

MSBACT Part D Draft Proposals
BACT Scientific Review Committee Meeting
December 12, 2017

1. Part D - Minor Source BACT
 - a. New - Printing, Graphic Arts
 - i. Flexographic
 1. UV/EB or water-based inks/coatings ≤ 180 g/L
 2. Add-on control venting to RTO, 95% overall efficiency @ $\geq 1500^{\circ}\text{F}$
 3. Cost-effectiveness
 - ii. Lithographic
 1. Remove vapor pressure language for consistency with Rule 1130
 2. Correct oven venting to afterburner listing from PM_{10} column to VOC column
 - iii. Screen Printing and Drying
 1. Use of Rule 1130.1 compliant UV/EB or water-based inks/coatings
 - b. New - Food Oven
 - i. Ribbon burner, $>500^{\circ}\text{F}$ and $\leq 500^{\circ}\text{F}$
 - ii. Other direct fired burner
 - iii. Infrared burner
 - iv. Bakery Oven with yeast leavened products ≥ 30 lb VOC/day - venting to CatOx, 95% overall control @ $\geq 600^{\circ}\text{F}$ inlet temp & ceramic pre-filter
 - v. Other burner
 - vi. Cost-Effectiveness
 - c. Update- I.C. Engine, Stationary, Non-Emergency, Non-Electrical Generators
 - i. Footnote- update applicability regarding Rule 1110.2
 - d. New- I.C. Engine, Stationary, Non-Emergency, Electrical Generators
 - i. Compliance with Rule 1110.2
 - e. Delete- I.C. Engine, Stationary, Non-Emergency
 - f. New - I.C. Engine, Portable
 - i. Tier 4 Final for $75 \leq \text{HP} < 175$
 - g. Update - Dryer or Oven
 - i. Footnote- does not include food or bakery oven

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

DRAFT

10-20-2000 Rev. 0
 12-5-2003 Rev. 1
 7-14-2006 Rev 2
[2-2-2018 Rev 3](#)

Equipment or Process: Printing (Graphic Arts)

Subcategory	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Flexographic	Inks with ≤ 1.5 Lbs VOC/Gal, Less Water and Less Exempt Compounds (1990); <u>or use of UV/EB or water-based inks/coatings ≤ 180 g VOC/L.</u> Compliance with SCAQMD Rules 1130 and 1171 <u>(12-5-2003)(2-2-2018)</u>					
<u>Control</u>	<u>For add-on control required by SCAQMD Rule 1130(c)(5) or other District requirement: EPA M. 204 Permanent Total Enclosure (100% collection) vented to RTO with 95% overall control efficiency; Combustion Chamber: Temp ≥ 1500°F¹, Retention Time > 0.3 seconds (2-2-2018)</u>	<u>Compliance with SCAQMD Rule 1147 at time of applicability (2-2-2018)</u>				
Letterpress	Compliance with SCAQMD Rules 1130 and 1171 (12-5-2003)					
Lithographic or Offset, Heatset	Low VOC Fountain Solution (≤ 8% by Vol. VOC); <u>Low Vapor Pressure (≤ 10 mm Hg VOC Composite Partial Pressure²)</u> or Low VOC (≤ 100 g/l) Blanket and Roller Washes; Oil-Based or UV-Curable Inks; and Compliance with SCAQMD Rules 1130 and 1171 (7-14-2006) <u>(2-2-18)</u>				<u>Oven Venting to an Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1400^oF; 95% Overall Efficiency) (10-20-2000)</u>	
<u>Control</u>	<u>Oven Venting to an Afterburner (≥ 0.3 Sec.</u>					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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Subcategory	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
	Retention Time at ≥ 1400 °F; 95% Overall Efficiency (10-20-2000)					

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Lithographic or Offset, Non-Heatset	Same As Above					
Rotogravure or Gravure— Publication and Packaging	Compliance with SCAQMD Rules 1130 and 1171 (10-20-2000)					
Screen Printing and Drying	Compliance with SCAQMD Rules 1130.1 and 1171 (12-5-2003); or use of Rule 1130.1 and 1171 compliant UV/EB or water-based inks/coatings. (2-2-2018) .					

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

1) ~~VOC COMPOSITE PARTIAL PRESSURE is the sum of the partial pressures of the compounds defined as VOCs. VOC Composite Partial Pressure is calculated as follows:~~

$$PP_c = \frac{\sum_{i=1}^n \frac{(W_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:	PP_c	=	VOC composite partial pressure at 20°C in mm Hg
	W_i	=	Weight of the "i"th VOC compound in grams
	MW_i	=	Molecular weight of "i"th VOC compound in grams per gram mole
	VP_i	=	Vapor pressure of the "i"th VOC compound at 20°C in mm Hg
	W_w	=	Weight of water in grams
	MW_w	=	Molecular weight of water in grams per gram mole
	W_e	=	Weight of exempt compound in grams
	MW_e	=	Molecular weight of exempt compound in grams per gram mole

~~For multiple exempt compounds: $W_e / MW_e = \sum_{j=1}^n W_{ej} / MW_{ej}$~~

12) or temperature demonstrating equivalent overall control efficiency in a District-approved source test.

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Flexographic Printing Press Cost Effectiveness Calculations for Regenerative Thermal Oxidizer as control - Asia Plastics

Flexo Printing Presses Info

Manufacturer: Hon Jin Iron Works
 Model: HJ-222, 4-Color, Air Dry
 Model HJ-HS6001, 6-Color, Air Dry
 Operation Schedule: 16 hr/day, 365 days/yr

Control Technology

RTO - Ship & Shore
 Model SSE-3K-95X-RTO, 1.35MMBtu/hr

Capital Cost

Equipment	\$	160,000
Direct & Indirect Installation	\$	140,000
Total Capital	\$	300,000

Operating Cost

Direct & Indirect	\$	124,720
Total Average Annual	\$	124,720

Present Value of Capital Costs	\$	300,000
Present Value of Annual Costs (10 years @ 4%)	\$	1,011,479
Total 10-Year Capital Cost	\$	1,311,479

Uncontrolled Emissions (lbs/day)	133
Control Efficiency	95%
Controlled Emissions (lbs/day)	127
Controlled Emissions (tons/10 years)	231
Cost per ton of VOC controlled	\$ 5,675

MSBACT maximum cost effectiveness ROG (\$/ton)	\$ 28,886
	COST EFFECTIVE
	\$ 28,107
MSBACT maximum cost effectiveness ROG (\$/ton)	\$ 86,658
	COST EFFECTIVE
	\$ 84,322

AVERAGE
<i>1st quarter 2013 M&S cost effectiveness (1558.7)</i>
INCREMENTAL
<i>1st quarter 2013 M&S cost effectiveness (1558.7)</i>

Notes:

- Calculations were based on Regenerative Thermal Oxidizer permit application no. 548337 submitted by applicant controlling VOC emissions from two Flexographic Printing Presses, 6-color and 4-color. In addition to cost information provided by applicant.
- 133.3 lbs/day of uncontrolled VOC emissions was the baseline used in determining cost effectiveness
- Maximum allowed cost effectiveness was based on 1st quarter 2017 Marshall & Swift index
- Incremental costs are assumed to be the same since there is no more stringent control technology

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

DRAFT

2-2-2018 Rev. 0

Equipment or Process: Food Oven

<u>Subcategory¹</u>	<u>Rating/ Size</u>	<u>Criteria Pollutants</u>					
		<u>VOC</u>	<u>NOx</u>	<u>SOx</u>	<u>CO</u>	<u>PM10</u>	<u>Inorganic</u>
<u>Ribbon Burner</u>	<u>> 500°F</u>		<u>60 ppmvd @ 3% O₂ (2-2-2018)</u>	<u>Natural Gas (2-2-2018)</u>	<u>Compliance with applicable SCAQMD Rules 407 or 1153.1(2-2-2018)</u>	<u>Natural Gas (2- 2-2018)</u>	
	<u>≤ 500°F</u>		<u>30 ppmvd @ 3% O₂ (2-2-2018)</u>	<u>Same as above</u>	<u>Same as above</u>	<u>Same as above</u>	
<u>Other Direct Fired Burner</u>			<u>30 ppmvd @ 3% O₂ (2-2-2018)</u>				
<u>Infrared Burner</u>			<u>30 ppmvd @ 3% O₂ (2-2-2018)</u>				
<u>Add-on Control for Bakery Oven processing yeast leavened products with emissions ≥ 30 lb VOC/day</u>		<u>Catalytic oxidizer with 95% overall control efficiency (mass basis); catalyst inlet temperature ≥ 600°F; ceramic prefilter (2-2-2018)</u>	<u>Compliance with SCAQMD Rule 1147 at the time of applicability (2-2-2018)</u>				

