San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.1.2*

Last Update: 7/31/2018

Sand, Gravel, Aggregate, Recycled Asphalt & Recycled Concrete: Processing, Crushing, Screening and Storage Operations

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	1) CRUSHING: Water sprays allowing visible emissions no greater than 12% opacity as measured using EPA Method 9 (Visible Opacity) 2) SCREENING: Water sprays allowing visible emissions no greater than 7% opacity as measured using EPA Method 9 (Visible Opacity) 3) CONVEYORS/TRANSFER POINT: Water sprays allowing visible emissions no greater than 7% opacity as measured using EPA Method 9 (Visible Opacity) 4) STORAGE (PILES): Water sprays allowing visible emissions no greater than 20% opacity as measured using EPA Method 9 (Visible Opacity)	1) CRUSHING: Charged fog spray or water spray with chemical additives 2) STORAGE (PILES): Water spray with chemical suppressant	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.2.2*

Last Update: 7/31/2018

Concrete Batch Plant

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	1) SAND/AGGREGATE STORAGE: Outdoor storage piles adequately wetted a) to prevent vislble emissions > 5% opacity, or b) with minimum moisture content of 2% for aggregate and 4% for sand 2) SAND/AGGREGATE HANDLING (ALL TRANSFER POINTS): Water sprays on all transfer points to prevent visible emissions > 5% opacity 3) SAND/AGGREGATE WEIGH BATCHER: Material adequately wetted to prevent visible emissions > 5% opacity 4) STORAGE SILOS for CEMENT, FLYASH and OTHER SUPPLEMENTS: Enclosed silo vented to a control device with 99% efficiency (baghouse, bin vent or equivalent) 5) CEMENT/FLYASH/SUPPLEMENTS WEIGH BATCHER: Enclosed weigh batcher vented to a control device with 99% efficiency (baghouse or equivalent) 6) TRANSIT-MIXED TRUCK LOADING: Loading operation enclosed by a flexible shroud which seals to the truck and is vented to a control device with 99% efficiency (baghouse or equivalent) 7) CENTRAL MIXER LOADING: a) < 5 yd^3 batch capacity: enclosed mixer with water sprays, b) > or = 5 yd^3 batch capacity: enclosed mixer vented to a control device with 99% efficiency	1) SAND/AGGREGATE STORAGE: Enclosed storage (building, silo, or equivalent) vented to a control device with 99% control efficiency (baghouse or equivalent) 2) CENTRAL MIXER LOADING: < 5 cubic yard batch capacity: enclosed mixer vented to a control device with 99% control efficiency (baghouse or equivalent)	

(baghouse or equivalent)

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.2.4*

Last Update: 4/30/2020

Portland Concrete Products Manufacturing - Tumbler

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Cartridge or fabric filter dust colletor		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.2.7*

Last Update: 12/30/2020

Concrete Roofing Tile Mold Releasing Oil Application Operation

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Use of mold releasing oils with a vapor pressure less than 2 mm Hg at 20 °C	1) VOC capture and control with incineration (98% overall control efficiency) 2) VOC capture and control with carbon adsorption (95% overall control efficiency)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.3.1*

Last Update: 8/23/2018

Asphaltic Concrete - Mix Plant

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Enclosed hot mix silos and loadout operation vented to rotary dryer burner		
SOx	Natural gas or LPG as primary fuel		
PM10	Rotary drum vented to fabric collector or Venturi scrubber with centrifugal separator; enclosed conveyors, hot mix storage silos, two sided truck loadout; all vented to dryer or electrostatic precipitator or filter; and natural gas or LPG as a primary fuel		
NOx	3.5 ppmv @ 19% O2 using Low-NOx burner and either natural gas or LPG as primary fuel		
CO	42 ppmv @ 19% O2 using and either natural gas or LPG as primary fuel		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.3.4*

Last Update: 10/10/2019

Asphalt Shingle Mfg. - Dry Material Receiving, Storage, and Processing Operations

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Use of a baghouse/dust collector serving silos, enclosed conveyors, and process equipment with visible emissions not to exceed 1% opacity		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.1*

Last Update: 3/24/2022

Transportable Screening Operation - Green Waste, Wood Waste, and Compost Materials

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Use of a water sprinkler system or maintaining adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.2*

Last Update: 3/10/2020

Tub Grinder - Transportable, Wood Waste Processing

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Use of a water sprinkler system or maintaining adequate moisture content of the process materials to prevent visible emissions in excess of 5% opacity		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.3*

Last Update: 7/16/2018

Green Waste, Wood Waste, and Composted Material - Transfer & Screening

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Process materials with moisture content >= 25% and =< 30%; visible emissions not to exceed 5% opacity	1) Baghouse serving screen and enclosed conveyors 2) Baghouse serving screen and process materials with moisture content >= 25% and =< 30%	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.5*

Last Update: 8/24/2020

Biomass – Fuel Receiving, Handling, and Storage

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	BIOMASS FUEL STACKING AND OPEN STORAGE Dust suppression to limit visible emissions from unloading/stacking operations and open storage areas to prevent visible emissions in excess of 5% opacity for any 3 minutes in any one hour period BIOMASS FUEL PROCESSING, INCLUDING: RECEIVING, SCREENING, GRINDING, FINES REMOVAL, AND CONVEYING AND HANDLING Receiving bin, screens, grinder, fines removal and augers, elevators, and conveyors all enclosed and vented to fabric filter baghouse		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.8*

