

Flexographic UV Printing - High End Printing of Labels, Tags, and Forms**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	use of materials with VOC content (less water and exempt compounds) as indicated, or lower: - for UV-cured inks: 1% by weight - for UV-cured coatings: 8% by weight and evaporative minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers	1. VOC capture and control with incineration (98% overall control efficiency) 2. VOC capture and control with carbon adsorption (95% overall control efficiency)	

** The substrates, covered by this guideline, are low-porosity papers, plastic films, and metalized paper/foil

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.15*

Last Update: 9/22/2006

Flexographic Printing - Corrugated Boxes, Low-end Graphics

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	use of coating with a VOC content (less water and exempt compounds) as indicated, or lower: 0.3 lb/gal and evaporative minimization methods, which include keeping all solvents and solvent-laden cloths/papers, not in active use, in closed containers.	1) capture of VOCs and thermal or catalytic oxidation 2) capture of VOCs and carbon absorption 3) capture of VOCs and regenerative thermal oxidizer	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.7.16*

Last Update: 11/8/2005

Rotogravure Printing Operation Low Porosity Substrate - High End Graphics

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	inks, coatings, and adhesives with a VOC content of <= 30% (less water and exempt compounds)	1. VOC capture and control with carbon adsorption and concentrator. 2. VOC capture and control with incineration and concentrator	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.1*

Last Update: 4/27/2020

Fiberglass Boat Manufacturing (< 120 gallons/day and < 25 tons VOC per year)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	For gel coats: air assisted airless application (or equivalent) and comply with District Rule 4684 monomer VOC content limits For resins, any of the following application methods: 1) non-atomized spray technique (such as the use of fluid impingement technology (FIT) spray guns), 2) flowcoaters, 3) pressure-fed rollers, 4) resin impregnators, 5) hand lay-up, or 6) any equivalent method as approved by the APCO; and comply with District Rule 4684 monomer VOC content limits	1) 98% total control efficiency (thermal/catalytic incineration and 100% capture) 2) 95% total control efficiency (carbon adsorption and 100% capture system) 3) 63.7% total control efficiency (thermal/catalytic incineration and hood vent with 65% capture) 4) 61.7% total control efficiency (carbon adsorption and hood vent with 65% capture)	
PM10	For gel coats, air assisted airless application (or equivalent) and an enclosed spray booth with filters rated at 95% or greater PM10 control efficiency For resins, any of the following application methods: 1) non-atomized spray technique (such as the use of fluid impingement technology (FIT) spray guns), 2) Flowcoaters, 3) Pressure-fed rollers, 4) resin impregnators, 5) hand lay-up, 6) or any equivalent method as approved by the APCO		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.2*

Last Update: 5/1/1997

Polyester Resin Products - Synthetic Marble Casting

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. VOC capture and control with thermal incineration using typical resins, pigmented gel coats and clear gel coats for this category of operation 2. VOC capture and control with carbon adsorption using typical resins, pigmented gel coats and clear gel coats for this category of operation 3.Use of the following resins & gel coats: low VOC resins with a monomer wt content ≤ 34%; low VOC pigmented gel coats with a monomer wt content ≤ 35%; and low VOC clear gel coats with a monomer wt content ≤ 47%	
PM10	Spray booth with exhaust filters and HVLP or equivalent application equipment as specified in Rule 4684 (Polyester Resin Operations)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.3*

Last Update: 6/10/1996

Polyester Resin Products - Compression Molding of Plumbing Fixtures with fillers mixed in a closed system, = or < 2,900 gallons resin/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		Closed mold and non VOC cleanup solvents. Filler and resins mixed in closed system. Resin monomer ≤ 28% by weight	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.4*

