

CATEGORY:

MATERIAL PROCESSING

BACT Size: Minor Source

PORTABLE WOOD MULCH DYEING OPERATION

BACT Determination Number: 196		BACT Determination Date:
Equipment Information		
Permit Number: 25565		
Equipment Description: PORTABLE WOOD MULCH DYEING OPERATION		
Unit Size/Rating/Capacity:		
Equipment Location: ZANKER ROAD RESOURCE MGMT, LTD DBA FLORIN PERKINS 4201 FLORIN PERKINS RD SACRAMENTO, CA		
BACT Determination Information		
ROCs	Standard:	
	Technology Description:	Use of super compliant materials (< or = 0.01 lb VOC per lb of dye)
	Basis:	
NOx	Standard:	
	Technology Description:	
	Basis:	
SOx	Standard:	
	Technology Description:	
	Basis:	
PM10	Standard:	
	Technology Description:	
	Basis:	
PM2.5	Standard:	
	Technology Description:	
	Basis:	
CO	Standard:	
	Technology Description:	
	Basis:	
LEAD	Standard:	
	Technology Description:	
	Basis:	
Comments: The use of super compliant materials is considered technologically feasible.		
District Contact: Felix Trujillo Phone No.: (916) 874 - 7357 email: ftrujillo@airquality.org		

**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION**

DETERMINATION NO.: 196
DATE: September 13, 2018
ENGINEER: Felix Trujillo, Jr.

Category/General Equip Description: Material Processing
Equipment Specific Description: Portable Wood Mulch Dyeing Operation
Equipment Size/Rating: Minor Source
Previous BACT Det. No.: None

This BACT determination will apply to a portable wood mulch dyeing operation.

This BACT was determined under the project for A/C 25565 (Zanker Road Resource Management, Ltd.).

BACT ANALYSIS**A: ACHIEVED IN PRACTICE (Rule 202, §205.1a)**

The following control technologies are currently employed as BACT for a portable wood mulch dyeing operation. No district has regulations that apply to the use of coatings (including stains, inks, or dyes) for application to wood mulch.

District/Agency	Best Available Control Technology (BACT)/Requirements
US EPA	<p><u>BACT</u> Source: EPA RACT/BACT/LAER Clearinghouse</p> <p>The EPA RACT/BACT/LAER Clearinghouse does not have a BACT determination for this source category.</p> <p><u>RULE REQUIREMENTS:</u> None</p>
ARB	<p><u>BACT</u> Source: ARB BACT Clearinghouse</p> <p>The ARB BACT Clearinghouse does not have a BACT determination for this source category.</p> <p><u>RULE REQUIREMENTS:</u> None</p>
SMAQMD	<p><u>BACT</u> Source: SMAQMD BACT Clearinghouse</p> <p>The SMAQMD does not have a BACT determination for this source category.</p> <p><u>RULE REQUIREMENTS:</u> None</p>
South Coast AQMD	<p><u>BACT</u> Source: SCAQMD BACT Clearinghouse for Non-Major Polluting Facilities.</p> <p>The SCAQMD does not have a BACT determination for this source category.</p> <p><u>RULE REQUIREMENTS:</u> None</p>
San Diego County APCD	<p><u>BACT</u> Source: SDAPCD BACT Clearinghouse.</p> <p>The SDAPCD does not have a BACT determination for this source category.</p> <p><u>RULE REQUIREMENTS:</u> None</p>

Bay Area AQMD	<p><u>BACT</u> Source: BAAQMD BACT Clearinghouse.</p> <p>The BAAQMD does not have a BACT determination for this source category.</p> <p><u>RULE REQUIREMENTS:</u> None</p>
San Joaquin Valley APCD	<p><u>BACT</u> Source: SJVAPCD BACT Clearinghouse.</p> <p>The SJVAPCD does not have a BACT determination for this source category.</p> <p><u>RULE REQUIREMENTS:</u> None</p>

The following control technologies have been identified and are ranked based on stringency:

SUMMARY OF ACHIEVED IN PRACTICE CONTROL TECHNOLOGIES		
Pollutant	Standard	Source
VOC	No Standard	
NOx	No Standard	
SOx	No Standard	
PM10	No Standard	
PM2.5	No Standard	
CO	No Standard	

The following control technologies have been identified as the most stringent, achieved in practice control technologies:

BEST CONTROL TECHNOLOGIES ACHIEVED		
Pollutant	Standard	Source
VOC	No Standard	
NOx	No Standard	
SOx	No Standard	
PM10	No Standard	
PM2.5	No Standard	
CO	No Standard	

B. TECHNOLOGICALLY FEASIBLE AND COST EFFECTIVE (Rule 202, §205.1.b.):

Technologically Feasible Alternatives:

Any alternative basic equipment, fuel, process, emission control device or technique, singly or in combination, determined to be technologically feasible by the Air Pollution Control Officer.

The table below shows the technologically feasible alternatives identified as capable of reducing emissions beyond the levels determined to be "Achieved in Practice" as per Rule 202, §205.1.a.

Pollutant	Technologically Feasible Alternatives(A)
VOC	1. Thermal Incineration, 2. Carbon Adsorption 3. Use of super compliant materials ($\leq 1\%$ VOC by weight)
NOx	Not applicable
SOx	Not applicable
PM10	Not applicable
PM2.5	Not applicable
CO	Not applicable

(A) Alternatives are discussed below.

VOC – Alternatives 1 and 2:

This operation consists of a portable trommel screen used to completely mix the dye with wood mulch. The mulch is used for landscaping purposes. The trommel screen is not being used to size the material. The turning motion of the trommel screen is an ideal motion for completely mixing the dye with the mulch. The portable trommel screen will be moved throughout the facility. It is not technologically feasible to install add on controls such as a thermal incinerator or carbon adsorption to this operation due its portability.

VOC – Alternative 3:

Pursuant to the SCAQMD's Part C:Policy and Procedures for Non-Major Polluting Facilities (page 41), SCAQMD accepts the use of super compliant materials ($< 5\%$ VOC by weight) in-lieu of add-on control devices controlling VOC emissions from coating operations. The applicant is proposing to use dyes with a VOC content of $\leq 0.61\%$ by weight. The SMAQMD is proposing $\leq 1\%$ (0.0061 lb VOC/lb dye, rounded to 2 decimal places). This will allow a compliance margin for variability in VOC content due to dye color, small VOC changes due to reformulation of the dyes, etc.

Since this is a technologically feasible alternative proposed by the applicant, a cost analysis is not required.

C. SELECTION OF BACT:

Minor Source BACT for portable wood mulch dyeing operation is the following:

BACT FOR A PORTABLE WOOD MULCH DYEING OPERATION		
Pollutant	Standard	Source
VOC	Use of super compliant materials (≤ 0.01 lb VOC per lb of dye)	Proposed by applicant
NOx		
SOx		
PM10		
PM2.5		
CO		

REVIEWED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____