

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**  
**Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities\***

10-20-2000 Rev. 0  
XX-XX-2019 Rev 1

Equipment or Process: Aluminum Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO <sub>x</sub>	SO <sub>x</sub>	CO	PM <sub>10</sub>	
Crucible or Pot		<u>≤60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas</del> <del>(07-11-97)</del>	Natural Gas (07-11-97)		Natural Gas with Ingots or Non-contaminated Scrap Charge, or Baghouse (10-20-2000)	
Reverberatory, Non-Sweating < 5 MM BTU/HR		<u>≤60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas</del> <del>(1990)</del>	Natural Gas (1990)		Same as above. (10-20-2000)	
Reverberatory, Non-Sweating ≥ 5 MM BTU/HR		Natural Gas with Low NO <sub>x</sub> Burner ≤ 60 ppmvd @ 3% O <sub>2</sub> (10-20-2000)	Natural Gas (1990)		Same as above. (10-20-2000)	
Reverberatory or Rotary, Sweating < 5 MM BTU/HR	Afterburner (≥ 0.3 sec. Retention Time at ≥ 1400° F) or Secondary Combustion Chamber (1990)	<u>≤60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas</del> <del>(1990)</del>	Natural Gas (1990)		Natural Gas with Baghouse and: - Afterburner (≥ 0.3 sec. Retention Time at ≥ 1400° F); or - Secondary Combustion Chamber (1990)	
Reverberatory or	Same as Above	Natural Gas with	Natural Gas		Same as above.	

\* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

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10-20-2000 Rev. 0  
XX-XX-2019 Rev 1

Equipment or Process: Brass Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM <sub>10</sub>	
Crucible, ≤ 300 Lbs/Hr Process Rate		<u>60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas</del> <del>(1990)</del>	Natural Gas (1990)		Natural Gas, Charge Clean Metal Only and Maintain Slag Cover Over Entire Melt Surface (1990)	
Crucible, > 300 Lbs/Hr Process Rate		<u>60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Low NOx Burner</del> <del>(10-20-2000)</del>	Natural Gas (1990)		Natural Gas, with Baghouse (1990)	
Reverberatory or Rotary, Non- Sweating		<u>60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas and</del> <del>Low NOx Burner</del> <del>(10-20-2000)</del>	Natural Gas (1990)		Natural Gas with Baghouse (1990)	
Reverberatory or Rotary, Sweating	Afterburner (≥ 0.3 Second Retention Time at ≥ 1400 °F) (1990)	<u>60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas with</del> <del>Low NOx Burner</del>	Natural Gas (1990)	Afterburner (≥ 0.3 Second Retention Time at ≥ 1400 °F)	Natural Gas with Baghouse (1990)	

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10-20-2000 Rev. 0  
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Equipment or Process:      Burnoff or Burnout Furnace (Excluding Wax Furnace)

Rating/Size	Criteria Pollutants					
	VOC	NO <sub>x</sub>	SO <sub>x</sub>	CO	PM <sub>10</sub>	Inorganic
All	Afterburner or Secondary Combustion Chamber with ≥0.3 Second Retention Time at ≥1,400°F Achieved within 15 Minutes of Primary Burner Ignition (07-11-97)	Compliance with Rule 1147 (XX-XX-2019) <del>Natural Gas (07-11-97)</del>	Natural Gas (07-11-97)		Natural Gas (07-11-97)	

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Equipment or Process:        Calciner

Criteria Pollutants						
Rating/Size	VOC	NO <sub>x</sub>	SO <sub>x</sub>	CO	PM <sub>10</sub>	Inorganic
Petroleum Coke	Afterburner (≥ 0.3 Second Retention Time at ≥ 1400 °F) (1988)	<u>Compliance with Rule 1147 (XX-XX-2019)</u> <del>44 ppmv, Dry, Corrected to 3% O<sub>2</sub> (1988)</del>	Natural Gas with Flue Gas Desulfurization (> 90% Removal Efficiency) (1988)	Afterburner (≥ 0.3 Second Retention Time at ≥ 1400 °F) (1988)	0.005 gr/dscf Corrected to 3% O <sub>2</sub> (1988)	
Other		<u>Compliance with Rule 1147 (XX-XX-2019)</u> <del>45 ppmv, Dry, Corrected to 3% O<sub>2</sub> (1988)</del>	Natural Gas (1988)		Natural Gas with Baghouse (1988)	