Last Update: 4/12/1996

Polyester Resin Products - Gel Coating of Plumbing Fixtures = or < 100 gallon resin/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. Thermal incineration using low VOC resin (< 39% by wt), non-VOC containing cleanup solvents 2. Catalytic incineration using low VOC resin (< 39% by wt), non-VOC containing cleanup solvents 3. Carbon absorption using low VOC resin (< 39% by wt), non-VOC containing cleanup solvents 4. Low VOC resin (< 39% by wt), using Air Assisted Airless spray gun and/or hand lay-up, non-VOC containing cleanup solvents	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.5*

Last Update: 5/25/2005

Polyester Resin Products - Chop Spray, Spray, and Hand Lay-Up, < or = 600 gallons resin/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Low-VOC resin compliant with District Rule 4684	1. Thermal or Catalytic incineration. 2. Carbon Adsorption. 3. Vapor suppressed low VOC resin (< or = 35% by wt) except where smooth finish and/or additional layering, coatings, or reinforcing is required to be bonded to the resin	Closed molding
PM10	95% control (spray booth with filtered exhaust, or equal), and air-assisted airless application equipment		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.6*

Last Update: 5/4/1995

Fiberglass Products Manufacturing - Utility Poles, = or < 6,000 lb/day of raw resin

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. Capture and Incineration 2. Capture and carbon adsorption 3. Low VOC monomer resins (no more than 35% monomer by weight) and Non-VOC containing cleanup solvents	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.7*

Last Update: 1/25/1999

Fiberglass Products Manufacturing - Fiberglass Mat Dryer and Curing Oven

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Thermal Incinerator with at least 98% control efficiency		
PM10	Natural gas with LPG as a secondary fuel.		
NOx	Natural gas with LPG as a secondary fuel.	1. 15 ppmv @ 3% O2 (0.018 lb/MMBtu/hr) burner. 2. 30 ppmv @ 3% O2 (0.036 lb/MMBtu/hr) Low-NOx burner.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.8*

Last Update: 3/24/2021

Polyester Resin Application - Boat and Marine Vessel Repair Operations (Pleasure Crafts Only)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of corrosion resistant resins with no more than 46% monomer by weight and use of specialty gelcoats with no more than 48% monomer by weight	1) VOC capture and control (thermal incineration, catalytic incineration, or equal) with a minimum overall control efficiency of 98% 2) VOC capture and control (carbon adsorption or equal) with a minimum overall control efficiency of 95%	
PM10	For resins: Use of manual non-atomized application methods, or equivalent For gelcoats: Use of an enclosed spray booth with particulate filters and HVLP application equipment, or equivalent		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.9*

Last Update: 1/25/1999

Fiberglass Products Manufacturing - Fiberglass Mat Forming

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Low VOC Resin (containing less than 0.25% formaldehyde and less than 0.45% methanol) and Whitewater (containing less than 0.1% VOC).	1. 98% control efficiency - Thermal/catalytic Oxidizer. 2. 95% Control Efficiency - Chemical oxidation	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.10*

Last Update: 12/30/2020

Expandable Polystyrene (EPS) Molding Operation - Pre-expander Unit

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Capture and Thermal Oxidation or equivalent (98% control efficiency)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.11*

Last Update: 1/22/1997

Polyester Resin Application - Concrete Block Surface Laminating, = or < 4000 Blocks laminated/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. Thermal incineration using low VOC resins with a monomer weight content of < 26% and clear gel coats with a monomer weight content of < 45% 2. Catalytic incineration using low VOC resins with a monomer weight content of < 26% and clear gel coats with a monomer weight content of < 45% 3. Carbon adsorption using low VOC resins with a monomer weight content of < 26% and clear gel coats with a monomer weight content of < 45%	
PM10		Enclosed lamination spray booth with exhaust filters and use of HVLP spray equipment	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.12*

Last Update: 6/9/2020

Expanded Polystyrene (EPS) Products - Reclaim Extrusion Line

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Capture and Thermal Oxidation or equivalent (98% control efficiency)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.13*

Last Update: 1/20/2000

Polyethylene Foam Extrusion Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Capture and Thermal or Catalytic Oxidation with 95% control efficiency.		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.14*

Last Update: 2/17/2000

Expanded Polystyrene Products - Fluff Storage Silo, = or < 18 tons of foam /day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Capture and Thermal or Catalytic Oxidation with 90% capture and 95% destruction efficiency, or		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.15*

Last Update: 2/17/2000

Existing Polystyrene Foam Sheet Extrusion Operation – Using VOC Blowing Agents to Produce Food Service Products.

