

Assembly Bill 617: BARCT – Miscellaneous Combustion Units

Board of Directors
Santa Barbara County
Air Pollution Control District

Our Mission: To protect the people and the environment
of Santa Barbara County from the effects of air pollution.

Aeron Arlin Genet
Executive Director / APCO

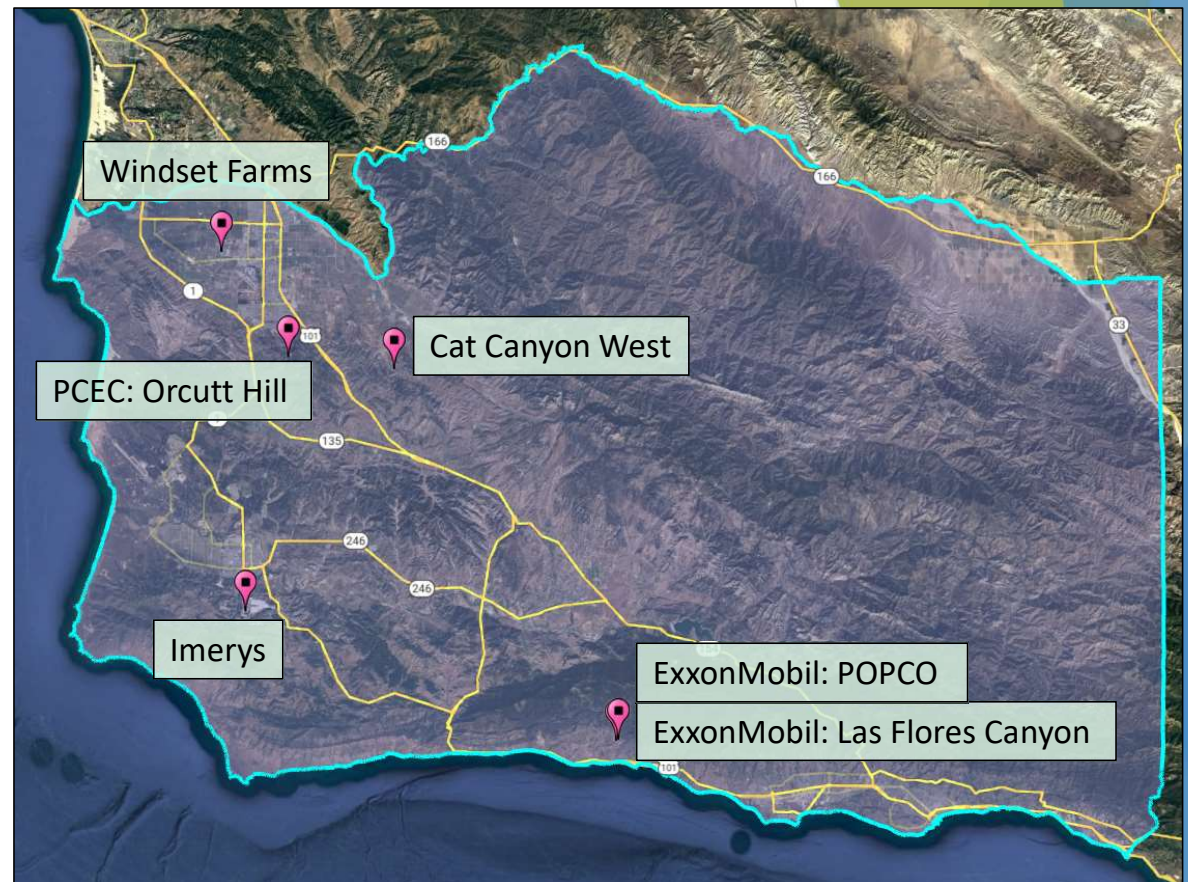
Tim Mitro, Air Quality Engineer
October 19, 2023

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Background: Assembly Bill (AB) 617

- ▶ Enacted in 2017 for Community Air Protection.
- ▶ AB 617 BARCT only applies to large industrial facilities subject to Cap-and-Trade.
 - ▶ Six industrial facilities within Santa Barbara County.
 - ▶ >25,000 metric tons/yr of GHGs as of 1/1/2017.
 - ▶ Requires maximum emission reduction achievable, taking into account environmental and economic impacts.