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

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¹[Indirect Fired units may be subject to Rules 1146 and 1146.1 and BACT for Process Heater](#)

<u>Subcategory</u>	<u>Rating/ Size</u>	<u>Criteria Pollutants</u>					<u>Inorganic</u>
		<u>VOC</u>	<u>NOx</u>	<u>SOx</u>	<u>CO</u>	<u>PM10</u>	
<u>Other Burners</u>		<u>Compliance with SCAQMD Rules and Regulations</u>					

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Bakery Oven Cost Effectiveness Calculations for Regenerative Thermal Oxidizer (RTO) as control - Bon Appetit

Oven Information

Manufacturer: GPA Orlandi
Model: Turbo termo oven 25
Rating/Fuel: 5,000,000 Btu/hr
4 Burners, 3x1MM Btu/hr & 1x2MM Btu/hr
Outside Dimensions: 86'-5"L, 15'-5"W, 6'-3"H
Operation Schedule: 24 hr/day, 360 days/yr

Control Technology

RTO - Alliance Corporation
Model Boxidizer 2-bed, .96 therms/hr

Capital Cost

Equipment	\$	150,166
Direct Installation	\$	85,600
Indirect Installation	\$	18,020
Total Capital	\$	253,786

Operating Cost

Direct & Indirect	\$	42,046
Total Average Annual	\$	42,046

Present Value of Capital Costs	\$	253,786
Present Value of Annual Costs (10 years @ 4%)	\$	340,993
Total 10-Year Capital Cost	\$	594,779

Uncontrolled Emissions (lbs/day)	30
Control Efficiency	95%
Controlled Emissions (lbs/day)	29
Controlled Emissions (tons/10 years)	52
Cost per ton of VOC controlled	\$ 11,435

MSBACT maximum cost effectiveness ROG (\$/ton)	\$ 28,886	COST EFFECTIVE	AVERAGE
MSBACT maximum cost effectiveness ROG (\$/ton)	\$ 86,658	COST EFFECTIVE	INCREMENTAL

Notes:

- Calculations were based on cost effectiveness analysis submitted by applicant in April 2017 for Bakery Oven permit application no. 523867 that was evaluated for cost-effectiveness for expected 15.56 lbs/day of uncontrolled VOC emissions and cost estimates from another RTO manufacturer.
- 30 lbs/day of uncontrolled VOC emissions was the baseline used in determining cost effectiveness
- Maximum allowed cost effectiveness was based on 1st quarter 2017 Marshall & Swift index
- Incremental costs are assumed to be the same since there is no more stringent control technology

Bakery Oven Cost Effectiveness Calculations for Catalytic Oxidizer as control- Bon Appetit

Oven Information

Manufacturer: GPA Orlandi
 Model: Turbo termo oven 25
 Rating/Fuel: 5,000,000 Btu/hr
 4 Burners, 3x1MM Btu/hr & 1x2MM Btu/hr
 Outside Dimensions: 86'-5"L, 15'-5"W, 6'-3"H
 Operation Schedule: 24 hr/day, 360 days/yr

Control Technology

CSM
 Cat-Ox Model 30A, 0.80MMBtu/hr

Capital Cost

Equipment	\$	460,438
Direct Installation	\$	277,455
Indirect Installation	\$	56,416
Total Capital	\$	794,309

Operating Cost

Direct	\$	75,136
Indirect	\$	2,000
Total Average Annual	\$	77,136

Present Value of Capital Costs	\$	794,309
Present Value of Annual Costs (10 years @ 4%)	\$	625,573
Total 10-Year Capital Cost	\$	1,419,882

Uncontrolled Emissions (lbs/day)

	30
Control Efficiency	95%
Controlled Emissions (lbs/day)	28.50
Controlled Emissions (tons/10 years)	51.30
Cost per ton of VOC controlled	\$ 27,678

MSBACT maximum cost effectiveness (\$/ton) **\$ 28,886**
COST EFFECTIVE

MSBACT maximum cost effectiveness (\$/ton) **\$ 86,658**
COST EFFECTIVE

Notes:

- Calculations were based on cost effectiveness analysis submitted by applicant in April 2017 for Bakery Oven permit application no. 523867 that was evaluated for cost-effectiveness for expected 15.56 lbs/day of uncontrolled VOC emissions.
- 30 lbs/day of uncontrolled VOC emissions was the baseline used in determining cost effectiveness
- Maximum allowed cost effectiveness was based on 1st quarter 2017 Marshall & Swift index
- Incremental costs are assumed to be the same since there is no more stringent control technology

Bakery Oven Cost Effectiveness Calculations for Catalytic Oxidizer as control - Aryzta, Ontario

Oven Information (two identical ovens vented)

Manufacturer: Baking Technology
 Model: Baketech Maxisaver bun oven
 Rating/Fuel: 7,300,000 Btu/hr
 24 Burners, Flynn no. 162HN, 30ppm NOx
 Outside Dimensions: 48'-4"L, 33'-0"W, 11'-0"H
 Operation Schedule: 24 hr/day, 360 days/yr

Control Technology

CSM
 Cat-Ox Model 180A, 2.7MMBtu/hr

Capital Cost

Equipment	\$	709,769
Direct Installation	\$	45,000
Indirect Installation	\$	71,000
Total Capital	\$	825,769

Operating Cost

Direct and Indirect	\$	37,178
Total Average Annual	\$	37,178

Present Value of Capital Costs	\$	825,769
Present Value of Annual Costs (10 years @ 4%)	\$	301,514
Total 10-Year Capital Cost	\$	1,127,283

Uncontrolled Emissions (lbs/day)

		114
Control Efficiency		95%
Controlled Emissions (lbs/day)		108.64
Controlled Emissions (tons/10 years)		195.56
Cost per ton of VOC controlled	\$	5,765

MSBACT maximum cost effectiveness ROG (\$/ton)	\$	28,886
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COST EFFECTIVE

	\$	24,573
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MSBACT maximum cost effectiveness ROG (\$/ton)	\$	86,658
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COST EFFECTIVE

	\$	73,719
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AVERAGE

1st quarter 2007 M&S cost effectiveness (1362.7)

INCREMENTAL

1st quarter 2007 M&S cost effectiveness (1362.7)

Notes:

- Calculations were based on cost effectiveness analysis provided by applicant for Cat-Ox under application no. 548869 venting two bakery ovens appl. Nos. 548863 & 548866 for expected 114.36 lbs/day of uncontrolled VOC emissions.
- Since applicant stated that these costs are almost 10 years old, cost effectiveness based on 1st quarter 2007 Marshall & Swift index was also used.
- Incremental costs are assumed to be the same since there is no more stringent control technology

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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

DRAFT

12-02-2016 Rev. 0
[2-2-2018 Rev. 1](#)

Equipment or Process: - I.C. Engine, Stationary, Non-Emergency, Non-Electrical Generators ⁺

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
> 50 bhp	Compliance with SCAQMD Rule 1110.2 (12-02-2016)	Compliance with SCAQMD Rule 1110.2 (12-02-2016)	See Clean Fuels Policy in Part C of the BACT Guidelines (12-02-2016)	Compliance with SCAQMD Rule 1110.2 (12-02-2016)	See Clean Fuels Policy in Part C of the BACT Guidelines (12-02-2016) Compliance with Rule 1470 (12-02-2016)	
Landfill or Digester Gas Fired ²¹	Compliance with SCAQMD Rule 1110.2 0-8 grams/bhp-hr (12-02-2016)(2-2-2018)	Compliance with SCAQMD Rule 1110.2 0-60 grams/bhp-hr (12-02-2016)(2-2-2018)	Compliance with SCAQMD Rule 431.1 (12-02-2016)	Compliance with SCAQMD Rule 1110.22-5 grams/bhp-hr (12-02-2016)(2-2-2018)		

1) This BACT listing was adapted from the “I.C. Engine, Stationary, Non-Emergency.” An additional listing for “I.C. Engine, Stationary, Non-Emergency, Electrical Generators,” is currently under development. Until the amendment is developed, Stationary, Non-Emergency, Electrical Generators will be subject to “I.C. Engine, Stationary, Non-Emergency.”

