



South Coast AQMD BACT Guidelines Overview

**BACT Scientific Review
Committee Meeting**

June 4, 2025

Meeting Location: South Coast AQMD, Conference Room GB

Zoom Webinar: <https://scaqmd.zoom.us/j/92579517440>

Webinar ID: 925 7951 7440

Call-in number: 1-669-900-6833

Outline



South Coast AQMD BACT Guidelines



BACT Scientific Review Committee



BACT LAER/BACT Listings Update Process



Cost-Effectiveness in BACT Determinations



Next Steps in the BACT Guidelines Update Process



Public Comments

Outline

- South Coast AQMD BACT Guidelines
 - BACT Scientific Review Committee
 - BACT LAER/BACT Listings Update Process
 - Cost-Effectiveness in BACT Determinations
 - Next Steps in the BACT Guidelines Update Process
 - Public Comments

South Coast AQMD BACT Guidelines

BACT Applicability and Criteria

- Best Available Control Technology (BACT) is a major element of Regulation XIII – New Source Review (NSR)
- During permitting, NSR analysis is performed for
 - New sources
 - Relocated sources
 - Modifications to an existing source
- BACT is required if NSR analysis shows:

Emissions increase

≥ 1.0 lb/day

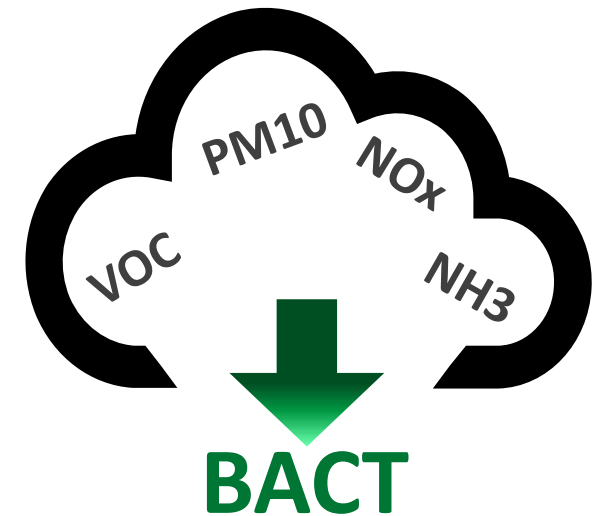
(Cumulative increases within a 5-year period will be subject to BACT)



Nonattainment air contaminant
(NO_x, VOC, SO_x, PM₁₀)

Ozone depleting compound

Ammonia



South Coast AQMD BACT Guidelines Background



- BACT Guidelines are periodically updated to
 - Reflect advancements in technology
 - Ensure affected equipment use the cleanest technologies
- BACT Guidelines are published for commonly permitted equipment:
 - Based on category or class of source
 - Source is defined as an individual permit unit
 - Engine, boiler, spray booth, etc.
 - Technical feasibility considered for the class and category of source

BACT is the most stringent emission limitation or control technique for a class & category of equipment that is:

Achieved in Practice (AIP), or

Contained in a State Implementation Plan (SIP), or

Technologically Feasible and Cost-Effective

South Coast AQMD BACT Guidelines

Structure and Facility Types



BACT Guidelines Structure

- Overview
- Parts A & B: Major Polluting Facilities LAER*/BACT
- Parts C & D: Non-Major (Minor) Polluting Facilities BACT
- Parts E & F: Prevention of Significant Deterioration (PSD) for GHGs

* Lowest Achievable Emission Rate

Facility Types

Major Polluting Facilities

- Has the potential to emit criteria pollutants at or above Clean Air Act thresholds, depending on attainment status
- Additional stringencies due to federal regulations
- Does not allow for routine consideration of cost
- Determined based on info at time of permit to construct issuance

Non-Major (Minor) Polluting Facilities

- Smaller emitting facilities
- CA H&SC Section 40440.11
- Cost-effectiveness analysis required
- Requires Board approval
- Determined at the time an application is deemed complete

