



Proposed Updates to BACT Guidelines

BACT Scientific Review Committee
April 4, 2017

Background

- **Updated BACT Guidelines and established Charter for BACT SRC at December 2016 Board meeting**
- **Board directed staff to continue work on updating BACT Guidelines, reviewing BACT determinations done by other air districts with an emphasis on UV/EB inks and coatings technology and report back to Stationary Source Committee by June 2017 on proposed updates**
- **First BACT Scientific Review Committee meeting today April 4, 2017**

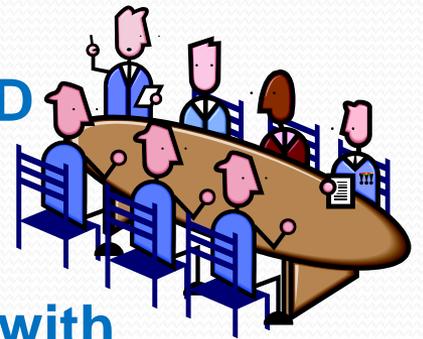
Background (cont'd)

- **BACT required for new and relocated sources and for modifications that increase emissions**
- **SCAQMD required to periodically publish BACT Guidelines which were first published in 1983**
- **Major facilities - Federal CAA requirement for LAER implemented through BACT**
- **Minor Source - BACT determined in accordance with State law H&SC 40440.11 (SB 456, 1995)**
- **This report summarizes proposed updates to the BACT Guidelines**



Proposed Updates to BACT Guidelines

- Parts B and D (major & minor source BACT)
- Reviewed achieved in practice BACT for UV/EV inks and coatings, Food Ovens and other equipment categories
- Reviewed BACT determinations from SCAQMD Engineering & Permitting and other Air Districts
- Conducted site visits to facilities and worked with printing industry trade organizations
- Proposing to update BACT determinations to maintain consistency with recent changes to SCAQMD rules, State and Federal requirements
- Proposed BACT webpage update “User Friendly”



Part B, Section I, SCAQMD LAER/BACT



New Listings

Furnace (Heat Treating)

5MMBtu/hr, Low NOx burner, NOx=5040ppm & CO=143ppm



Aggregate Dryer Burner

TBD



Food Oven- Bakery

Four ovens: 3.2, 2.8, 3.2 & 5.4MMBtu/hr vented to 4MMBtu/hr CatOx Rule 1147 compliant, Ovens NOx=40ppm, CO=800ppm.



Food Oven- Tortilla Chip

5.774MMBtu/hr, IR & Ribbon burners, NOx=54ppm @ 1 hr. avg., CO=2000ppm, @ 15 min. avg.



Food Oven- Snack Food

1.6MMBtu/hr, Maxon Low NOx burner, NOx=25ppm, CO=75ppm, both @ 1 hr. avg. 3% O₂



Flare- Biogas

12MMBtu/hr, Zink ultra Low NOx, NOx=0.025 lb/MMBtu, CO=0.06 & VOC=0.038
39.3MMBtu/hr, NOx=0.025, CO=0.06, VOC=5.5, PM=14.2



Flare- Landfill Gas

120MMBtu/hr, Zink ultra Low NOx, NOx=0.025 lb/MMBtu, CO=0.06; VOC=1.33 lb/hr, PM=1.4 lb/hr & SOx=2.5 lb/hr



Part B, Section I, SCAQMD LAER/BACT



Listing Updates

Boilers

39.9 MMBtu/hr, Low NOx burner, SCR & anhydrous NH₃. NOx=5ppm, CO=100ppm & NH₃=5ppm



I.C. Engine – Digester Gas Fired

Compliance with Rule 1110.2(d)(1)(C); NOx=11ppm, VOC=30ppm & CO=250ppm



Part B, Section II, Other LAER/BACT



New Listings II

Printing (Graphic Arts) Flexographic

SJVAPCD: Use of materials with VOC equal to or lower than: UV-curing inks – 1% by weight, UV-cured coatings- 8% by weight and evaporative minimization methods (use of closed containers)



Fiberglass Operations, Application Hand and Spray Lay up

BAAQMD: Compliance with BAAQMD Reg. 8, Rule 50 use of polyester resin with monomer content <34% by weight & use of aqueous emulsion cleaner or acetone for clean up.