2) For the adoption of this new listing, the requirements for this subcategory were transferred directly from the existing requirements under “I.C. Engine, Stationary, Non-Emergency.” The requirements are not new, but the date listed was updated to reflect the date of adoption of the new listing.

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

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2-2-2018 Rev. 0

Equipment or Process: I.C. Engine, Stationary, Non-Emergency, Electrical Generators ¹

<u>Subcategory/ Rating/Size</u>	<u>Criteria Pollutants</u>					<u>Inorganic</u>
	<u>VOC</u>	<u>NO_x</u>	<u>SO_x</u>	<u>CO</u>	<u>PM₁₀</u>	
<u>> 50 bhp</u>	<u>Compliance with SCAQMD Rule 1110.2 (2-2-2018)</u>	<u>Compliance with SCAQMD Rule 1110.2 (2-2-2018)</u>	<u>See Clean Fuels Policy in Part C of the BACT Guidelines (2-2-2018)</u>	<u>Compliance with SCAQMD Rule 1110.2 (2-2-2018)</u>	<u>See Clean Fuels Policy in Part C of the BACT Guidelines (2-2-2018)</u> <u>Compliance with Rule 1470 (2-2-2018)</u>	
<u>Landfill or Digester Gas Fired</u>	<u>Compliance with SCAQMD Rule 1110.2 (2-2-2018)</u>	<u>Compliance with SCAQMD Rule 1110.2 (2-2-2018)</u>	<u>Compliance with SCAQMD Rule 431.1 (2-2-2018)</u>	<u>Compliance with SCAQMD Rule 1110.2 (2-2-2018)</u>		

1) This BACT listing was adapted from the previous "I.C. Engine, Stationary, Non-Emergency," Part D BACT listing.

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

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~~10-20-2000 Rev. 0~~
~~7-9-2004 Rev. 1~~
~~12-3-2004 Rev. 2~~
2-2-2018 Rev. 3

Equipment or Process: ~~I.C. Engine, Stationary, Non-Emergency~~

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
<2064 bhp	0.15 grams/bhp-hr (4-10-98)	0.15 grams/bhp-hr (4-10-98)	See Clean Fuels Policy in Part C of the BACT Guidelines (10-20-2000)	0.60 grams/bhp-hr (4-10-98)	See Clean Fuels Policy in Part C of the BACT Guidelines (10-20-2000) Compliance with Rule 1470: (12-3-2004)	
≥2064 bhp	25 ppm @ 15% O ₂ (7-9-2004)	9 ppmvd @ 15% O ₂ (7-9-2004)	Same as Above (10-20-2000)	33 ppmvd @ 15% O ₂ (5-8-98)	Same as Above (7-9-2004)	Ammonia: 10 ppmvd @ 15% O ₂ (7-9-2004)
Landfill or Digester Gas Fired	0.8 grams/bhp-hr (4-10-98)	0.60 grams/bhp-hr (4-10-98)	Compliance with Rule 431.1 (10-20-2000)	2.5 grams/bhp-hr (4-10-98)		

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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10-20-2000 Rev. 0
7-14-2006 Rev. 1
12-02-2016 Rev. 2
[2-2-2018 Rev. 3](#)

Equipment or Process: I.C. Engine, Portable ¹

		Criteria Pollutants					
Subcategory	Rating/Size	VOC	NO _x	NO _x + NMHC ²	SO _x	CO	PM
Compression-Ignition ³	50 ≤ HP < 75			Tier 4 Final: 4.7 grams/kW-hr (3.5 grams/bhp-hr) (12-02-2016)	Diesel fuel with a sulfur content no greater than 0.0015% by weight (Rule 431.2). (6-6-2003)	Tier 4 Final: 5.0 grams/kW-hr (3.7 grams/bhp-hr) (12-02-2016)	Tier 4 Final: 0.03 grams/kW-hr (0.02 grams/bhp-hr) and CARB ATCM for portable diesel engines ⁴ (12-02-2016)
	75 ≤ HP < 175 ⁵		Tier 4 Final Interim: 3.40.40 grams/kW-hr (2.50.30 grams/bhp-hr) (2-2-2018)	Tier 4 Final Interim: NMHC only: 0.19 grams/kW-hr (0.14 grams/bhp-hr) (2-2-2018)		Tier 4 Final Interim: 5.0 grams/kW-hr (3.7 grams/bhp-hr) (2-2-2018)	Tier 4 Final Interim: 0.02 grams/kW-hr (0.01 grams/bhp-hr) and CARB ATCM for portable diesel engines ⁴ (2-2-2018)
	175 ≤ HP < 750			Tier 4 Final: 0.40 grams/kW-hr (0.30 grams/bhp-hr) (12-02-2016)	Tier 4 Final: NMHC only: 0.19 grams/kW-hr (0.14 grams/bhp-hr) (12-02-2016)		Tier 4 Final: 3.5 grams/kW-hr (2.6 grams/bhp-hr) (12-02-2016)

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

Subcategory	Rating/Size	Criteria Pollutants					
		VOC	NO _x	NO _x + NMHC ²	SO _x	CO	PM

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Compression-Ignition ³	≥750 HP ⁵		<u>Tier 4 Interim:</u> For Generator Sets > 1200 HP: 0.67 grams/kW-hr (0.50 grams/bhp-hr) For All Engines Except “Generator Sets > 1200 HP”: 3.5 grams/kW-hr (2.6 grams/bhp-hr) (12-02-2016)	<u>Tier 4 Interim:</u> NMHC only: 0.4 grams/kW-hr (0.30 grams/bhp-hr) (12-02-2016)	Diesel fuel with a sulfur content no greater than 0.0015% by weight (Rule 431.2). (6-6-2003)	<u>Tier 4 Interim:</u> 3.5 grams/kW-hr (2.6 grams/bhp-hr) (12-02-2016)	<u>Tier 4 Interim:</u> 0.10 grams/kW-hr (0.07 grams/bhp-hr)and CARB ATCM for portable diesel engines ⁴ (12-02-2016)
Spark Ignition	All	1.5 grams/bhp-hr, or 240 ppmvd as methane @ 15% O ₂ (4-10-1998)	1.5 grams/bhp-hr, or 80 ppmvd @ 15% O ₂ (4-10-1998)			2.0 grams/bhp-hr, or 176 ppmvd @ 15% O ₂ (4-10-1998)	

Notes:

- 1) BACT for “I.C. Engine, Portable” is determined by deemed complete date of permit application not date of manufacture or installation.
- 2) NMHC + NO_x means the sum of non-methane hydrocarbons and oxides of nitrogen emissions, unless specified as “NMHC only”, which only includes NMHC emissions.
- 3) The engine must be certified by U.S. EPA or CARB to meet the Tier 4 emission requirements of 40 CFR Part 89 – Control of Emissions from New and In-use Nonroad Compression-Ignition Engines shown in the table– or otherwise demonstrate that it meets the Tier 4 emission limits. If, because of the averaging, banking, and trading program, there is no new engine from any manufacturer that meets the above standards, then the engine must meet the family emission limits established by the manufacturer and approved by U.S. EPA. Based on the model year, the CARB Airborne Toxic Control Measure (ATCM) for Portable Diesel Engines (see www.arb.ca.gov/diesel/peatcm/peatcm.htm) requires in-use portable diesel engines to be certified to Tier 1, 2, 3 or 4 by their respective deadlines, all of which have passed. All exceptions allowed in the ATCM are also allowed in this guideline.

