

UNDER PUBLIC REVIEW SMAQMD BACT CLEARINGHOUSE

CATEGORY:

MISCELLANEOUS

BACT Size: Minor Source BACT

TROMMEL SCREEN - PORTABLE

BACT Determination Number: 170		BACT Determination Date:
Equipment Information		
Permit Number: 25130		
Equipment Description: TROMMEL SCREEN - PORTABLE		
Unit Size/Rating/Capacity:		
Equipment Location: L AND D LANDFILL LIMITED PARTNERSHIP 8635 FRUITRIDGE ST SACRAMENTO, CA		
BACT Determination Information		
ROCs	Standard:	
	Technology Description:	
	Basis:	
NOx	Standard:	
	Technology Description:	
	Basis:	
SOx	Standard:	
	Technology Description:	
	Basis:	
PM10	Standard:	
	Technology Description:	VEE < or equal to 20% Opacity; Water spray or adequate moisture of process materials.
	Basis:	Achieved in Practice
PM2.5	Standard:	
	Technology Description:	VEE < or equal to 20% Opacity; Water spray or adequate moisture of process materials.
	Basis:	Achieved in Practice
CO	Standard:	
	Technology Description:	
	Basis:	
LEAD	Standard:	
	Technology Description:	
	Basis:	
Comments: Small Emitter/Minor Source BACT. Processed for permits 25130, 25131 & 25132. This BACT is for a portable gypsum drywall recycling operation.		
District Contact: Felix Trujillo Phone No.: (916) 874 - 7357 email: ftrujillo@airquality.org		



BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION

DETERMINATION NO.: 170
DATE: January 11, 2018
ENGINEER: Felix Trujillo, Jr.

Category/General Equip Description: Miscellaneous
Equipment Specific Description: Portable Gypsum Drywall Recycling Trommel Screen
Equipment Size/Rating: Small Emitter BACT (< 10 lb/day)/Minor Source
Previous BACT Det. No.: None

SMAQMD's BACT Clearinghouse does not have a BACT guideline for portable gypsum drywall recycling operations. Therefore, a new BACT determination was performed under the project for A/C 25130 (L&D Landfill Limited Partnership).

BACT ANALYSIS

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

The following control technologies are currently employed as BACT for portable gypsum/drywall trommel screen operations:

District/Agency	Best Available Control Technology (BACT)/Requirements	
US EPA	<u>BACT</u> Source: EPA RACT/BACT/LAER Clearinghouse	
	Portable Gypsum Drywall Recycling Trommel Screen	
	VOC	No standard
	NOx	No standard
	SOx	No standard
	PM10	No standard
	PM2.5	No standard
	CO	No standard