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10-20-2000 Rev. 0  
XX-XX-2019 Rev. 1

Equipment or Process:      Coffee Roasting

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM <sub>10</sub>	
Roaster, < 110,000 BTU/Hr		<u>Compliance with Rule 1147 (XX-XX-2019)</u> <del>Natural Gas (1988)</del>	Natural Gas (1988)		Natural Gas (1988)	
Roaster, ≥ 110,000 BTU/Hr	Afterburner (0.3 Sec Retention Time at 1200 °F) (1990)	<u>Compliance with Rule 1147 (XX-XX-2019)</u>  <del>Natural Gas, with Heat Recovery on Afterburner Exhaust to Reduce Fuel Consumption (10-20-2000)</del>	Natural Gas (1990)		Natural Gas with Cyclone and Afterburner (≥ 0.3 Second Retention Time at ≥ 1200 °F) (1990)	
Handling Equipment, < 1,590 Lbs/Hr All <sup>1</sup>						
Handling Equipment, ≥ 1,590 Lbs/Hr All					Cyclone (1990)	

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## **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

### **Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities\***

1) At the date of the last revision for this category, there was no Achieved In Practice BACT Determination for this subcategory. Technologically Feasible options listed in historic SCAQMD BACT Guidelines for this subcategory require cost effective analyses before they can be listed in these current Guidelines.

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**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**  
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10-20-2000 Rev. 0  
XX-XX-2019 Rev 1

Equipment or Process:      Crematory

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM <sub>10</sub>	
All	Secondary Combustion Chamber, ≥ 1500 °F (1990)	<u>60ppm Compliance with Rule 1147 (XX-XX-2019)</u> <del>Natural Gas (1990)</del>	Natural Gas (1990)		Natural Gas with Secondary Combustion Chamber, ≥ 1500 °F (1990)	

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**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**  
**Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities\***

10-20-2000 Rev. 0  
XX-XX-2019 Rev 1

Equipment or Process:      Dryer – Kiln

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO <sub>x</sub>	SO <sub>x</sub>	CO	PM <sub>10</sub>	
All <sup>1</sup>		Compliance with Rule 1147 (XX-XX-2019) <del>Natural Gas with Low NO<sub>x</sub> Burner (10-20-2000)</del>	Natural Gas (1988)		Natural Gas (1988)	

<sup>1</sup> Does not include digester gas or landfill gas fired units

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# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

## Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities\*

10-20-2000 Rev. 0  
2-2-2018 Rev. 1  
XX-XX-2019 Rev 2

Equipment or Process:        Dryer or Oven

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO <sub>x</sub>	SO <sub>x</sub>	CO	PM <sub>10</sub>	
Carpet Oven		<u>30ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>80 ppmvd,</del> <del>corrected to 3% O<sub>2</sub></del> <del>(10-20-2000)</del>	Natural Gas (1990)		Natural Gas (1990)	
Rotary, Spray and Flash Dryers <sup>1)</sup>		<u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas with</del> <del>Low NO<sub>x</sub> Burner</del> <del>(10-20-2000)</del>	Natural Gas (1990)		Natural Gas with Baghouse (1990)	
Tray, Agitated Pan, and Rotary Vacuum Dryers		<u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas with</del> <del>Low NO<sub>x</sub> Burner</del> <del>(10-20-2000)</del>	Natural Gas (1990)		Natural Gas (1990)	
Tenter Frame Fabric Dryer		<u>30ppm</u> <u>Compliance with</u>	Natural Gas (10-20-2000)		Natural Gas (10-20-2000)	

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**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**  
**Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities\***

		<u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>60 ppmvd</del> <del>Corrected to 3% O<sub>2</sub></del> <del>(10-20-2000)</del>				
Other Dryers and Ovens – Direct & Indirect Fired <sup>2,3</sup>		30 ppmvd corrected to 3% O <sub>2</sub> (04-10-98)	Natural Gas (10-20-2000)		Natural Gas (10-20-2000)	

1. Dryers for foodstuff, pharmaceuticals, aggregate & chemicals.
2. Does not include food or bakery ovens. See listing for “Food Oven”.
3. Does not include digester gas or landfill gas units.