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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- 4) The CARB ATCM also requires in-use portable diesel engines to meet fleet-average PM standards beginning 1/1/2013. The PM limits in the table apply only to filterable PM.
- 5) CARB has extended the Tier 4 Final requirements deadline “until further notice” for Portable, Compression-Ignition Engines for ~~75 ≤ HP < 175~~ and HP ≥ 750.

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DRAFT

10-20-2000 Rev. 0
[2-2-2018 Rev. 1](#)

Equipment or Process: Dryer or Oven

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Carpet Oven		80 ppmvd, corrected to 3% O ₂ (10-20-2000)	Natural Gas (1990)		Natural Gas (1990)	
Rotary, Spray and Flash Dryers ¹⁾		Natural Gas with Low NO _x Burner (10-20-2000)	Natural Gas (1990)		Natural Gas with Baghouse (1990)	
Tray, Agitated Pan, and Rotary Vacuum Dryers		Natural Gas with Low NO _x Burner (10-20-2000)	Natural Gas (1990)		Natural Gas (1990)	
Tenter Frame Fabric Dryer		60 ppmvd Corrected to 3% O ₂ (10-20-2000)	Natural Gas (10-20-2000)		Natural Gas (10-20-2000)	
Other Dryers and Ovens – Direct and Indirect Fired ²⁾		30 ppmvd corrected to 3% O ₂ (04-10-98)	Natural Gas (10-20-2000)		Natural Gas (10-20-2000)	

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

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Part D, SCAQMD BACT Determination

Source Type: **Minor**
 Application No.: **548341**
 Equipment Category: **Flexographic Printing Press**
 Equipment Subcategory: **w/ Regenerative Thermal Oxidizer**
 Date: **March 28, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Hot Jin Ironworks		B. MODEL: HJ-222	
C. DESCRIPTION: Flexographic Printing Press 4 color. Demonstrates compliance with Rule 1130(c)(1) through provisions of 1130(c)(5).			
D. FUNCTION: Printing of food packaging			
E. SIZE/DIMENSIONS/CAPACITY: Two identical presses contained in enclosure. Second press operating under Appl. 548337			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: Press electric heater; RTO 1.35 MMBtu/hr			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	
MAXON KINEDIZER		1.35 MMBtu/hr	
NUMBER		1	
Enter additional burner types, as needed, add extra rows			
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: Supplementary or standby fuels	
J. OPERATING SCHEDULE: 24 HRS/DAY 5 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST: TBD			
L. EQUIPMENT INFORMATION COMMENTS: Enter additional comments regarding Equipment Information			

2. COMPANY INFORMATION

A. COMPANY: Asia Plastics		B. FAC ID: 103149	
C. ADDRESS: 9347 Rush St. CITY: S. El Monte STATE: CA ZIP: 91733		D. NAICS CODE: 32311	
E. CONTACT PERSON: Kent Ung		F. TITLE: President	
G. PHONE NO.: 626-448-8100		H. EMAIL: asiaplasticsinc@yahoo.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION
C. SCAQMD ENGINEER: Farah Milner	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 7/10/13 P/O NO.: G43434 PO ISSUANCE DATE: 10/21/2016	
E. START-UP DATE: Select date from pull down. The start-up date is the first date that the equipment operates for any reason. Use the best estimate at the PC stage and actual date at the PO stage.	
F. OPERATIONAL TIME: 12/9/2013 source test date. > 3 years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (% O ₂ , % CO ₂ , dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit	Overall Control Efficiency 95%	RTO: Compliance with SCAQMD Rule 1147				
Averaging Time	1 HR	30 MIN				
Correction	Mass basis	@ 3% O ₂				
B. OTHER BACT REQUIREMENTS: Method 204 Permanent Total Enclosure, Combustion Chamber Temperature ≥ 1500°F, Chamber Retention Time ≥ 0.3 seconds, chamber temperature interlock system						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: Flexographic press has an electric heater						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Ship and Shore		B. MODEL: SSE-3K-95X-RTO	
C. DESCRIPTION: RTO to vent and combust VOC emissions from a flexographic printing press			
D. SIZE/DIMENSIONS/CAPACITY: 1.35 MMBtu/hr natural gas fired with two ceramic heat exchanger beds			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 548337 PC ISSUANCE DATE: 7/10/13 PO NO.: G43432 PO ISSUANCE DATE: 10/21/2016			
F. REQUIRED CONTROL EFFICIENCIES: Minimum efficiencies of the system control equipment as required by permit, or the most stringent rule requirement. The control or destruction efficiency is determined across the control device (e.g. inlet-outlet). Collection or capture efficiency is based at each point of contaminant collection in the system. Enter each contaminant that applies. Add rows as needed.			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	95%	95%	100%
NO _x	___%	___%	___%
SO _x	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM ₁₀	___%	___%	___%
INORGANIC	___%	___%	___%
G. CONTROL TECHNOLOGY COMMENTS NO _x emissions in compliance with SCAQMD Rule 1147			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Test
B. DATE(S) OF SOURCE TEST: December 9, 2013
C. COLLECTION EFFICIENCY METHOD: EPA Method 204
D. COLLECTION EFFICIENCY PARAMETERS: PTE Static Pressure \leq 0.01" H ₂ O
E. SOURCE TEST/PERFORMANCE DATA: VOC: Inlet 1.5 lb C/hr, Exhaust 0.075 lb C/hr, Exhaust 0.081 lb VOC/hr. NO _x : Startup 0.064 lb NO _x /hr, Normal 0.026 lb NO _x /hr
F. TEST OPERATING PARAMETERS AND CONDITIONS: RTO Startup Burner at 99.9%, Burner during normal operation 52-66%; Oxidizer inlet 2730 acfm; oxidizer exh 3680 acfm; Press 1 1100 ft/hr; Press 2 7000 ft/hr
G. TEST METHODS (SPECIFY AGENCY): SCAQMD 25.1, 25.3, 100.1

H. MONITORING AND TESTING REQUIREMENTS: Include any monitoring or testing requirements and their frequency that will be enforced to maintain emission levels reported for the BACT Determination.
I. DEMONSTRATION OF COMPLIANCE COMMENTS: Rule 1130 minimum requirement is 70% overall control, equipment permitted at 95% overall control

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 000276	B. CCAT: 12	C. APPLICATION TYPE CODE: 10	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	E. TITLE V FAC: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	F. SOURCE TEST ID(S): Click here to enter text.	
G. SCAQMD SOURCE SPECIFIC RULES: Click here to enter text.			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR: Click here to enter text.	H2. MICR DATE: Click here to enter a date.	H3. CANCER BURDEN: Click here to enter text.	H4. CB DATE: Click here to enter a date.
H5: HIA: Click here to enter text.	H6. HIA DATE: Click here to enter a date.	H7. HIC: Click here to enter text.	H8. HIC DATE: Click here to enter a date.