South Coast AQMD BACT Guidelines

BACT Guidelines Update History and Process



✓ BACT Guidelines first published in 1983

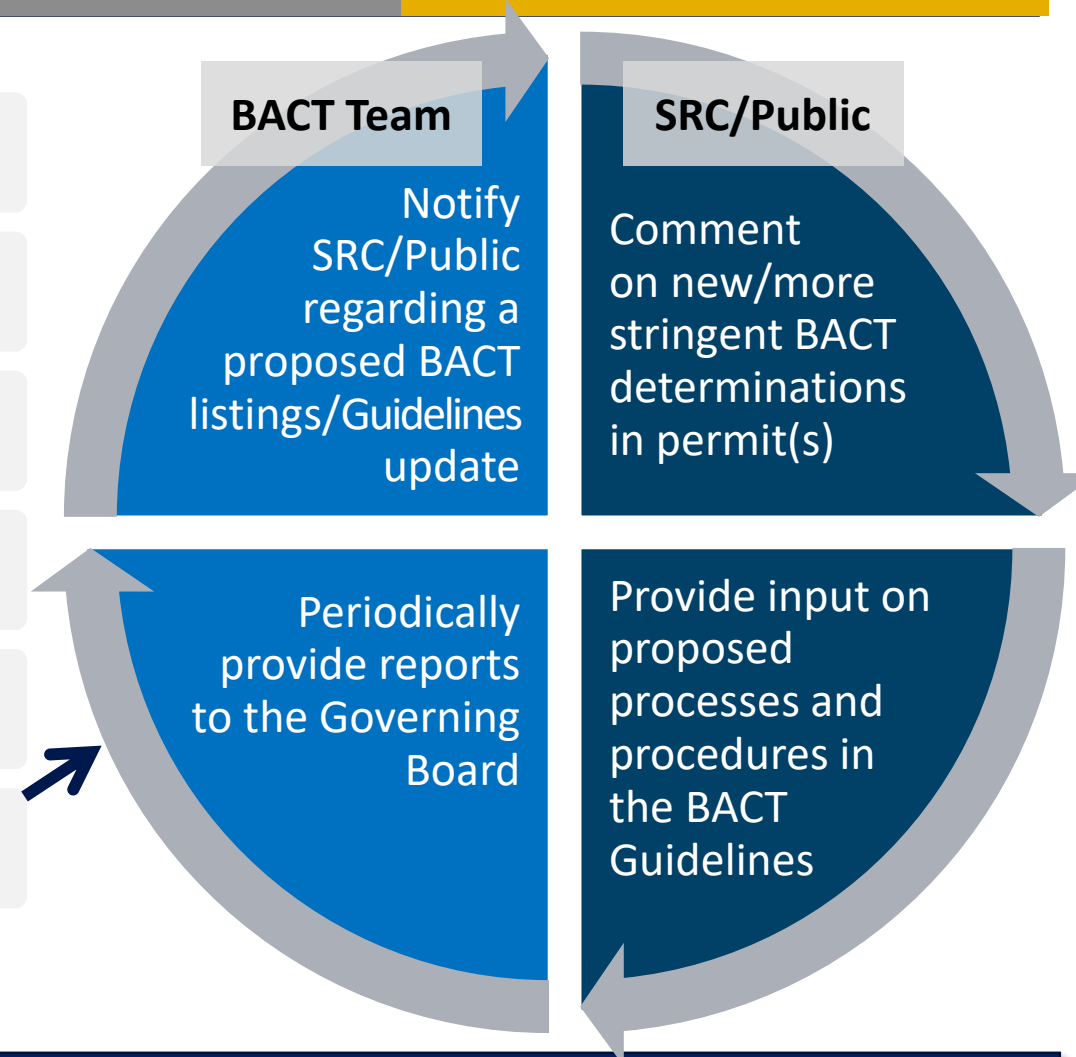
■ Major revisions in 1988, 1995, and 1998 incorporated Clean Fuel guidelines and extended BACT listings

■ December 1998 - Governing Board approved new BACT process and format

■ October 2000 - Minor Source BACT adopted

■ December 2016 - Additional parts were added to address PSD requirement for GHG emissions