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# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

## Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities\*

10-20-2000 Rev. 0  
XX-XX-2019 Rev. 1

Equipment or Process: Fish Reduction

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO <sub>x</sub>	SO <sub>x</sub>	CO	PM <sub>10</sub>	
Cooker	Scrubber with Chlorinated Solution ( $\leq 20$ ppmv Cl <sup>-</sup> Outlet Conc., $\geq 0.6$ Sec. Retention Time and $\leq 200$ °F Outlet Temp.) (1988)	<u>Compliance with Rule 1147 (XX-XX-2019)</u>				
Digestor, Evaporator and Acidulation Tank	Afterburner ( $\geq 0.3$ Sec. Retention Time at $\geq 1200$ °F) (1990)	<u>Compliance with Rule 1147 (XX-XX-2019)</u>			Natural Gas with Afterburner ( $\geq 0.3$ Sec. Retention Time at $\geq 1200$ °F) (1990)	
Dryer	Scrubber with Chlorinated Solution ( $\leq 20$ ppmv Cl <sup>-</sup> Outlet Conc., $\geq 0.6$ Sec. Retention Time and $\leq 200$ °F Outlet Temp.) (1990)	<u>Compliance with Rule 1147 (XX-XX-2019)</u>			Natural Gas and Scrubber with Chlorinated Solution ( $\leq 20$ ppmv Cl <sup>-</sup> Outlet Conc., $\geq 0.6$ Sec. Retention Time and $\leq 200$ °F Outlet Temp.) (1990)	
Meal Handling <sup>1</sup>						
Rendering – Presses, Centrifuges, Separators, Tanks, Etc.	Water Condenser and Vent to Dryer Firebox (1988)					

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# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

## Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities\*

10-20-2000 Rev. 0  
XX-XX-2019 Rev. 1

Equipment or Process:          Lead Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM <sub>10</sub>	
Pot or Crucible, Non-Refining Operations		60ppm <u>Compliance with Rule 1147 (XX-XX-2019)</u> <del>Natural Gas (1990)</del>	Natural Gas (1990)		Natural Gas and Melt only Sows, Pigs, Ingots or Clean Scrap (1990)	
Pot or Crucible, Refining Operations		60ppm <u>Compliance with Rule 1147 (XX-XX-2019)</u> <del>Natural Gas (1990)</del>	Natural Gas with Scrubber; or Natural Gas with Sulfur Free Refining Agents (1990)		Natural Gas with Baghouse (1990)	
Reverberatory, Secondary Melting Operations		60ppm <u>Compliance with Rule 1147 (XX-XX-2019)</u> <del>Natural Gas with Low NOx Burner (10-20-2000)</del>	Natural Gas with Scrubber (1990)		Natural Gas with Baghouse (1990)	

Note: Some secondary lead smelting operations must also comply with the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63, Subpart X.

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XX-XX-2019 Rev. 0

Equipment or Process:      Soil and Water Remediation (Includes Soil Vapor Extraction)

<u>Rating/Size</u>	<u>Criteria Pollutants</u>					<u>Inorganic</u>
	<u>VOC</u>	<u>NOx</u>	<u>SOx</u>	<u>CO</u>	<u>PM<sub>10</sub></u>	
<u>All</u>		<u>Compliance with Rule 1147.</u>				

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10-20-2000 Rev. 0  
XX-XX-2019 Rev 1

Equipment or Process:      Zinc Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM <sub>10</sub>	
Crucible or Pot		<u>60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas</del> <del>(1990)</del>	Natural Gas (1990)		Natural Gas with Ingot and/or Clean Scrap Charge Only, or Baghouse (1988/2000)	
Reverberatory, Non-Sweating Operations		<u>60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas</del> <del>(1990)</del>	Natural Gas (1990)		Same as Above (10-20-2000)	
Reverberatory, Sweating Operations		<u>60ppm</u> <u>Compliance with</u> <u>Rule 1147</u> <u>(XX-XX-2019)</u> <del>Natural Gas</del> <del>(1990)</del>	Natural Gas (1990)		Natural Gas with Baghouse and: - Afterburner (≥ 0.3 sec. Retention Time at ≥ 1400° F); or Secondary Combustion (≥ 0.3 sec. Retention Time at ≥ 1400° F); (1990)	
Rotary, Sweating Operations		<u>60ppm</u> <u>Compliance with</u>	Natural Gas (1990)		Same as Above (1990)	

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		Rule 1147 (XX-XX-2019) Natural Gas (1990)				
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