DRAFT



Part D, SCAQMD BACT Determination

Source Type: **Minor**
 Application No.: **548863**
 Equipment Category: **Food Oven**
 Equipment Subcategory: **Ribbon Burner ≤ 500°F**
 Date: **March 24, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: International Multifood		B. MODEL: 1400	
C. DESCRIPTION: Griddle Type oven with ribbon burners			
D. FUNCTION: Food oven with griddle type trays used to bake English muffins			
E. SIZE/DIMENSIONS/CAPACITY: 6' W X 70'L x 5'-4"H			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 2.59 MMBtu/hr			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	NUMBER
FLYNN MODEL 122HN SERIES 856		Rated heat input of single burner, in btu/hr	63
Enter additional burner types, as needed, add extra rows			
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: Supplementary or standby fuels	
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST: TBD			
L. EQUIPMENT INFORMATION COMMENTS: PERMITTED LIMIT OF < 49 LB VOC/DAY			

2. COMPANY INFORMATION

A. COMPANY: Aрызta, LLC		B. FAC ID: 173864	
C. ADDRESS: 1220 S. Baker St. CITY: Ontario STATE: CA ZIP: 91761		D. NAICS CODE: 311812	
E. CONTACT PERSON: Michael Wu		F. TITLE: Asst Dir. of Engineering	
G. PHONE NO.: 714-256-6900		H. EMAIL: michael.wu@aryzta.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: OTHER
C. SCAQMD ENGINEER: Tracy Nguyen	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 9/4/13 P/O NO.: G26836 PO ISSUANCE DATE: 9/4/2013	
E. START-UP DATE: Select date from pull down. The start-up date is the first date that the equipment operates for any reason. Use the best estimate at the PC stage and actual date at the PO stage.	
F. OPERATIONAL TIME: > 5years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (%O ₂ , %CO ₂ , dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit		30 ppmvd	Natural Gas	Compliance with SCAQMD Rule 1153.1	Natural Gas	
Averaging Time		1 HR				
Correction		3% O ₂				
B. OTHER BACT REQUIREMENTS: Concise description of the BACT requirements for each regulated contaminant from the equipment, other than the requirements list in Section 4(A).						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: Enter any additional comments regarding Emissions Information.						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Manufacturer of the equipment		B. MODEL: Model name and number	
C. DESCRIPTION: Additional description of the operation and functions of the control equipment.			
D. SIZE/DIMENSIONS/CAPACITY: An appropriate size parameter such as rated heat input, usable volume, rated filter efficiency, and/or one more characteristic dimensions.			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. Click here to enter text. PC ISSUANCE DATE: Click here to enter a date. PO NO.: Click here to enter text. PO ISSUANCE DATE: Click here to enter a date.			
F. REQUIRED CONTROL EFFICIENCIES: Minimum efficiencies of the system control equipment as required by permit, or the most stringent rule requirement. The control or destruction efficiency is determined across the control device (e.g. inlet-outlet). Collection or capture efficiency is based at each point of contaminant collection in the system. Enter each contaminant that applies. Add rows as needed.			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	___%	___%	___%
NO _x	___%	___%	___%
SO _x	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM ₁₀	___%	___%	___%
INORGANIC	___%	___%	___%
G. CONTROL TECHNOLOGY COMMENTS .			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Tests R12019 and R11208
B. DATE(S) OF SOURCE TEST: 3/9/2011 and 11/9/2011 when facility was named Fresh Start Bakeries (Fac ID: 149457) and Application # 513897
C. COLLECTION EFFICIENCY METHOD: The method used to determine collection efficiency of the system (e.g., EPA Method 204, mass balance), if applicable. A brief description of the collection efficiency test may be included if there is no applicable method (e.g., OVA measurements, smoke tests)
D. COLLECTION EFFICIENCY PARAMETERS: The quantitative parameters used to verify the method or procedures in Section 6(C). Examples include static pressure measurements, anemometer measurements, and mass balance results.
E. SOURCE TEST/PERFORMANCE DATA: CO ₂ equivalency used due to high O ₂ content, highest zone concentration 27.76 ppmvd NO _x @3%O ₂ .
F. TEST OPERATING PARAMETERS AND CONDITIONS: Test conducted during "normal operations."
G. TEST METHODS (SPECIFY AGENCY): SCAQMD Method 100.1

H. MONITORING AND TESTING REQUIREMENTS: Include any monitoring or testing requirements and their frequency that will be enforced to maintain emission levels reported for the BACT Determination.
I. DEMONSTRATION OF COMPLIANCE COMMENTS: Enter comments for additional information for Demonstration of Compliance.

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 000255	B. CCAT: Click here to enter text.	C. APPLICATION TYPE CODE: 40	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	E. TITLE V FAC: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	F. SOURCE TEST ID(S): R12019, R11208	
G. SCAQMD SOURCE SPECIFIC RULES: 1153, 1153.1			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR: Click here to enter text.	H2. MICR DATE: Click here to enter a date.	H3. CANCER BURDEN: Click here to enter text.	H4. CB DATE: Click here to enter a date.
H5: HIA: Click here to enter text.	H6. HIA DATE: Click here to enter a date.	H7. HIC: Click here to enter text.	H8. HIC DATE: Click here to enter a date.



Part D, SCAQMD BACT Determination

Source Type: **Minor**
 Application No.: **475618**
 Equipment Category: **Food Oven**
 Equipment Subcategory: **Ribbon Burner > 500°F**
 Date: **March 24, 2017**

1. EQUIPMENT INFORMATION		
A. MANUFACTURER: Tecnomaz		B. MODEL: T-1200 NG
C. DESCRIPTION: Corn Tortilla Oven No. 1		
D. FUNCTION: Food oven with ribbon type burners used to bake corn tortillas		
E. SIZE/DIMENSIONS/CAPACITY: 20'-7" L X 7'-4" W X 6'-9"H		
COMBUSTION SOURCES		
F. MAXIMUM HEAT INPUT: 2.7 MMBtu/hr		
G. BURNER INFORMATION		
TYPE	INDIVIDUAL HEAT INPUT	NUMBER
RIBBON	0.079 MMBtu/hr	34
Enter additional burner types, as needed, add extra rows		
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: Supplementary or standby fuels
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR		
K. EQUIPMENT COST: TBD		
L. EQUIPMENT INFORMATION COMMENTS: Enter additional comments regarding Equipment Information		

2. COMPANY INFORMATION	
A. COMPANY: Mission Foods	B. FAC ID: 153640
C. ADDRESS: 14200 Arminta St. CITY: Panorama City STATE: CA ZIP: 91402	D. NAICS CODE: 31183
E. CONTACT PERSON: Kelli Kimberly	F. TITLE: Environmental Director
G. PHONE NO.: 909-980-3566	H. EMAIL: kelli_kimberly@missionfoods.com

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION
C. SCAQMD ENGINEER: Hassan Namaki	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 1/1/10 P/O NO.: G19902 PO ISSUANCE DATE: 8/16/2012	
E. START-UP DATE: Select date from pull down. The start-up date is the first date that the equipment operates for any reason. Use the best estimate at the PC stage and actual date at the PO stage.	
F. OPERATIONAL TIME: > 5years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (%O₂, %CO₂, dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.

	VOC	NOx	SOx	CO	PM OR PM ₁₀	INORGANIC
BACT Limit		60 ppmvd	Natural Gas	Compliance with SCAQMD Rules 407 and 1153.1	Natural Gas	
Averaging Time		1 HR				
Correction		3% O ₂				

B. OTHER BACT REQUIREMENTS: Concise description of the BACT requirements for each regulated contaminant from the equipment, other than the requirements list in Section 4(A).

C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology

D. EMISSION INFORMATION COMMENTS: Enter any additional comments regarding Emissions Information.

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Manufacturer of the equipment		B. MODEL: Model name and number	
C. DESCRIPTION: Additional description of the operation and functions of the control equipment.			
D. SIZE/DIMENSIONS/CAPACITY: An appropriate size parameter such as rated heat input, usable volume, rated filter efficiency, and/or one more characteristic dimensions.			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. Click here to enter text. PC ISSUANCE DATE: Click here to enter a date. PO NO.: Click here to enter text. PO ISSUANCE DATE: Click here to enter a date.			
F. REQUIRED CONTROL EFFICIENCIES: Minimum efficiencies of the system control equipment as required by permit, or the most stringent rule requirement. The control or destruction efficiency is determined across the control device (e.g. inlet-outlet). Collection or capture efficiency is based at each point of contaminant collection in the system. Enter each contaminant that applies. Add rows as needed.			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	___%	___%	___%
NO _x	___%	___%	___%
SO _x	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM ₁₀	___%	___%	___%
INORGANIC	___%	___%	___%
G. CONTROL TECHNOLOGY COMMENTS.			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Tests PR10242
B. DATE(S) OF SOURCE TEST: 1/12/2012
C. COLLECTION EFFICIENCY METHOD: The method used to determine collection efficiency of the system (e.g., EPA Method 204, mass balance), if applicable. A brief description of the collection efficiency test may be included if there is no applicable method (e.g., OVA measurements, smoke tests)
D. COLLECTION EFFICIENCY PARAMETERS: The quantitative parameters used to verify the method or procedures in Section 6(C). Examples include static pressure measurements, anemometer measurements, and mass balance results.
E. SOURCE TEST/PERFORMANCE DATA: 2 zones, Highest zone concentration 52.6 ppmvd NO _x , 915 ppmvd CO both at 3%O ₂ .
F. TEST OPERATING PARAMETERS AND CONDITIONS: Test conducted during "normal load," 89.1% firing rate
G. TEST METHODS (SPECIFY AGENCY): SCAQMD M. 100.1

H. MONITORING AND TESTING REQUIREMENTS: Include any monitoring or testing requirements and their frequency that will be enforced to maintain emission levels reported for the BACT Determination.
I. DEMONSTRATION OF COMPLIANCE COMMENTS: Enter comments for additional information for Demonstration of Compliance.