Part B, Section III, Other Technologies



New Listings

I.C. Engine- Emergency Compression Ignition with PM Trap and SCR

Equipped with SCR & DPF certified to meet EPA Tier 4 emission limits: NMHC=0.14 g/bhp-hr, NOx=0.5 g/bhp-hr, CO=2.61 and PM=0.022 g/bhp-hr



Distributed Generation Fuel Cell with digester gas clean up system

Equipped with 2.5 MMBtu/hr heater fired on digester gas used for start up, cool down and low power operation. Rule 222 limited $\leq 90,000$ therms/yr. NOx=0.07, VOC=CO=0.10 lb/Mw-hr



Part D, BACT for Non-Major Facilities



New Listings

Printing (Graphic Arts) Flexographic

or UV/EB or water-based inks/coatings, and use of super compliant cleaning solvents



Printing (Graphic Arts) Screen Printing and Drying

or UV/EB or water-based inks/coatings, and use of super compliant cleaning solvents



Printing (Graphic Arts) Lithographic or Offset, Heatset

Add-on control of afterburner



Part D, BACT for Non-Major Facilities



New Listings

Food Oven

– Ribbon burner

>500°F: NO_x = 60 ppm, CO= Rule 407/1153.1, PM₁₀=SO_x= Nat Gas

<500°F: NO_x = 30 ppm, CO= Rule 407/1153.1, PM₁₀=SO_x= Nat Gas

– Direct fired

NO_x = 30 ppm, CO=Rule 407/1153.1 100ppm TBD,
PM₁₀=SO_x= Nat Gas [TBD NO_x=15ppm, CO=100ppm]

– Infrared

NO_x = 30 ppm, CO= CO=Rule 407/1153.1 100ppm TBD,
PM₁₀=SO_x= Nat Gas

– Add-on Control

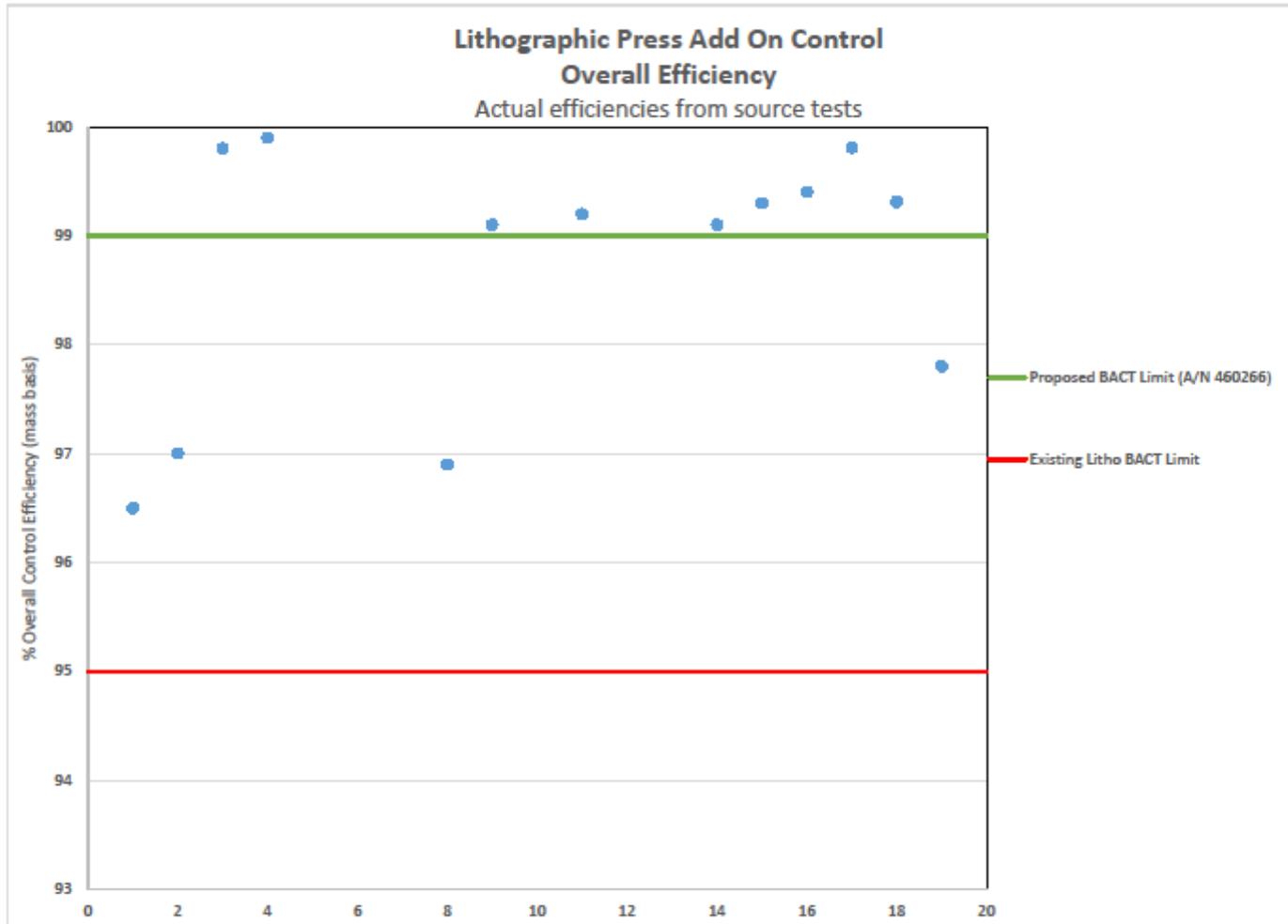
NO_x=30 ppm, CO=Rule 407 100-TBD, PM₁₀=SO_x= Nat Gas, CatOx with 95% control, 600°F inlet temp & ceramic pre filter