■ Ongoing process to streamline the update process as well as reflect new lower emitting technologies



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BACT Scientific Review Committee

Introduction



- **Originated from a 1994 initiative** to update BACT Guidelines
- **Established in 1995** by South Coast AQMD Governing Board as a standing committee:
 - To provide comments on proposed BACT Guidelines updates
 - To contribute knowledge and experience on technical issues
 - To assist staff in developing and implementing BACT procedures/methodologies
 - That is an advisory body composed of air quality experts
- **BACT SRC Charter** adopted in 2016 and available online on the BACT SRC webpage or https://www.aqmd.gov/docs/default-source/bact-src/bact-src-charter/amended-bact-src-charter_02012019.pdf

BACT Scientific Review Committee

Mission & Goals



Mission

To assist and advise South Coast AQMD staff in ensuring BACT Guidelines are developed in a clear, consistent, and technically sound public process

Goals

Contribute to the development of the BACT Guidelines through a public process

Provide technical expertise on proposed BACT updates

Advise on a more predictable and certain BACT determination process

BACT Scientific Review Committee

Key Objectives



- The BACT SRC achieves its goals by:

Providing written and verbal comments to South Coast AQMD staff on proposed BACT Guidelines

Sharing technical knowledge and encouraging discussion on Emerging Technologies

Ensuring BACT Guidelines align with local, state, and federal requirements

BACT Scientific Review Committee Membership Structure

- Up to 19 members appointed by the Executive Officer
- Members are technical/scientific air quality professionals
- 2-year terms with reappointment eligibility
- Alternates allowed with Executive Officer approval



Email BACTTeam@aqmd.gov to join the BACT SRC interested membership list

BACT SRC Membership List

https://www.aqmd.gov/docs/default-source/bact-src/bact-src_membershiplist_042325.pdf

BACT Scientific Review Committee

Public Meetings



- **Meetings held periodically** during BACT updates
- **Governed by Brown Act:** public access and transparency required
 - Regular meetings – Agenda posted 72 hours in advance
 - Posted in publicly accessible location for entire posting period within jurisdiction
- **AB 1234 Ethics Training** required for all members and alternates
- **New BACT listings** will be sent to SRC members at least one week prior to the SRC meeting
- **30-day public comment period** for proposed amendments to BACT Guidelines followed by a final public BACT SRC meeting
- **Report to the Stationary Source Committee and the Governing Board**

BACT Scientific Review Committee

Public Participation & Reporting



- **BACT SRC meetings are open to the public**
- **Teleconference Meeting:**
 - Each teleconference location shall be accessible to the public
 - Each teleconference location shall be identified in the notice and agenda
 - Members of the public must be able to hear the meeting and testify from each location
 - Teleconference locations must be accessible to the disabled
 - Agenda must be posted at all teleconference locations
- **Opportunity for public to comment on proposed Guidelines updates**
- **Prior permitting decisions** not discussed unless relevant

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LAER/BACT Listings Update Process

More Stringent LAER



- **LAER/BACT Determinations for Major Polluting Facilities**

- **Section I** – South Coast AQMD LAER/BACT Determinations
- **Section II** – Other LAER/BACT Determinations
- **Section III** – Other Technologies

**Achieved in Practice, or
Contained in a State Implementation Plan**

Required by federal law,
as LAER for major sources

- **LAER Update Process: Section I - South Coast AQMD LAER/BACT Determinations**

- To make a LAER determination more stringent than current LAER
 - Notify the public and BACT SRC through a public process, provide 30-day public review
 - Include written comments in the BACT Docket
 - Evaluate comments filed during the 30-day period, before making a permit decision
 - Provide standing status reports to the Stationary Source Committee and to the Governing Board

LAER/BACT Listings Update Process

More Stringent BACT (cont'd)



- **BACT Update Process:**

- To make BACT more stringent than LAER

or

- In establishing Non-major Polluting Facility BACT

- Evaluate cost-effectiveness
 - Notify the public and BACT SRC through a public process, provide 30-day public review
 - Include written comments in the BACT Docket
 - Evaluate comments filed during the 30-day period, before making a permit decision
 - Provide a report to the Stationary Source Committee
 - Present to the Governing Board for approval at a public hearing
 - Update the BACT Guidelines