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 000264	B. CCAT: Click here to enter text.	C. APPLICATION TYPE CODE: 40	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	E. TITLE V FAC: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	F. SOURCE TEST ID(S): PR10242	
G. SCAQMD SOURCE SPECIFIC RULES: 1153, 1153.1			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR: Click here to enter text.	H2. MICR DATE: Click here to enter a date.	H3. CANCER BURDEN: Click here to enter text.	H4. CB DATE: Click here to enter a date.
H5: HIA: Click here to enter text.	H6. HIA DATE: Click here to enter a date.	H7. HIC: Click here to enter text.	H8. HIC DATE: Click here to enter a date.



Part D, SCAQMD BACT Determination

Source Type: **Minor**
 Application No.: **Oven - 567948, CatOx - 569302**
 Equipment Category: **Food Oven**
 Equipment Subcategory: **Infrared burners**
 Date: **March 24, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Custom		B. MODEL: Model name and number	
C. DESCRIPTION: Food oven with only infrared burners vented to a catalytic oxidizer to control VOC emissions			
D. FUNCTION: Food oven equipped with infrared burners used to bake pita and other flat breads			
E. SIZE/DIMENSIONS/CAPACITY: 7' W x 19' L x 11'H with a 0.5 HP combustion blower			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 2.198 MMBtu/hr			
G. BURNER INFORMATION			
	TYPE	INDIVIDUAL HEAT INPUT	NUMBER
	Make and model of burner	Rated heat input of single burner, in btu/hr	314
	Enter additional burner types, as needed, add extra rows		
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: Supplementary or standby fuels	
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST: TBD			
L. EQUIPMENT INFORMATION COMMENTS: UNCONTROLLED (INLET) VOC EMISSIONS 1.038 LB/HR (PERMIT EVALUATION) IS EQUAL TO 24.9 LB VOC/DAY. PERMIT LIMITS TO 1440 TON BAKERY PROD/MONTH AND 0.7752% YEAST			

2. COMPANY INFORMATION

A. COMPANY: Rich Products Corporation		B. FAC ID: 178261	
C. ADDRESS: 3401 W. Segerstrom Ave. CITY: Santa Ana STATE: CA ZIP: 92704		D. NAICS CODE: 311812	
E. CONTACT PERSON: Jim Niemeyer		F. TITLE: Maintenance Manager	
G. PHONE NO.: 714-559-6826		H. EMAIL: jniemeyer@rich.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: MODIFICATION
C. SCAQMD ENGINEER: Tracy Nguyen	
D. PERMIT INFORMATION: PC ISSUANCE DATE: Click here to enter a date. P/O NO.: G43298 PO ISSUANCE DATE: 10/14/2016	
E. START-UP DATE: 10/14/2014	
F. OPERATIONAL TIME: > 1 year (10/14/14 source test date)	

4. EMISSION INFORMATION

A. **BACT EMISSION LIMITS AND AVERAGING TIMES:** List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (%O₂, %CO₂, dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.

	VOC	NOx	SOx	CO	PM OR PM ₁₀	INORGANIC
BACT Limit	95% BY WEIGHT OVERALL CONTROL	Oven: 30 ppm CatOx: 30 ppm	Nat Gas	Compliance with SCAQMD Rules 407 and 1153.1	Nat Gas	
Averaging Time	1 HR	1 HR				
Correction	TGNMO as CH4	Oven: 3% O2 Cat Ox: 3% O2				

B. **OTHER BACT REQUIREMENTS:** Concise description of the BACT requirements for each regulated contaminant from the equipment, other than the requirements list in Section 4(A).

C. **BASIS OF THE BACT/LAER DETERMINATION:** Achieved in Practice/New Technology

D. **EMISSION INFORMATION COMMENTS:** Enter any additional comments regarding Emissions Information.

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Western Combustion		B. MODEL: 30	
C. DESCRIPTION: Catalytic oxidizer with low NOx burner venting Oven No. 2 and control VOC emission released by yeast in baking products			
D. SIZE/DIMENSIONS/CAPACITY: Maxon Oven Pak LE13 burner, 1.3 MMBTu/hr burner. 4 Pt catalyst Modules.			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 569302 PC ISSUANCE DATE: Change ownership PO NO.: G43249 PO ISSUANCE DATE: 10/12/2016			
F. REQUIRED CONTROL EFFICIENCIES: Minimum efficiencies of the system control equipment as required by permit, or the most stringent rule requirement. The control or destruction efficiency is determined across the control device (e.g. inlet-outlet). Collection or capture efficiency is based at each point of contaminant collection in the system. Enter each contaminant that applies. Add rows as needed.			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	95%	95%	___%
NOx	___%	___%	___%
SOx	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM ₁₀	___%	___%	___%
INORGANIC	___%	___%	___%
G. CONTROL TECHNOLOGY COMMENTS Permitted limit minimum 600°F catalyst inlet temperature. 100% collection efficiency required to meet efficiency limits.			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source test PR14211
B. DATE(S) OF SOURCE TEST: 10/14-16/2014 when the Cat Ox was Appl # 557729
C. COLLECTION EFFICIENCY METHOD: EPA M.204
D. COLLECTION EFFICIENCY PARAMETERS: The quantitative parameters used to verify the method or procedures in Section 6(C). Examples include static pressure measurements, anemometer measurements, and mass balance results.
E. SOURCE TEST/PERFORMANCE DATA: 98.4% destruction eff, Inlet VOC to Cat Ox 2.4 lb/hr, Exh VOC 0.03 lb/hr. Exhaust of cat ox: Normal load NOx with production 22.1 ppmvd @ 3%O ₂ (0.05 lb NOx/hr) and 21.2 ppmvd CO @ 3%O ₂ (0.14 lb CO/hr)
F. TEST OPERATING PARAMETERS AND CONDITIONS: Cat Bed inlet Temp 650°F.
G. TEST METHODS (SPECIFY AGENCY): SCAQMD 25.1, 25.3, 100.1

H. MONITORING AND TESTING REQUIREMENTS: Include any monitoring or testing requirements and their frequency that will be enforced to maintain emission levels reported for the BACT Determination.
I. DEMONSTRATION OF COMPLIANCE COMMENTS: Enter comments for additional information for Demonstration of Compliance.

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 000255	B. CCAT: 06	C. APPLICATION TYPE CODE: Click here to enter text.	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	E. TITLE V FAC: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	F. SOURCE TEST ID(S): PR14211	
G. SCAQMD SOURCE SPECIFIC RULES: Click here to enter text.			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR: Click here to enter text.	H2. MICR DATE: Click here to enter a date.	H3. CANCER BURDEN: Click here to enter text.	H4. CB DATE: Click here to enter a date.
H5: HIA: Click here to enter text.	H6. HIA DATE: Click here to enter a date.	H7. HIC: Click here to enter text.	H8. HIC DATE: Click here to enter a date.