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	100 % VOC blowing agent and Thermal Oxidizer, with 95% destruction efficiency, or equal.	1. Non-VOC blowing agent (HFC-152a or equal) 2. Low-VOC (VOC/CO2 blended blowing agent with thermal or catalytic oxidizer.	Non-VOC

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.16*

Last Update: 4/3/2000

Polyvinyl chloride (PVC) Products Manufacturing - Material Blending Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. VOC Capture and Control with Thermal Oxidizer. 2. VOC Capture and Control with Carbon Adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.17*

Last Update: 11/22/2000

Polyethylene Products Manufacturing - Rotational Molding Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Mold Release Agents with VOC content not exceeding 6.5 lb/gal (less water and exempt compounds.	1. Capture and thermal/catalytic incineration. 2. Capture and carbon adsorption.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.18*

Last Update: 10/7/2001

Expanded Polystyrene Foam Products - Vertical, water-quenched extruder; food-grade products.

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Total emissions* of 0.94 lb VOC/100 lb of raw material processed.	Total emissions* not to exceed 0.48 lb VOC/100 lb of raw material processed.	Use of 100% HFC 152a or HFC-152 and CO2 mixture, or equal.

* Total emissions: Amount of the VOC added as a blowing agent less VOC retained in the produce and less any VOC collected and destroyed.

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.19*

Last Update: 10/8/2001

Fiberglass-reinforced Composite Products – Pultruded, heat set resin products.

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of polyester resins with 35% monomer by weight, or less, and Use of epoxy-based resins with 1% VOC by weight, or less, and Use of a covered, resin-product cooling bath.	1. Thermal/catalytic incineration. 2. Carbon adsorption system.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.20*

Last Update: 8/26/2020

No-Bake Mold Manufacturing

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Binders: less than or equal to 0.07 lb-VOC/lb-binder	1) VOC capture and control with thermal oxidizer	
	Release Agents: less than or equal to 0.9 lb-VOC/lb-	2) VOC capture and control with carbon adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.21*

Last Update: 6/11/2021

Corrosion-Resistant Polyester Resin Application

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Resin containing ≤ 46% monomer by weight	VOC Capture and control with thermal incineration (98% control)	
	Mechanical non-atomizing resin application	VOC Capture and control with catalytic incineration (98% control)	
	Enclosed gun cleaner	VOC Capture and control with carbon adsorption (95% control)	
PM10	Spray booth with exhaust filter and mechanical non-atomizing resin application		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.22*

Last Update: 2/14/2019

Polyisocyanurate (PIR) Insulated Panel Manufacturing Operation Consisting of Pentamat, Laminator, and Panel Saws

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of pentane or equivalent blowing agent with a low global warming potential and a maximum VOC emission rate of 0.045 lb-VOC/lb-blowing agent	1. At least 98% overall capture and control using a properly designed capture system served by a thermal/catalytic oxidizer, or other equivalent control achieving device or technology 2. At least 95% overall capture and control using a properly designed capture system served by a carbon adsorption system, or other equivalent control achieving device or technology	
PM10	Panel sawing equipment served by a fabric filter dust collector or equivalent with 99% capture and control		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.23*

Last Update: 9/10/2003

Finished Polyisocyanurate Product Storage Area

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	None	None	None

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.24*

Last Update: 8/21/2020

Fiberglass Mold Manufacturing (Tooling) Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Non-atomizing polyester resin application equipment, gel coat application equipment compliant with District Rule 4684, and tooling resins and gel coats with monomer VOC content compliant with District Rule 4684	1) Capture and control with thermal or catalytic incineration - 98% control 2) Capture and control with carbon adsorption - 95% control	Closed Molding
PM10	Spray booth with exhaust filters, non-atomizing polyester resin application equipment, and gel coat application equipment compliant with District Rule 4684		Closed Molding