District/Agency	Best Available Control Technology (BACT)/Requirements														
	<u>RULE REQUIREMENTS:</u> None														
ARB	<u>BACT</u> Source: ARB BACT Clearinghouse <table border="1" data-bbox="441 520 1403 867"> <tr> <td colspan="2">Portable Gypsum Drywall Recycling Trommel Screen</td></tr> <tr> <td>VOC</td><td>No standard</td></tr> <tr> <td>NOx</td><td>No standard</td></tr> <tr> <td>SOx</td><td>No standard</td></tr> <tr> <td>PM10</td><td>No standard</td></tr> <tr> <td>PM2.5</td><td>No standard</td></tr> <tr> <td>CO</td><td>No standard</td></tr> </table> <u>RULE REQUIREMENTS:</u> None	Portable Gypsum Drywall Recycling Trommel Screen		VOC	No standard	NOx	No standard	SOx	No standard	PM10	No standard	PM2.5	No standard	CO	No standard
Portable Gypsum Drywall Recycling Trommel Screen															
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NOx	No standard														
SOx	No standard														
PM10	No standard														
PM2.5	No standard														
CO	No standard														
SMAQMD	<u>BACT</u> Source: SMAQMD BACT Clearinghouse <table border="1" data-bbox="441 1098 1403 1423"> <tr> <td colspan="2">Portable Gypsum Drywall Recycling Trommel Screen</td></tr> <tr> <td>VOC</td><td>No standard</td></tr> <tr> <td>NOx</td><td>No standard</td></tr> <tr> <td>SOx</td><td>No standard</td></tr> <tr> <td>PM10</td><td>No standard</td></tr> <tr> <td>PM2.5</td><td>No standard</td></tr> <tr> <td>CO</td><td>No standard</td></tr> </table> <u>RULE REQUIREMENTS:</u> Rule 401 – Ringlemann Chart (4-19-83) This rule limits the discharge of air contaminants into the atmosphere through visible emissions and opacity. The rule sets an opacity standard of 20% opacity for this type of operation. Water sprays are proposed by the applicant to meet this limit and they have been used by similar operations (aggregate processing) in the past to meet such standard. The applicant is limited in the amount of water that can be added to the gypsum material as this would create plugging issues with the screen and thus the reason for the proposed 20% opacity.	Portable Gypsum Drywall Recycling Trommel Screen		VOC	No standard	NOx	No standard	SOx	No standard	PM10	No standard	PM2.5	No standard	CO	No standard
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South Coast AQMD	<p><u>BACT</u> Source: SCAQMD BACT Guidelines for Non-Major Polluting Facilities, page 13.</p> <table border="1" data-bbox="440 422 1401 781"> <tr> <td colspan="2">Portable Gypsum Drywall Recycling Trommel Screen</td></tr> <tr> <td>VOC</td><td>No standard</td></tr> <tr> <td>NOx</td><td>No standard</td></tr> <tr> <td>SOx</td><td>No standard</td></tr> <tr> <td>PM10</td><td>No standard</td></tr> <tr> <td>PM2.5</td><td>No standard</td></tr> <tr> <td>CO</td><td>No standard</td></tr> </table> <p><u>RULE REQUIREMENTS:</u> Rule 401 – Visible Emissions (11-9-01) This rule limits the discharge of air contaminants into the atmosphere through visible emissions and opacity. The rule sets an opacity standard of 20% opacity for this type of operation.</p>	Portable Gypsum Drywall Recycling Trommel Screen		VOC	No standard	NOx	No standard	SOx	No standard	PM10	No standard	PM2.5	No standard	CO	No standard
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San Diego County APCD	<p><u>BACT</u> Source: NSR Requirements for BACT, page 27.</p> <table border="1" data-bbox="440 1119 1401 1486"> <tr> <td colspan="2">Portable Gypsum Drywall Recycling Trommel Screen</td></tr> <tr> <td>VOC</td><td>No standard</td></tr> <tr> <td>NOx</td><td>No standard</td></tr> <tr> <td>SOx</td><td>No standard</td></tr> <tr> <td>PM10</td><td>No standard</td></tr> <tr> <td>PM2.5</td><td>No standard</td></tr> <tr> <td>CO</td><td>No standard</td></tr> </table> <p>The SDCAPCD has a BACT trigger level of 10 lb/day.</p> <p><u>RULE REQUIREMENTS:</u> Rule 50 – Visible Emissions (8-13-97) This rule limits the discharge of air contaminants into the atmosphere through visible emissions and opacity. The rule sets an opacity standard of 20% opacity for this type of operation.</p>	Portable Gypsum Drywall Recycling Trommel Screen		VOC	No standard	NOx	No standard	SOx	No standard	PM10	No standard	PM2.5	No standard	CO	No standard
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District/Agency	Best Available Control Technology (BACT)/Requirements														
Bay Area AQMD	<p><u>BACT</u> Source: BAAQMD BACT Guideline Document 180.1 (8/5/91)</p> <table border="1" data-bbox="440 438 1401 766"> <tr> <td colspan="2">Portable Gypsum Drywall Recycling Trommel Screen</td></tr> <tr> <td>VOC</td><td>No standard</td></tr> <tr> <td>NOx</td><td>No standard</td></tr> <tr> <td>SOx</td><td>No standard</td></tr> <tr> <td>PM10</td><td>No standard</td></tr> <tr> <td>PM2.5</td><td>No standard</td></tr> <tr> <td>CO</td><td>No standard</td></tr> </table> <p>The BAAQMD has a BACT trigger level of 10 lb/day.</p> <p><u>RULE REQUIREMENTS:</u> Regulation 6 - Particulate Matter Rule 1 – General Requirements (12-5-07) This rule limits the discharge of air contaminants into the atmosphere through visible emissions and opacity. The rule sets an opacity standard of 20% opacity for this type of operation.</p>	Portable Gypsum Drywall Recycling Trommel Screen		VOC	No standard	NOx	No standard	SOx	No standard	PM10	No standard	PM2.5	No standard	CO	No standard
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San Joaquin Valley APCD	<p><u>BACT</u> Source: SJVUAPCD BACT Guideline 6.4.1</p> <table border="1" data-bbox="440 1165 1401 1514"> <tr> <td colspan="2">Portable Gypsum Drywall Recycling Trommel Screen</td></tr> <tr> <td>VOC</td><td>No standard</td></tr> <tr> <td>NOx</td><td>No standard</td></tr> <tr> <td>SOx</td><td>No standard</td></tr> <tr> <td>PM10</td><td>No standard</td></tr> <tr> <td>PM2.5</td><td>No standard</td></tr> <tr> <td>CO</td><td>No standard</td></tr> </table> <p>The SJVAPCD BACT trigger level is 2 lb/day.</p> <p><u>RULE REQUIREMENTS:</u> Rule 4101 – Visible Emissions (2-17-05) This rule limits the discharge of air contaminants into the atmosphere through visible emissions and opacity. The rule sets an opacity standard of 20% opacity for this type of operation.</p>	Portable Gypsum Drywall Recycling Trommel Screen		VOC	No standard	NOx	No standard	SOx	No standard	PM10	No standard	PM2.5	No standard	CO	No standard
Portable Gypsum Drywall Recycling Trommel Screen															
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PM2.5	No standard														
CO	No standard														