Part D, SCAQMD BACT Determination

Source Type: **Minor**
 Application No.: **548869**
 Equipment Category: **Food Ovens**
 Equipment Subcategory: **Ribbon Burners with CatOx**
 Date: **March 24, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Baking Technology (2 identical ovens)		B. MODEL: Baketech Maxisaver Bun Oven	
C. DESCRIPTION: Two identical food ovens vented to a 2.7 MMBtu/hr Catalytic Oxidizer			
D. FUNCTION: Two food oven with ribbon burners used to bake buns			
E. SIZE/DIMENSIONS/CAPACITY: 33'-0" L X 48'-4" W X 11'-0"H			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 7.3 MMBtu/hr each oven			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	
FLYNN 1622HN		Rated heat input of single burner, in btu/hr	
MAXON MPAKT EB4		2.7 MMBtu/hr	
NUMBER			
24 each oven		1 Cat Ox	
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: Supplementary or standby fuels	
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST: TBD			
L. EQUIPMENT INFORMATION COMMENTS: TEMP RANGE <= 500°F			

2. COMPANY INFORMATION

A. COMPANY: Aрызta, LLC		B. FAC ID: 173864	
C. ADDRESS: 1220 S. Baker St. CITY: Ontario STATE: CA ZIP: 91761		D. NAICS CODE: Click "NAICS" for link	
E. CONTACT PERSON: Michael Wu		F. TITLE: Asst. Dir. of Engineering	
G. PHONE NO.: 714-256-6900		H. EMAIL: michael.wu@aryzta.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: OTHER
C. SCAQMD ENGINEER: Marilyn Potter	
D. PERMIT INFORMATION: PC ISSUANCE DATE: Click here to enter a date. P/O NO.: G14787 PO ISSUANCE DATE: 9/13/2013	
E. START-UP DATE: Select date from pull down. The start-up date is the first date that the equipment operates for any reason. Use the best estimate at the PC stage and actual date at the PO stage.	
F. OPERATIONAL TIME: > 9 years. Prev. operated under Fresh Start Bakeries	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (% O ₂ , % CO ₂ , dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit	95% overall control (mass basis)	30 ppmvd (both ovens and Catalytic Oxidizer)	Natural Gas	Compliance with SCAQMD Rules 407 and 1153.1	Natural Gas	
Averaging Time	1 HR	1 HR				
Correction		3% O ₂				
B. OTHER BACT REQUIREMENTS: Concise description of the BACT requirements for each regulated contaminant from the equipment, other than the requirements list in Section 4(A).						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: Enter any additional comments regarding Emissions Information.						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: CSM Worldwide		B. MODEL: 180A	
C. DESCRIPTION: Catalytic oxidizer used to control VOC emissions vented from two bun ovens			
D. SIZE/DIMENSIONS/CAPACITY: 25 Catalyst module with 2.7 MMBtu/hr			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 548869 PC ISSUANCE DATE: Click here to enter a date. PO NO.: G27030 PO ISSUANCE DATE: 9/13/2016			
F. REQUIRED CONTROL EFFICIENCIES: Minimum efficiencies of the system control equipment as required by permit, or the most stringent rule requirement. The control or destruction efficiency is determined across the control device (e.g. inlet-outlet). Collection or capture efficiency is based at each point of contaminant collection in the system. Enter each contaminant that applies. Add rows as needed.			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	95%	___%	___%
NO _x	___%	___%	___%
SO _x	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM ₁₀	___%	___%	___%
INORGANIC	___%	___%	___%
G. CONTROL TECHNOLOGY COMMENTS. Minimum catalyst inlet temperature 600°F			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Test PR07086
B. DATE(S) OF SOURCE TEST: 4/3/2011 NO _x cat ox burner (Appl file 518219), NO _x Ovens 1 and 2 (Appl file 460942, 460943) – 9/24/2007, VOC control of cat ox (Appl file 460945) - 9/20/2007.
C. COLLECTION EFFICIENCY METHOD: The method used to determine collection efficiency of the system (e.g., EPA Method 204, mass balance), if applicable. A brief description of the collection efficiency test may be included if there is no applicable method (e.g., OVA measurements, smoke tests)
D. COLLECTION EFFICIENCY PARAMETERS: The quantitative parameters used to verify the method or procedures in Section 6(C). Examples include static pressure measurements, anemometer measurements, and mass balance results.
E. SOURCE TEST/PERFORMANCE DATA: 96.6% overall VOC control eff. Highest concentration 28.2 ppmvd NO _x @ 3% O ₂
F. TEST OPERATING PARAMETERS AND CONDITIONS: Test conducted during normal load.
G. TEST METHODS (SPECIFY AGENCY): SCAQMD Methods 100.1, 25.1, 25.3

H. MONITORING AND TESTING REQUIREMENTS: Include any monitoring or testing requirements and their frequency that will be enforced to maintain emission levels reported for the BACT Determination.
I. DEMONSTRATION OF COMPLIANCE COMMENTS: Enter comments for additional information for Demonstration of Compliance.

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 000255	B. CCAT: 16	C. APPLICATION TYPE CODE: 30	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	E. TITLE V FAC: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	F. SOURCE TEST ID(S): PR07086	
G. SCAQMD SOURCE SPECIFIC RULES: 1153, 1153.1			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR: Click here to enter text.	H2. MICR DATE: Click here to enter a date.	H3. CANCER BURDEN: Click here to enter text.	H4. CB DATE: Click here to enter a date.
H5: HIA: Click here to enter text.	H6. HIA DATE: Click here to enter a date.	H7. HIC: Click here to enter text.	H8. HIC DATE: Click here to enter a date.



Part D, SCAQMD BACT Determination

Source Type: **Minor**
 Application No.: **487295**
 Equipment Category: **Food Oven**
 Equipment Subcategory: **Direct Fired**
 Date: **March 24, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Werner Ppfleiderer		B. MODEL: 1F62837/1
C. DESCRIPTION: Two zone 48" wide oven		
D. FUNCTION: Food oven with low NOx burners used to bake almond cookies		
E. SIZE/DIMENSIONS/CAPACITY: 20'-7" L X 7'-4" W X 6'-9"H		
COMBUSTION SOURCES		
F. MAXIMUM HEAT INPUT: 2.4 MMBtu/hr		
G. BURNER INFORMATION		
TYPE	INDIVIDUAL HEAT INPUT	NUMBER
LOW NOX	1.2 MMBtu/hr	2
Enter additional burner types, as needed, add extra rows		
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: Supplementary or standby fuels
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR		
K. EQUIPMENT COST: TBD		
L. EQUIPMENT INFORMATION COMMENTS: TEMP RANGE 500-560°F		

2. COMPANY INFORMATION

A. COMPANY: JSL Foods Inc.		B. FAC ID: 136986
C. ADDRESS: 2222 1/2 Davie Ave. CITY: Los Angeles STATE: CA ZIP: 90040		D. NAICS CODE: Click "NAICS" for link
E. CONTACT PERSON: Gregorio Torres		F. TITLE: Plant Mgr
G. PHONE NO.: 323-797-9999	H. EMAIL: gtorres@jlsfoods.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: PO NO PC
C. SCAQMD ENGINEER: Kim Le	
D. PERMIT INFORMATION: PC ISSUANCE DATE: Click here to enter a date. P/O NO.: G5819 PO ISSUANCE DATE: 1/1/2010	
E. START-UP DATE: Select date from pull down. The start-up date is the first date that the equipment operates for any reason. Use the best estimate at the PC stage and actual date at the PO stage.	
F. OPERATIONAL TIME: > 7 years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (% O ₂ , % CO ₂ , dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit		30 ppmvd	Natural Gas	Compliance with SCAQMD Rules 407 and 1153.1	Natural Gas	
Averaging Time		1 HR				
Correction		3% O ₂				
B. OTHER BACT REQUIREMENTS: Concise description of the BACT requirements for each regulated contaminant from the equipment, other than the requirements list in Section 4(A).						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: Enter any additional comments regarding Emissions Information.						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Manufacturer of the equipment		B. MODEL: Model name and number	
C. DESCRIPTION: Additional description of the operation and functions of the control equipment.			
D. SIZE/DIMENSIONS/CAPACITY: An appropriate size parameter such as rated heat input, usable volume, rated filter efficiency, and/or one more characteristic dimensions.			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. Click here to enter text. PC ISSUANCE DATE: Click here to enter a date. PO NO.: Click here to enter text. PO ISSUANCE DATE: Click here to enter a date.			
F. REQUIRED CONTROL EFFICIENCIES: Minimum efficiencies of the system control equipment as required by permit, or the most stringent rule requirement. The control or destruction efficiency is determined across the control device (e.g. inlet-outlet). Collection or capture efficiency is based at each point of contaminant collection in the system. Enter each contaminant that applies. Add rows as needed.			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	___%	___%	___%
NO _x	___%	___%	___%
SO _x	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM ₁₀	___%	___%	___%
INORGANIC	___%	___%	___%
G. CONTROL TECHNOLOGY COMMENTS.			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Tests PR10302
B. DATE(S) OF SOURCE TEST: 10/22/2010
C. COLLECTION EFFICIENCY METHOD: The method used to determine collection efficiency of the system (e.g., EPA Method 204, mass balance), if applicable. A brief description of the collection efficiency test may be included if there is no applicable method (e.g., OVA measurements, smoke tests)
D. COLLECTION EFFICIENCY PARAMETERS: The quantitative parameters used to verify the method or procedures in Section 6(C). Examples include static pressure measurements, anemometer measurements, and mass balance results.
E. SOURCE TEST/PERFORMANCE DATA: 2 zones, Highest zone concentration 22.3 ppmvd NO _x , 111 ppmvd CO both at 3%O ₂ .
F. TEST OPERATING PARAMETERS AND CONDITIONS: Test conducted during normal load.
G. TEST METHODS (SPECIFY AGENCY): SCAQMD M. 100.1