BARCT Rule Development Schedule

#	Equipment Category	Status	Method
1)	Boilers, Steam Generators, and Process Heaters (5 MMBtu/hr and greater)	<i>Completed June 2019</i>	Amended Rule 342
2)	Boilers, Steam Generators, and Process Heaters (2 - 5 MMBtu/hr)	<i>Completed June 2019</i>	Amended Rule 361
3)	Particulate Matter Control Devices	<i>Completed June 2022</i>	Incorporated into Permit
4)	Reciprocating Internal Combustion Engines	<i>Completed March 2023</i>	Incorporated into Permit
5)	Miscellaneous Combustion Units	<i>Focus of Board Item Discussion</i>	
6)	Stationary Gas Turbines	<i>In Progress</i>	

Miscellaneous Combustion Units

- ▶ **Includes:** Dryers, dehydrators, ovens, kilns, calciners, furnaces, roasters, crematories, and incinerators.
- ▶ **Excludes:** Boilers, water heaters, steam generators and process heaters.
(*subject to District prohibitory Rules 342, 361, and 360*)

Affected Units at Imerys

Device Name	Rated Heat Input (MMBtu/hr)	Most Recent Modification	Permitted Emission Rate
Silicates Conveyor Dryer	45 total [3 burners]	Pre-1990	Uncontrolled (≈ 82 ppmv NO _x)
Silicates Flash Dryer	17.5	Pre-1990	Uncontrolled (≈ 82 ppmv NO _x)

BARCT Emission Standard

► **BARCT Analysis based on rules from:**

- South Coast AQMD (2008)
- San Joaquin Valley APCD (2005)
- Ventura County APCD (2016)
- Sac-Metro AQMD (2018)

Table 4.1 – BARCT for Miscellaneous Combustion Units

Equipment Category	Process Temperature	NOx Limit (ppmv)
Dryer, Furnace, Kiln, or Heater	< 1,200°F	30
	≥ 1,200°F	60

Cost-Effectiveness

	Conveyor Dryer (3 burners)	Flash Dryer (1 burner)
Capital and Installation Costs:	\$480,000	\$160,000
Representative Operating Capacity: <i>(3 years of data)</i>	170,000 therms (4% capacity)	13,000 therms (1% capacity)
Emission Reductions:	0.53 tpy NOx	0.04 tpy NOx
Cost-Effectiveness: <i>(25 year project life, 6% interest)</i>	\$71,000 per ton of NOx	\$303,000 per ton of NOx

- ▶ Cost-Effectiveness is higher than the normally accepted values.

Cost-Effectiveness (Low-use)

	Conveyor Dryer (3 burners)	Flash Dryer (1 burner)
Capital and Installation Costs:	\$480,000	\$160,000
Low-use Threshold:	270,000 therms (7% capacity)	90,000 therms (6% capacity)
Emission Reductions @ Threshold:	0.84 tpy NOx	0.28 tpy NOx
Cost-Effectiveness @ Threshold: <i>(25 year project life, 6% interest)</i>	\$45,000 per ton of NOx	\$45,000 per ton of NOx

- ▶ Project is more Cost-Effective at the Low-use Threshold.

BARCT Implementation

- ▶ Imerys submitted an application to incorporate the “Low-use Thresholds” directly into their permit. Permit issued on Oct 5, 2023.
 - ▶ If “Low-use Threshold” is exceeded:
 - 1) A new application will be required within 30 days, and
 - 2) Demonstrate compliance with the BARCT NOx standard within 18 months.
- ▶ BARCT also applies to any new installations at any of the 6 industrial facilities within the County.
 - ▶ BACT (Best Available Control Technology) is already required for most large projects.

Recommendation

- ▶ Adopt the resolution, concluding that a new rule for Miscellaneous Combustion Units is no longer necessary to satisfy the AB 617 BARCT requirements.

BARCT Timeline for Misc. Units

- ▶ **Dec 2018:** BARCT Schedule adopted by District Board
- ▶ **Jan 2023:** Draft BARCT analysis sent to Imerys for review
- ▶ **Aug 2023:** “Low-use” permit application submitted by Imerys
- ▶ **Aug 23, 2023:** CAC Meeting to receive update on BARCT Analysis
- ▶ **Oct 5, 2023:** Permit modification issued
- ▶ **Oct 19, 2023:** District Board Hearing to receive BARCT Analysis
(Upon approval, forward BARCT Analysis to CARB)
- ▶ **Dec 31, 2023:** AB 617 Implementation Date

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