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	1. VEE < or equal to 20% Opacity; Water spray or adequate moisture of process materials	SMAQMD, SCAQMD, SJVAPCD, BAAQMD, SDAPCD, APPLICANT
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	VEE < or equal to 20% Opacity; Water spray or adequate moisture of process materials	SMAQMD, SCAQMD, SJVAPCD, BAAQMD, SDAPCD, APPLICANT
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
VOC	None identified
NOx	None identified
SOx	None identified
PM10	Baghouse
PM2.5	Baghouse
CO	None identified

This operation is a portable gypsum drywall trommel screen that will be moved throughout the processing area. The use of a baghouse requires electrical power. The engines on these types of equipment can only power the equipment that is associated with the manufactured unit and cannot power additional equipment such as baghouses. This BACT will also apply to facilities that don't own their own equipment. These facilities would be issued flex permits, that will allow them to use equipment from various third party contractors. The requirement of a baghouse would put the burden on the operator or facility to obtain an additional permit for the baghouse. The trommel screen is on wheels and can be easily moved from one location to another. The use of a baghouse would reduce the mobility of the equipment. There would also be a variation in the hp rating of the equipment, which may require a specific baghouse to be used with specific equipment. Therefore, it is not technologically feasible to use a baghouse with this type of portable equipment.

Using the PM10 BACT standard for PM2.5:

Since both, PM10 and PM2.5 trigger BACT at >0 lb/day and PM2.5 is a subset of PM10, BACT for PM2.5 will be triggered whenever BACT is triggered for PM10. Therefore, BACT for PM2.5 will be set to be the same as for PM10.

C. SELECTION OF BACT

Small emitter BACT (< 10 lb/day) & Minor Source BACT for a portable gypsum drywall trommel screen is the following:

BACT FOR PORTABLE GYSPUM DRYWALL TROMMEL SCREEN		
Pollutant	Standard	Source
VOC	No standard	
NOx	No standard	
SOx	No standard	
PM10	VEE < or equal to 20% Opacity; Water spray or adequate moisture of process materials	SMAQMD, SJVAPCD, SCAQMD
PM2.5	VEE < or equal to 20% Opacity; Water spray or adequate moisture of process materials	SMAQMD, SJVAPCD, SCAQMD
CO	No standard	

REVIEWED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____