– Meat, Other

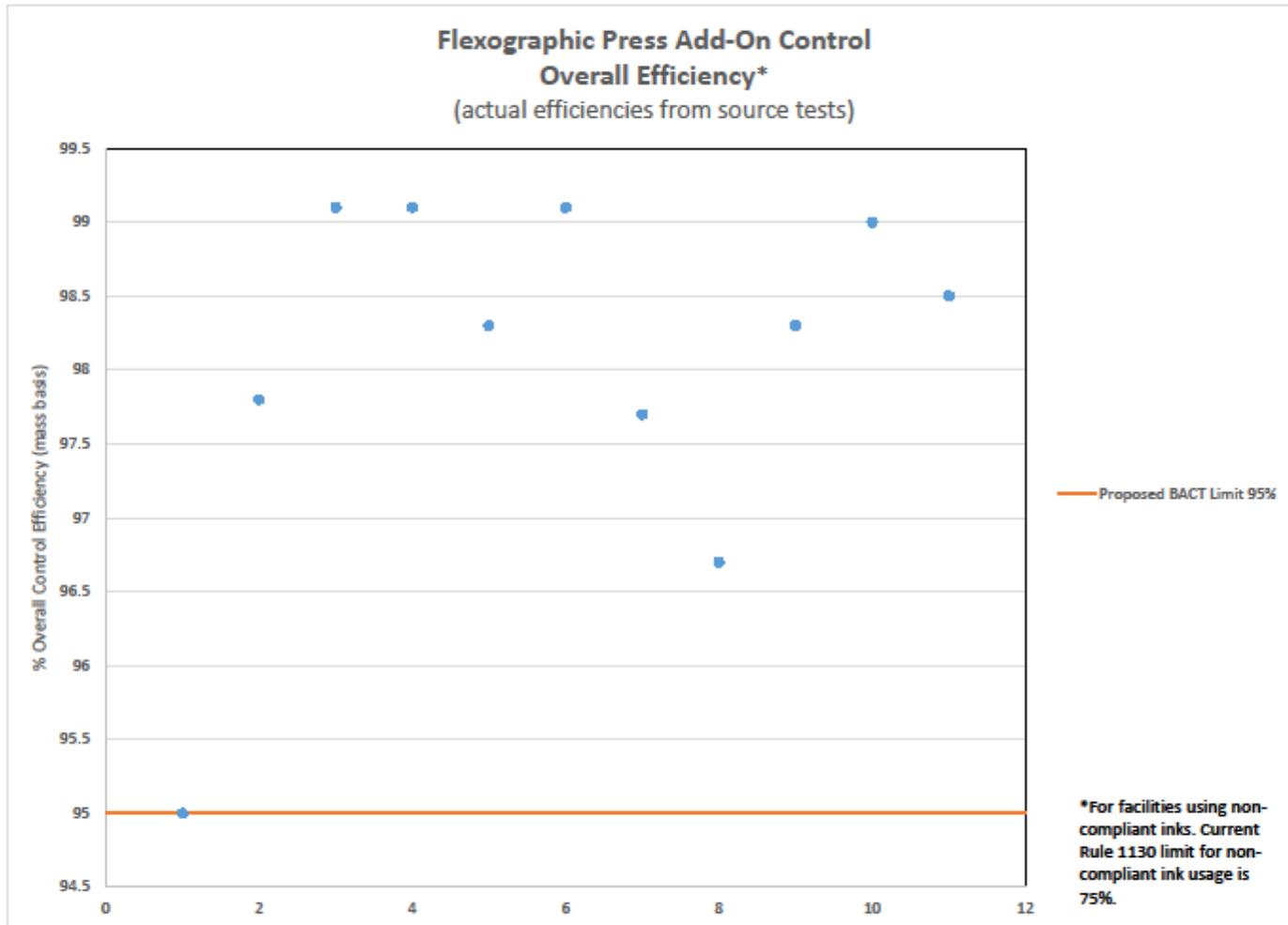
Compliance with applicable Rules & Regulations