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.25*

Last Update: 4/23/2020

Pneumatic Conveying - PVC Material

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	99% control (baghouse or equivalent)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.8.26*

Last Update: 5/31/2018

Finished Polyethylene Product Storage Area

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	98% Capture and Control (100% Capture with Permanent Total Enclosure and 98% Control with Regenerative Thermal Oxidizer, or equal)	99% Capture and Control (100% Capture with Permanent Total Enclosure and 99% Control with Regenerative Thermal Oxidizer, or equal)	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.1*

Last Update: 8/21/2020

Adhesives Application - Tire Retreading

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of adhesives with a VOC content of 100 gram per liter (less water and exempt compounds)	1) Use of adhesives with zero VOC content 2) Capture of VOCs and thermal or catalytic oxidation or equivalent achieving 98% control 3) Capture of VOCs and carbon adsorption or equivalent achieving 95% control	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.2*

Last Update: 9/11/1997

Adhesive Application Operation - Rubber Parts and Products, Brush Applied

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Using adhesives with a VOC content of 7.0 lb/gal or less (less water and exempt compounds)	1. VOC capture and control with thermal incineration 2. VOC capture and control with catalytic incineration 3. VOC capture and control with carbon adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.3*

Last Update: 5/27/1997

Adhesive Application Process - Foam Products

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Adhesives with a VOC content of ≤ 1.0 lb/gallon (less water and exempt compounds)	1. Capture and control with a thermal incineration device 2. Capture and control with a catalytic incineration device 3. Capture and control with a carbon adsorption device 4. Adhesives with a VOC content of ≤ 0.49 lb/gallon (less water and exempt compounds)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.4*

Last Update: 4/3/2000

Adhesive Application Process - Non-Porous Materials, Specialty Contact Adhesives, Spray Application

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Using adhesives with a VOC content of 540 grams/liter or less (less water and exempt compounds) until July 1, 2000. Using adhesives with a VOC content of 400 grams/liter or less (less water and exempt compounds) after July 1, 2000.	1. VOC capture and control with thermal or catalytic incineration 2. VOC capture and control with carbon adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.5*

Last Update: 11/5/1998

Adhesive Application Process - Wooden case manufacturing

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of adhesives with a VOC content compliant with Rule 4653 (Adhesives) [This is achieved in practice only for those facilities subject to District Rule 4653.]	1. VOC capture and incineration using adhesives with a VOC content compliant with Rule 4653 (Adhesives). 2. VOC capture and carbon adsorption using adhesives with a VOC content compliant with Rule 4653 (Adhesives).	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.6*

Last Update: 6/10/2021

Food-Grade Carton Manufacturing - Specialty Flexographic Printing and Coatings Application

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Inks and Coatings: Water-based or UV or EB (Electro Beam) inks with VOC content < 1.5 lb/gal (180 g/l) or < 10% by volume Solvents: Zero VOC	1. Capture and vent VOC to afterburner or carbon adsorption system with ≥ 98.5% destruction/recovery efficiency, OR VOC outlet ≤ 10 ppmv 2. Water-based inks with VOC content < 1 lb/gal (120 g/l)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.7*

Last Update: 8/3/2001

Corrugated PVC Sheet Products - Special Contact Adhesive, Roller Applied

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	PVC welding adhesive compliant with District Rule 4653	1. Thermal / catalytic incinerator. 2. Carbon adsorption system. 3. Low VOC adhesive (= or < 0.3 lb/gal, less water and exempt compounds).	