Technologically Feasible and Cost-Effective

Unique to South Coast AQMD and some other areas in California and allows for more stringent controls than LAER

LAER/BACT Listings Update Process

California Health and Safety Code Requirements for BACT



- **Public Hearing Required:** Hold a public hearing before approving any BACT Guideline revisions that change BACT policy or implementation procedures (per § 40440.10)
- **Before establishing Non-major Polluting Facility BACT or making BACT more stringent than LAER for a source category:**
 - Identify potential BACT control alternatives
 - Ensure proposed limit is AIP (≥ 1 year) with commercially available equipment/process
 - Assess cost-effectiveness of each alternative (annual cost per ton reduced)
 - Calculate incremental cost-effectiveness between options
 - Present proposed BACT revision to South Coast AQMD Governing Board(per §40440.14)
- **Statewide clearinghouse:** Use the State Board's statewide clearinghouse when updating BACT determinations (per § 40920.8)

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- Next Steps in the BACT Guidelines Update Process
- AB 617 Technology Clearinghouse Update
- Public Comments

Cost-Effectiveness in BACT Determinations

■ What is Cost-Effectiveness (CE)?

- Required when establishing BACT standards beyond LAER as well as for Non-major Polluting Facilities*
- Defined as “ ... compared to measures as listed in AQMP or rules adopted by the Governing Board”**
- Expressed as dollars per ton of emissions reduced
- Benchmarks based on control measures from the 1994 AQMP and adopted rules

* Per H&SC §40440.11

** Rule 1302 (h)(3)

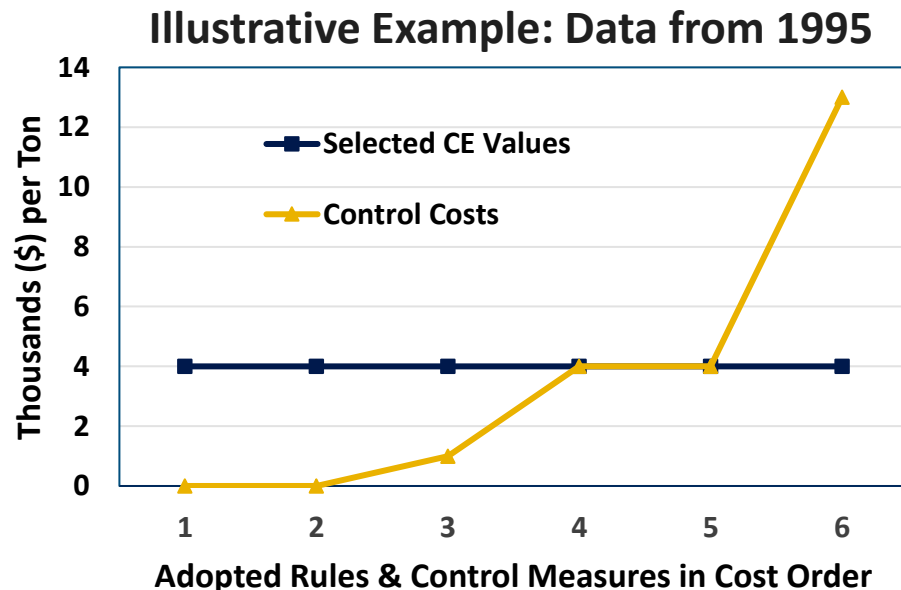


Cost-Effectiveness in BACT Determinations

Background

➤ Cost-Effectiveness threshold basis:

- **BACT:** Control cost as established in 1995 BACT Methodology Report and adjusted quarterly



	Average (Incremental) \$/ton*	2022 AQMP \$/ton**
ROG	\$42,037 (\$126,112)	\$36,000
NOx	\$39,748 (\$119,036)	\$325,000
SOx	\$21,019 (\$63,056)	_***
PM10	\$9,365 (\$27,886)	_***
CO	\$832 (\$2,393)	_***