Permitted Lithographic Press Add-On Controls



Permitted Flexographic Press Add-On Controls



Part D, BACT for Non-Major Facilities



Listing Updates

**I.C. Engine, Stationary,
Non-Emergency
Electrical Generators**

Compliance with Rule
1110.2



Food Oven - Bakery

Add-on control ≥ 25 lbs/day
~~VOCC~~ Compliance with Rule 1153



Food Oven – Other

Compliance with Rule
1153.1



**I.C. Engine, Stationary
Non-Emergency, Non-
Electrical Generators**

Footnote regarding new I.C.
Engine, Stat. Non-Emerg.
Elect. Gen. determination

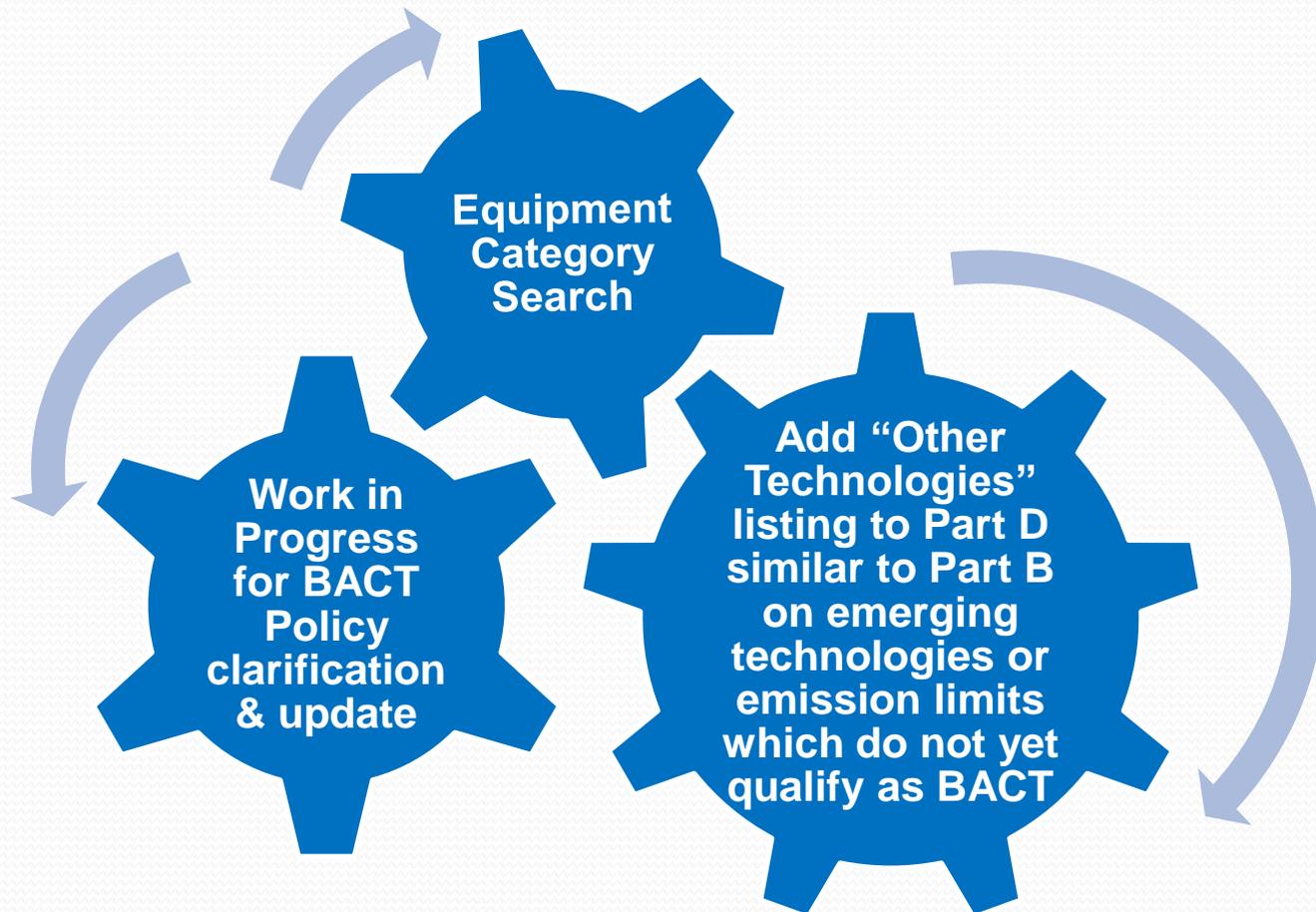


Dryer or Oven

Footnote of non-applicability
to food oven



Making BACT Guidelines User Friendly



Equipment Category Search

The screenshot shows a web browser window displaying the South Coast Air Quality Management District website. The browser's address bar shows the URL: <http://sfdev.aqmd.gov/home/permits/bact/guidelines/Action/Preview>. The website header includes the South Coast Air Quality Management District logo and name, a search bar, and social media icons for Facebook, Twitter, Email, RSS, and YouTube. The breadcrumb trail is: Home / Permits / Best Available Control Tech. / Guidelines. The main heading is "BACT Guidelines". Below the heading is a social media sharing bar. A green arrow points to the link "EQUIPMENT CATEGORY SEARCH" under the heading "Best Available Control Technology Guidelines". The text below states: "The BACT Guidelines consist of the following elements:" followed by a list of links to various guideline sections. On the right side, there are two sidebars: "Trending" with links to "Torrance Refinery", "SCAQMD Rule Book Rules", "Special Meeting of the SCAQMD Governing Board: March 9, 2017", and "Proposed Rules"; and "More Information" with a "Contact" section listing the "BACT Team" and phone numbers: 909-396-2516 and 909-396-2491. The Windows taskbar at the bottom shows the time as 11:01 AM on 3/9/2017.

