

CATEGORY:

MATERIAL PROCESSING

BACT Size: Minor Source

PORTABLE WOOD MULCH DYEING OPERATION

| | |
|---------------------------------------|--|
| BACT Determination Number: 196 | BACT Determination Date: 10/19/2018 |
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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.

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**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION**

DETERMINATION NO.: 196
DATE: October 19, 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: Barry F. Hunt DATE: 10-19-18