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***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.8*

Last Update: 11/20/2001

Adhesive Application Process – Wooden Door Assembly, Roller applied

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of an adhesive with a VOC content of 5.0 grams/liter (less water and exempt compounds), or less.	1. Thermal incineration 2. Carbon Adsorption or Use of an adhesive with a VOC content of 1.0 grams/liter (less water or exempt compounds), or less.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.9*

Last Update: 9/26/2003

Adhesive Application Process - Vinyl Door and Window Assembly, Non-Spray Applied

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1) Use of adhesive with VOC content of 3.0 g/l (less water and exempt compounds), or less for automated adhesive application and assembly processes 2) Use of adhesive with VOC content of 76.5 g/l (less water and exempt compounds), or less for manually applied adhesive operations when assembling	1) Thermal Oxidizer 2) Carbon Adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.10*

Last Update: 11/18/2004

Adhesive Application for Multi-Wall Packaging Manufacturing

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	adhesives with a VOC content of <= 0.2 lb/gal (excluding water and exempt compounds) for the adhesion of plastic film to porous material adhesives with a VOC content of <= 0.13 lb/gal (excluding water and exempt compounds) for the adhesion of porous materials	1. Capture and thermal incineration 2. Capture and carbon adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.11*

Last Update: 11/3/2005

Adhesive Application Operation - Bonding of Fiberglass Boat Hulls and Decks, Non-Atomizing Application

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	use of adhesives with VOC content of 80 grams/liter or less (less water and exempt compounds)	1. VOC capture and incineration 2. VOC capture and carbon adsorption 3. use of low VOC content adhesives with VOC content of 50 grams/liter or less (less water and exempt compounds)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.12*

Last Update: 8/29/2018

Corrugated Box Gluer

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of adhesives with a VOC content of 0.021 lb-VOC/gal (less water and exempt compounds)	1. VOC Capture and Thermal/Catalytic Oxidation 2. VOC Capture and Carbon Adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.13*

Last Update: 8/29/2018

Corrugated Board Manufacturing (Corrugator)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Steam conditioning of paper - 3.5 lb-VOC/10^6 sq ft; Adhesives - 0.015 lb-VOC/gal (less water and exempt compounds)	1. VOC Capture and Thermal/Catalytic Oxidation 2. VOC Capture and Carbon Adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.9.14*

Last Update: 6/6/2019

Wood Parts and Products Subfloor Adhesive Application Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of adhesives and solvents with a VOC content and application methods compliant with District Rule 4653 (Adhesives and Sealants)	1) At least 98% overall capture and control using a properly designed capture system served by a thermal/catalytic oxidizer, or other equivalent control achieving device or technology 2) At least 95% overall capture and control using a properly designed capture system served by a carbon adsorption system, or other equivalent control achieving device or technology	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.10.1*

Last Update: 4/19/1995

Parts Cleaner - Electrical Components, Isopropyl Alcohol, = or > 440 sq. in. surface area of isopropyl alcohol

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. Incineration or carbon adsorption of solvent VOC emissions 2. Cleaning tank with freeboard ratio greater than or equal to 1.0, solvent drainage from part in closed cleaning tank, closed lid except when parts are added or removed	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.10.2*

Last Update: 7/1/1995

Cold cleaner/degreaser - Metal Products, Batch Loaded, = or < 1 gal/day solvent usage

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Drainage to Minimize Carryout Emissions, high freeboard ratio	1. Carbon Adsorption 2. Low Volatility Solvent 3. Downtime Cover	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.10.3*

Last Update: 1/23/2000

Parts Cleaner - Rubber Parts and Products

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of solvents with VOC content (less water and exempt compounds) as indicated, or lower: - for Natural Rubber: 6.3 lb/gal, - for Nitrile, SBR, or chlorobutyl Rubber: 6.71 lb/gal, - for Neoprene Rubber: 7.25 lb/gal and evaporative minimization methods, which include - use of controlled flow dispensers (e.g. squeeze bottles) and - keeping all cloth/papers and solvent, which are not in active use, stored in closed containers.	1) Capture and control using an enclosed booth and thermal incineration system. 2) Capture and control using an enclosed booth and catalytic incineration system. 3) Capture and control using a hood and thermal incineration system. 4) Capture and control using a hood and catalytic incineration system.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.10.4*