Last Update: 8/26/2025

On-Farm Dairy Manure Composting

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1. Maintain a minimum oxygen concentration of at least 5%, by volume, in the free air space of every active and curing compost pile; 2. Maintain the moisture content of every active and curing compost pile equal to or less than 70%, by weight, and 3. Maintain a temperature of between 131 F and 170 F for 15 days, or the duration of the composting cycle, whichever is shorter, using a windrow composting system, during which period, the materials must be turned a minimum of five times	1. 99% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to a scrubber, or equivalent) 2. 95% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to an activated carbon system, or equivalent) 3. 80% overall capture and control efficiency for both active and curing composting phases (positively aerated piles with Gore Covers, or equivalent)	
NH3	1. Maintain a minimum oxygen concentration of at least 5%, by volume, in the free air space of every active and curing compost pile; 2. Maintain the moisture content of every active and curing compost pile equal to or less than 70%, by weight, and 3. Maintain a temperature of between 131 F and 170 F for 15 days, or the duration of the composting cycle, whichever is shorter, using a windrow composting system, during which period, the materials must be turned a minimum of five times	1. 99% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to a scrubber, or equivalent) 2. 95% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to an activated carbon system, or equivalent) 3. 80% overall capture and control efficiency for both active and curing composting phases (positively aerated piles with Gore Covers, or equivalent)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.10*

Last Update: 9/29/2023

Organic Material* Composting, >= 50,000 ton/yr

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	80% overall capture and control efficiency for active and curing composting phases, consisting of one of the following options: • Positively aerated static windrow piles with engineered covers or equivalent, or • Negatively aerated static windrow piles vented to a biofilter or equivalent	1. 99% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to a scrubber, or equivalent) 2. 95% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to an activated carbon system, or equivalent)	
NH3	80% overall capture and control efficiency for active and curing composting phases, consisting of one of the following options: • Positively aerated static windrow piles with engineered covers or equivalent, or • Negatively aerated static windrow piles vented to a biofilter or equivalent	1. 99% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to a scrubber, or equivalent) 2. 95% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to an activated carbon system, or equivalent)	

* For the purposes of this BACT Guideline, “Organic Material” is as defined in District Rule 4566

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.11*

Last Update: 3/29/2023

Co-Composting with Organic Material, Biosolids, Poultry Litter or Animal Manure >= 60,000 ton/yr

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	80% overall capture and control efficiency for both active and curing composting phases (positively aerated piles with Gore Covers, or equivalent)	1.99% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to a scrubber, or equivalent) 2.95% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to an activated carbon system, or equivalent)	
NH3	80% overall capture and control efficiency for both active and curing composting phases (positively aerated piles with Gore Covers, or equivalent)	1.99% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to a scrubber, or equivalent) 2.95% overall capture and control efficiency for both active and curing composting phases (composting in enclosure vented to an activated carbon system, or equivalent)	

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.4.15*

Last Update: 3/29/2023

Composting Feedstock Receiving, Mixing, and Stockpiles (Non-biosolids)

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	>=100,000 tons/year: process green waste, animal manure, and poultry litter within 3 days of receipt and process food waste within 48 hours of receipt by: 1) removing the feedstock from the facility, or 2) starting the active phase of composting, or 3) covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency); <100,000 tons/year: process green waste, animal manure, and poultry litter within 7 days of receipt and process food waste within 48 hours of receipt by: 1) removing the feedstock from the facility, or 2) starting the active phase of composting, or 3) covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency)	1.Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a scrubber. (99% combined capture and control efficiency) 2.Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a carbon adsorption system. (95% combined capture and control efficiency) 3.Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a biofilter. (80% combined capture and control efficiency)	

NH3	>=100,000 tons/year: process green waste, animal manure, and poultry litter within 3 days of receipt and process food waste within 48 hours of receipt by: 1) removing the feedstock from the facility, or 2) starting the active phase of composting, or 3) covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency); <100,000 tons/year: process green waste, animal manure, and poultry litter within 7 days of receipt and process food waste within 48 hours of receipt by: 1) removing the feedstock from the facility, or 2) starting the active phase of composting, or 3) covering the feedstock material with a waterproof cover that has at least six feet of overlap of adjacent sheets and is securely anchored, or implementing an APCO approved alternative mitigation measure. (10% control efficiency)	1.Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a scrubber. (99% combined capture and control efficiency) 2.Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a carbon adsorption system. (95% combined capture and control efficiency) 3.Organic feedstock materials received, mixed, and stockpiled in an enclosed building vented to a biofilter. (80% combined capture and control efficiency)

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.5.1*

Last Update: 4/30/2020

Synthetic Stone Products Manufacturing

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Capture and Control with a Baghouse or Equivalent Control Device		

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San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 6.5.2*

Last Update: 7/28/2021

Soda Ash Loading into Cargo Ships

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Use of an engineered telescopic spout consisting of inner and outer sleeve with a neoprene (or other similar durable material) skirt vented to a dust collection system. During loading, the telescopic spout shall be operated in a manner that maintains minimum drop height of the material such that the loading process remains in compliance with permitted visible emission limit(s). (98% control)		

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