* 1st Quarter 2025 – Adjusted quarterly using M&S Cost Index

** 2022 – Adjusted annually using the California CPI

*** No CE thresholds

Note: \$325,000 is mid-point between the estimates from the 2016 AQMP and 2035 benefits/ton of NOx estimate in CA (2021 Dollars) from three sectors, including monetized public health benefits

Cost-Effectiveness in BACT Determinations

Calculating Cost Effectiveness

■ Major Parameters in Cost-Effectiveness Analysis:



Capital (One-time) Costs



Annual Operating (Recurring) Costs



Real Interest Rate



Project/Equipment Life



Emissions Reduced Over Project Life

Cost-Effectiveness Methodology

- Discounted cash flow (DCF) method
- Calculate present value of all costs, applying present value factor (PVF) to annual costs

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Next Steps in the BACT Guidelines Update Process



Please Provide Your Comments to
BACTTeam@aqmd.gov
Include "BACT Docket" in the Subject Line

BACT Scientific Review
Committee Meetings*
(2025)

Stationary Source
Committee Meeting
(Early to Mid 2026)

Governing Board
Meeting
(Early to Mid 2026)

* BACT Team provides a report to the Stationary Source Committee once proposed amendments to the BACT Guidelines have been presented at a public BACT SRC meeting initiating a 30-day comment period followed by a final public BACT SRC meeting.

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☒ BACT
 Guidelines



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The South Coast AQMD offers periodic newsletter updates via Email on a variety of topics . Click on the Manage Subscriptions link at the bottom of the form to update your subscriptions (unsubscribe from lists, subscribe to additional lists, or change your Email address).

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Enter the following information:

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BACT Staff Contact Information

Please contact staff with any questions or comments

Bahareh Farahani

Program Supervisor
BACT Team, E&P



(909) 396-2353



BFarahani@aqmd.gov

Bettina Burleigh Sanchez

Senior Air Quality Engineer
BACT Team, E&P



(909) 396-3245



BBurleigh@aqmd.gov

BACT Team

Shared Mailbox



BACTTEAM@aqmd.gov

<http://www.aqmd.gov/home/permits/bact>

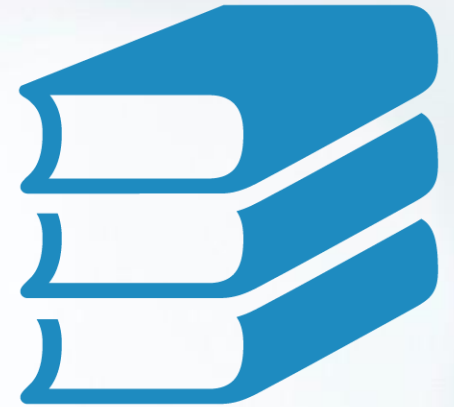


AB 617 Technology Clearinghouse (TCH) Update for SRC

June 4, 2025

Technology Clearinghouse Background

- 2017 California adopted Assembly Bill (AB) 617
 - Community-informed local emissions and exposure reduction actions
 - The Blueprint, adopted September 2018 and updated to Blueprint 2.0 October 2023
- Technology Clearinghouse goals:
 - One-stop-shop for new, existing, and Next-Generation Technology (NextGen)
 - Show data in a format that is useful to all user groups