Last Update: 12/3/1997

Parts Cleaner/degreaser - Automotive Parts, Portable unit, < 10 Gallon remote reservoir

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		Low volatility solvents (as defined in Rule 4662), drain cover, and freeboard height of at least 6”	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.10.5*

Last Update: 5/28/2020

Medical Grade Silicon Products - Wipe Cleaning Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of solvents with VOC content (less water and exempt compounds) of 7.2 lb/gal, or lower, and evaporative minimization methods, which include: - use of controlled flow dispensers (e.g. squeeze bottles) and - keeping all cloth/papers and solvent, which are not in active use, stored in closed containers	1) Capture and control using an enclosed booth and thermal/catalytic oxidation system 2) Capture and control using a hood and thermal/catalytic oxidation system	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.10.6*

Last Update: 11/19/2001

Metal Parts, Open-top, Powder Coating Stripping Tank

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of solvent with a VOC Content (less water and exempt compounds) of 0.75 lb/gal, or less.	1. 99% control (thermal or catalytic incineration, or equal). 2. 95% control (Carbon adsorption or layer of VOC-suppressing oil, or equal).	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.10.7*

Last Update: 8/19/2002

Metal Parts and Products Cleaning - Open-top, Heated, Vapor Degreaser

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	95% control (Open top degreaser w/refrigerated freeboard chiller, part movement < 2.2 ft/sec, and holding parts in degreaser until dry, or	1. 99.6% control (thermal or catalytic incineration or equal). 2. 95% control (carbon adsorption, or equal).	100% control (Cold cleaning with alternate solvent (e.g. perchloroethylene with carbon adsorption), or equal).

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.1*

Last Update: 4/28/2020

Tire Manufacturing - Steel Belt Milling/Calendar (no cementing/gluing performed)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1) Thermal incineration (with 65% to 90% estimated capture efficiency) 2) Carbon adsorption (with 65% to 90% estimated capture efficiency)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.2*

Last Update: 4/21/2020

Non-woven Polyester Foam Production - = or < 1800 lb Foam/hr *RESCINDED*

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.3*

Last Update: 5/21/2020

Cardboard Box Laminator

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of adhesive with a VOC content of 0.021 lb/gal (less water and exempt compounds)	1) VOC Capture and Regenerative Thermal/Catalytic Oxidation 2) VOC Capture and Carbon Adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.4*

Last Update: 12/22/1998

Organic Liquid Storage Tanks - Non-petroleum and non-petrochemical facilities, = or < 19,800 gallons capacity

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Pressure/vacuum valve set within 10% of the maximum allowable tank working pressure.	Vapor control system with a minimum control efficiency of 95%.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.5*

Last Update: 4/21/2020

Circuit Board Manufacturing - Soldermask Operation *RESCINDED*

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.6*

Last Update: 7/11/1996

Railcar Unloading - Transfer of Non-petroleum Organic Liquids into Delivery Vehicles

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Bottom loading with vapor recovery system	1. Bottom loading with vapor collection system vented to a refrigerated vapor condenser system OR Bottom loading with vapor collection system vented to a thermal incinerator 2. Bottom loading with vapor collection system vented to a carbon adsorption system	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.7*

Last Update: 5/9/2016

Shop Towel Laundering Consisting of Sorting Tables, Washing Machines, and Wastewater Treatment System

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Evaporative Loss Minimization (store shop towels in closed containers)	1. At least 98% overall capture and control using a properly designed capture system served by a thermal/catalytic oxidizer, or other equivalent control achieving device or technology 2. At least 95% overall capture and control using a properly designed capture system served by a carbon adsorption system, or other equivalent control achieving device or technology	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.8*

Last Update: 12/27/1999

Rubber Tire Retreading - Curing Chamber (autoclave)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. VOC capture and control with thermal incineration. 2. VOC capture and control with catalytic incineration. 3. VOC capture and control with carbon adsorption.	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.9*