South Coast Air Quality Management District

Home / Permits / Best Available Control Tech. / Guidelines

BACT Guidelines

[New proposed link](#)

Best Available Control Technology Guidelines

EQUIPMENT CATEGORY SEARCH

The BACT Guidelines consist of the following elements:

- [Overview](#) (PDF, 557kb)
- [PART A: POLICY AND PROCEDURES FOR MAJOR POLLUTING FACILITIES](#) (PDF, 557kb)
Part A of the BACT Guidelines explains what BACT is, why it is required, when it is required, and how it is determined for major polluting facilities. Persons who want to learn about BACT and the BACT process for major polluting facilities should start by reading Part A.
- [PART B: LAER/BACT DETERMINATIONS FOR MAJOR POLLUTING FACILITIES](#)
The current Part B began in March 1999 with listings for only boilers, degreasers, and spray booths. As new permits are issued, they will be added to the current Part B, which includes three sections:
 - [Section I - SCAQMD LAER/BACT Determinations](#), provides information on LAER/BACT determinations contained in permits issued by SCAQMD.
 - [Section II - Other LAER/BACT Determinations](#), provides information about LAER/BACT requirements in permits or guidelines issued by other agencies.
 - [Section III - Other Technologies](#), provides information on technologies which have been achieved in practice but are not reflected in a permit limit, and information on emerging technologies or emission limits which have not yet been achieved in practice and do not yet qualify as LAER.
- [PART C: POLICY AND PROCEDURES FOR NON-MAJOR POLLUTING FACILITIES](#) (PDF, 557kb)