User Groups

Public

AB 617 Communities
Academia
General public



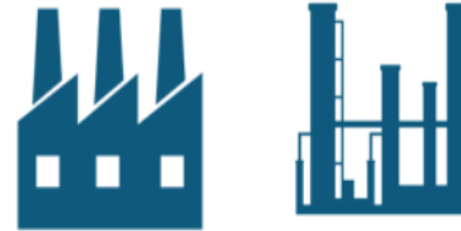
Government

Air Districts
CARB
EPA
Partner agencies



Technology Users

Sources subject
to air emission
regulations



Manufacturers

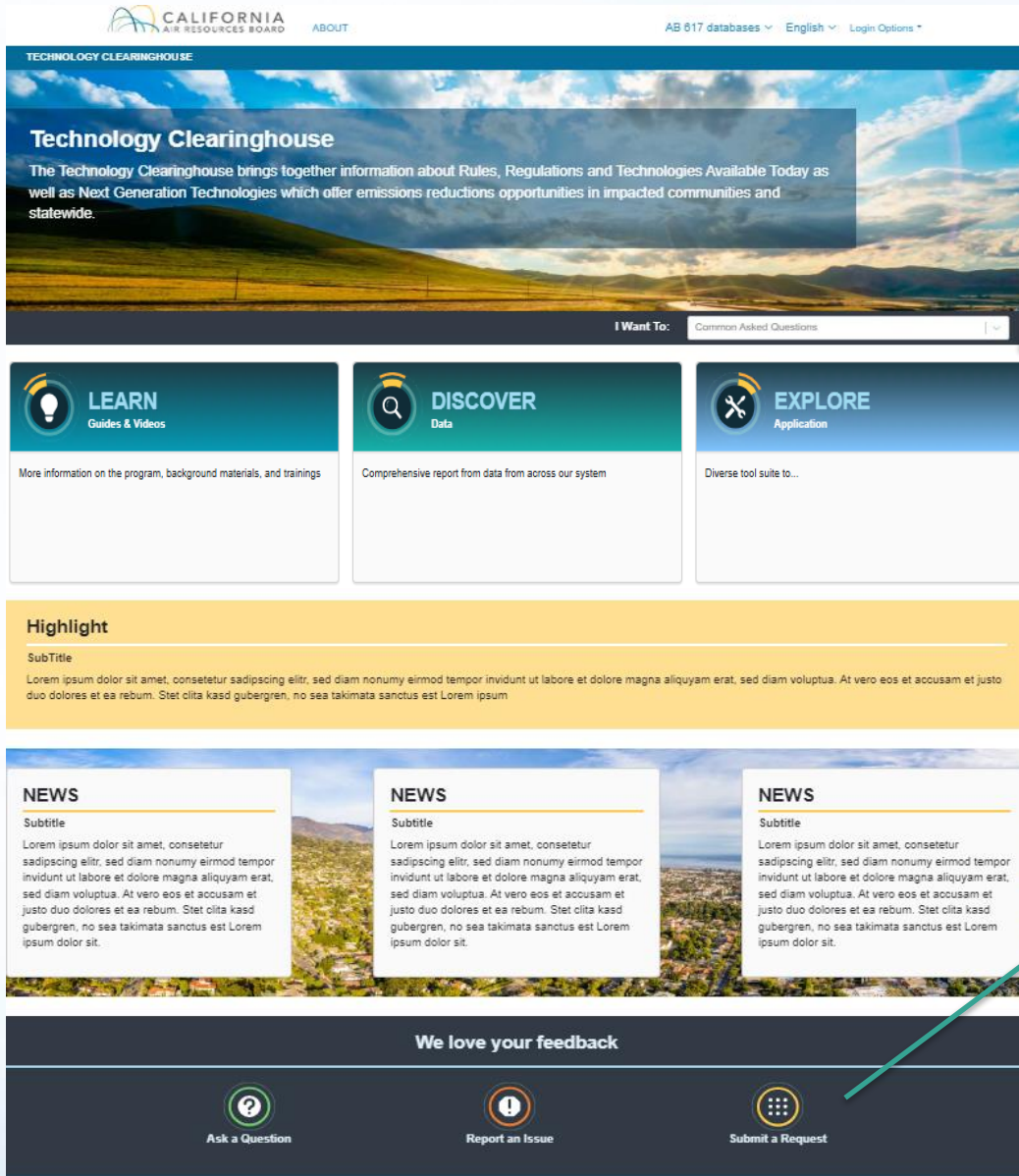
Add-on control
technology mfrs.
Low- & zero-emission
technology mfrs.
R&D labs
Installers



Modules

Best Available Control Technology (BACT & T-BACT)	Best Available Retrofit Control Technology (BARCT)	Next-Generation Technology (NextGen)	Support
<i>Limits for <u>new or modified</u> sources</i>	<i>Part of District Rules for <u>all existing</u> sources</i>	<i>Advanced solutions and technologies</i>	<i>Information, plans, actions and metrics for success</i>

Beta Landing Page



- Technology Clearinghouse
- Permitting Process
- Clean Air Technology



- Search
- Comprehensive
- Visualization



- BACT
- Rules
- Next Gen

We love your feedback

Ask a Question Report an Issue Submit a Request

Submit a Request

We welcome your requests. If you provide your email address, you agree that we may contact you to better understand the report you submitted.