Last Update: 4/30/2020

Rubber Tire Retreading - Buffing Operation (Tread Removal)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1) VOC capture and control with thermal or catalytic incineration (98% control) 2) VOC capture and control with carbon adsorption (95% control)	
PM10	Water spray at rasp, and vacuum system ducted to a dust collector with 99% control		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.10*

Last Update: 2/15/2002

Circuit Board Manufacturing – Flux Application for Wave Soldering Machine

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of flux material(s) with a VOC content of 6.3 lb/gal (less water and exempt compounds), or lower.	1) 98% Control (Thermal or catalytic incineration system, or equal). 2) 95% Control (Carbon adsorption system, or equal).	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.11.11*

Last Update: 7/2/2020

Fructose Reclamation System - Process Vent *RESCINDED*

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.1*

Last Update: 11/26/2006

Chemical Plants - Valves & Connectors

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Leak defined as a reading of methane in excess of 100 ppmv above background when measured per EPA Method 21 and Maintenance Program pursuant to District Rule 4455		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.2*

Last Update: 11/27/2006

Chemical Plants Pump and Compressor Seals

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Leak defined as a reading of methane in excess of 500 ppmv above background when measure per EPA Method 21 and an Inspection and Maintenance Program pursuant to District Rule 4455		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.3*

Last Update: 8/28/2019

Chemical Evaporator/Dryer/Oven

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Minimize VOC emissions units best management practises	1. Incineration System - RTO/Catalytic Oxidizer 2. Incineration System - Ultra Low-NOx Flare 3. Carbon Adsorption	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.4*

Last Update: 7/8/2020

Ethanol Fermentation Process Tanks Including: Fermentation Tanks and Beerwell Storage Tanks

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	99.5% VOC emissions control efficiency (fermentation wet scrubber vented to a CO2 recovery plant with a condenser and a high pressure scrubber; or equivalent)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.5*

Last Update: 2/17/2004

Emission Units (Excluding Wet Cake Dryer) Involved in the Ethanol Distillation and Wet Cake Process

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	95% VOC emissions control efficiency (wet scrubber or equivalent)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.6*

Last Update: 5/25/2004

Ethanol Manufacturing Facility Distillers Dried Grains with Solubles (DDGS) Dryer

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	VOC capture and control with thermal or catalytic incineration (98%) or equivalent		
SOx	natural gas fuel	wet scrubber (95% control)	
PM10	high efficiency (1D-3D) cyclones and thermal incinerator in series (98.5% control) or equivalent		
NOx	low NOx burner - 33 ppmv NOx @ 3% O2 (0.04 lb-NOx/MMBtu)	ultra-low NOx burner - 15 ppmv NOx @ 3% O2 (0.018 lb-NOx/MMBtu)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.7*

Last Update: 8/16/2006

Distillers Dried Grains with Solubles (DDGS) Cooler

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		98% capture and control (thermal incineration or equal)	
PM10	99% capture and control (baghouse or equal)		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.8*

Last Update: 1/23/2007

Ethanol Wet Cake Storage and Loadout Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1) VOC capture with an enclosure that has a face velocity across any opening of 50 ft/min and 98% control efficiency - Incineration or equal 2) VOC capture with an enclosure that has a face velocity across any opening of 50 ft/min and 95% control efficiency - Carbon Adsorption, Wet Scrubber or equal	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a State Implementation Plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 4.12.9*

Last Update: 7/18/2016

Ethanol Production: Solar Drying of Distillers Cake

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1) VOC capture with an enclosure that has a face velocity across any opening of 50 ft/min and 98% control efficiency - Incineration or equal 2) VOC capture with an enclosure that has a face velocity across any opening of 50 ft/min and 95% control efficiency - Carbon Adsorption, Wet Scrubber, or equal 3) Use of wet distillers cake only from solids separator - to achieve an emission limit of 0.1529 lb/ton of material dried	

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