Trending

- [Torrance Refinery](#)
- [SCAQMD Rule Book Rules](#)
- [Special Meeting of the SCAQMD Governing Board: March 9, 2017](#)
- [Proposed Rules](#)

More Information

Contact

[BACT Team](#)
Ph: 909-396-2516
909-396-2491

EQUIPMENT CATEGORIES

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Index of Equipment Categories

A

Abrasive Blasting Room

Absorption Chiller

Air Start Unit

Air Stripper – Ground Water Treatment

Aluminum Mating Furnace

Ammonium Bisulfate and Thiosulfate Production

Asbestos Machining Equipment

Asphalt Batch Plant

Asphaltic Day Tanker

Auto Body Shredder

EQUIPMENT CATEGORIES

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Index of Equipment Categories

Search 

Abrasive Blasting Room

Part D- Minor Source

1. Abrasive Blasting - Enclosed

Part B- Major Source - LAER

I. SCAQMD Listings

[Abrasive Blasting Room, Rohr, Ind. A/N 391420 12/6/02](#)

II. Other Districts

TBD

III. Other/Potential Technologies

TBD

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*
10-20-2000 Rev. 0

Equipment or Process: Abrasive Blasting - Enclosed

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
All					Baghouse or Cartridge Dust Collector (07-11-97)	

Section I: AQMD BACT Determination -
Application No.: 391420
Equipment Category - Abrasive Blasting Room

1. GENERAL INFORMATION DATE: 11/14/2002

A. MANUFACTURER: Cimco Industries
B. TYPE: Constarach C. MODEL:
E. APPLICABLE REGULATIONS: 1146, 401, 402, 404, 405, 1409
F. CODE: 5 (NA) SOURCE OF CODE DATA:
G. OPERATING SCHEDULE: 24 HRS/DAY 3 DAYS/WK 52 WKS/YR

2. EQUIPMENT INFORMATION APP NO: 391420

A. FUNCTION: Facility manufactures aircraft parts. This abrasive blasting room (RECLAIM device No. D214) is used to remove excess adhesive materials from parts. Constarach particles are used as the abrasive medium. Blasting is done by hand using a 1/2" velocity air nozzle. After contacting the part, the particles drop through a floor grate and are recaptured to a cyclone for recovery. Air from the cyclone is filtered prior to exhaust.

C. DIMENSIONS: 12'0" W x 8'6" H x 17'4" L
E. MATERIAL STORAGE/PROCESSING/LOADING: Constarach TOTAL FLOW RATE: acfm
F. THROUGHPUT/PROCESS RATE/LOAD RATE:

Next Steps / Discussion / Other Items

- **30-day comment period**
- **Schedule follow up BACT SRC meeting in May 2017**
- **Report / Presentation at Stationary Source Committee meeting June 16, 2017**
- **Bring back Board Package to July 2017 Stationary Source Committee**
- **September 2017 Governing Board Meeting**
- **Comments/Responses**

BACT Scientific Review Committee

Lisa Beckham U.S. EPA Region IX	Gov	Bill LaMarr Calif. Small Business Alliance	Trade Assoc.
Dave Mehl CARB	Gov	Bridget McCann WSPA	Trade Assoc.
Steve Moore San Diego APCD	Gov	Rita Loof RadTech	Trade Assoc.
Rizaldo Aldas California Energy Commission	Gov	Karl Lany Montrose Environ. Group, Inc.	A.Q. Pract.
Nicholas Maiden Bay Area AQMD	Gov	Anoosheh Mostafaei Ship & Shore Environ., Inc.	A.Q. Pract.
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