Request Type Selection Required

Please select a request type from the dropdown options

Request for Technology Assessment X

Name Required

Email Required

Phone Number Optional

Organization Optional

Request Description Required

Submit



<https://ww2.arb.ca.gov/capp/cst/air-quality-fundamentals>

Beta User Screens

User Dashboard

HOME

ACCOUNT

Profile

Settings

My Submissions

My Tasks

My Notifications

ADMIN

TECHNOLOGY CLEARINGHOUSE

Dashboard

Welcome noplus

Review

0 New Notifications
Unread Notifications
View

Tools

User Management

USERS MANAGEMENT

Add New Users

Add new users to the system (DEV NOTE: NOT YET LINKED IN)

Find Users

Enter User Search Criteria Search

Organization

Organization | TestComp031125 X

Search Results. Keyword: N/A [2 Results]

First Name	Last Name	User Name	Last Login Date	Account Status	Organization	Details
external	comp1	techclearinghouseat+externalcomp@gmail.com	3/13/2025	Active	TestComp031125	
external	comp2	techclearinghouseat+externalcomp2@gmail.com	3/13/2025	Active	TestComp031125	

Data Entry

TECHNOLOGY CLEARINGHOUSE

Dashboard < BACT < New Submission

01 Data Entry Method Selection 02 Copy Record 03 General Details 04 Facility Details 05 Add Sources 06 Add Limits 07 Add Controls 08 Supersede 09 Add Documents 10 Review & Submit

BACT Data Entry - Would you like to copy an existing record?

Instructions
You may start a completely new record or duplicate an existing one by selecting the data you want to carry over to your new entry.

How would you like to proceed?

☐ Continue by starting a completely new submission
☒ Copy an Existing Record

Search BACT by Keyword Search Show Filter

Agency	Type	BACT Status	District ID	BACT Date	
<input type="radio"/> South Coast	Determination	Current	358091	10/20/1999	
<input type="radio"/> South Coast	Determination	Current	distID101	1/22/2025	
<input type="radio"/> South Coast	Determination	Current	district_id_101	2/20/2025	
<input type="radio"/> South Coast	Determination	Current	district_id_106	2/4/2025	
<input type="radio"/> South Coast	Determination	Current	district_id_107	1/7/2025	
<input type="radio"/> South Coast	Determination	Current	district_id_109	2/19/2025	
<input type="radio"/> South Coast	Determination	Current	district_id_101	2/20/2025	

Data View

TECHNOLOGY CLEARINGHOUSE

Dashboard < Bact

Data Detail View

Agency: South Coast AQMD
CARB BACT ID: 1190
District ID: distID101
District Version: distversion101
District Title: Disttitle101
BACT Type: Determination
BACT Status: Current
BACT Date: 1/22/2025
Major/Minor: Minor
To see full detail about the facility, go to facility page.
Go to Facility

General Details Facility Details Sources & Limits Controls Associated Documents

Determination-Specific Facility Data

Facility Name: 101 VERMONT AUTO GROUP
Facility Address: 3718 BEVERLY BLVD
Facility City: LOS ANGELES
Facility Zipcode: 90004
Primary NAICS: N/A
Primary SIC: N/A

Map

Next Steps

- Web app launches Fall 2025
- TCH User Groups will have access to view and enter data
- CARB continues TCH work with:
 - **Outreach/Training:** promote awareness, provide webinars
 - **Support:** assist users, identify improvements
 - **Assessment:** NextGen technologies, special projects