H. MONITORING AND TESTING REQUIREMENTS: Include any monitoring or testing requirements and their frequency that will be enforced to maintain emission levels reported for the BACT Determination.
I. DEMONSTRATION OF COMPLIANCE COMMENTS: Enter comments for additional information for Demonstration of Compliance.

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 000255	B. CCAT: Click here to enter text.	C. APPLICATION TYPE CODE: 30	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	E. TITLE V FAC: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	F. SOURCE TEST ID(S): PR10302	
G. SCAQMD SOURCE SPECIFIC RULES: 1153, 1153.1			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR: Click here to enter text.	H2. MICR DATE: Click here to enter a date.	H3. CANCER BURDEN: Click here to enter text.	H4. CB DATE: Click here to enter a date.
H5: HIA: Click here to enter text.	H6. HIA DATE: Click here to enter a date.	H7. HIC: Click here to enter text.	H8. HIC DATE: Click here to enter a date.



Part D: NonSCAQMD BACT Determination

Source Type: **Minor**
 Application No.: **533039**
 Equipment Category: **I.C. Engine, Stationary, Non-Emergency, Electrical Generators**
 Equipment Subcategory: _____
 Date: **April 26, 2012**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: GM/Tecogen		B. MODEL: TECODRIVE 7400	
C. DESCRIPTION: Spark Ignition, Rich Burn, Four-Cycle, 8 cylinders.			
D. FUNCTION: On-site electrical power generation			
E. SIZE/DIMENSIONS/CAPACITY: 108 HP, driving 75 KW generator			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: ---			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	
---		---	
Enter additional burner types, as needed, add extra rows			
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: ---	
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST: Not Available			
L. EQUIPMENT INFORMATION COMMENTS: Engine is equipped with emission control consisting of non-selective catalytic converter.			

2. COMPANY INFORMATION

A. COMPANY: Lake Forest II Master Assoc.		B. FAC ID: 170558	
C. ADDRESS: 24752 Toledo Way CITY: Lake Forest STATE: CA ZIP: 92630		D. NAICS CODE: Click "NAICS" for link	
E. CONTACT PERSON: JoAnn Burrows		F. TITLE: General Manager	
G. PHONE NO.: 949-586-0860		H. EMAIL: jburrows@lf2.org	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: PO NO PC
C. SCAQMD ENGINEER: Chingli Lin	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 4/26/12 P/O NO.: G17651 PO ISSUANCE DATE: 4/26/2012	
E. START-UP DATE: 1/29/2013	
F. OPERATIONAL TIME: 4+ years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (% O₂, % CO₂, dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.

	VOC	NOx	SOx	CO	PM OR PM ₁₀	INORGANIC
BACT Limit	0.1 LB/MW-HR	0.07 LB/MW-HR		0.2 LB/MW-HR	RULE 404	
Averaging Time	Per 1110.2 requirements	Per 1110.2 requirements		Per 1110.2 requirements		
Correction						

B. OTHER BACT REQUIREMENTS: Compliance with emission requirements of Rule 1110.2(d)(1)(L)

C. BASIS OF THE BACT/LAER DETERMINATION: Compliance with Rule 1110.2(d)(1)(L) and achieved in practiceOther (add comment)

D. EMISSION INFORMATION COMMENTS: Enter any additional comments regarding Emissions Information.

5. CONTROL TECHNOLOGY

A. MANUFACTURER: SUD-CHEMIE NSCR		B. MODEL: ENVICAT 7319	
C. DESCRIPTION: Non-Selective Catalytic Converter with automatic air/fuel ratio controller, Tecogen, model Teconet Stoichiometric AFRC.			
D. SIZE/DIMENSIONS/CAPACITY: ---			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 533039 PC ISSUANCE DATE: 4/26/12 PO NO.: G17651 PO ISSUANCE DATE: 4/26/2012			
F. REQUIRED CONTROL EFFICIENCIES: Maintain compliance with Rule 1110.2(d)(1)(L) for engine emissions.			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	___%	___%	___%
NO _x	___%	___%	___%
SO _x	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM ₁₀	___%	___%	___%
INORGANIC	___%	___%	___%
G. CONTROL TECHNOLOGY COMMENTS two stage system with three way catalyst followed by air injection and additional catalyst. Manages air/fuel ratio slightly rich of stoichiometric via oxygen sensors located before and after the first stage three way catalyst.			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source test.
B. DATE(S) OF SOURCE TEST: January 29, 2013
C. COLLECTION EFFICIENCY METHOD: The method used to determine collection efficiency of the system (e.g., EPA Method 204, mass balance), if applicable. A brief description of the collection efficiency test may be included if there is no applicable method (e.g., OVA measurements, smoke tests)
D. COLLECTION EFFICIENCY PARAMETERS: The quantitative parameters used to verify the method or procedures in Section 6(C). Examples include static pressure measurements, anemometer measurements, and mass balance results.
E. SOURCE TEST/PERFORMANCE DATA: NO _x = 0.027 lb/MWe-hr, CO = 0.067 lb/MWe-hr, VOC = 0.04 lb/MWe-hr.
F. TEST OPERATING PARAMETERS AND CONDITIONS: List any important operating conditions maintained during the source test or normal operations. Examples include, but may not be limited to, pressure differentials across control devices, feed rates, firing rates, temperatures, flow rates, or other parameters used to evaluate the level of operation of the equipment during the test or operations that may affect emissions from the equipment.

G. TEST METHODS (SPECIFY AGENCY): NO _x , CO and O ₂ determined using SCAQMD Method 100.1. VOC determined using SCAQMD Method 25.3.
H. MONITORING AND TESTING REQUIREMENTS: Compliance with Rule 1110.2(f)
I. DEMONSTRATION OF COMPLIANCE COMMENTS: Enter comments for additional information for Demonstration of Compliance.

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: Click here to enter text.	B. CCAT: Click here to enter text.	C. APPLICATION TYPE CODE: Click here to enter text.	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input type="checkbox"/>	E. TITLE V FAC: YES <input type="checkbox"/> NO <input type="checkbox"/>	F. SOURCE TEST ID(S): Click here to enter text.	
G. SCAQMD SOURCE SPECIFIC RULES: Click here to enter text.			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR: Click here to enter text.	H2. MICR DATE: Click here to enter a date.	H3. CANCER BURDEN: Click here to enter text.	H4. CB DATE: Click here to enter a date.
H5: HIA: Click here to enter text.	H6. HIA DATE: Click here to enter a date.	H7. HIC: Click here to enter text.	H8. HIC DATE: Click here to enter a date.



Part D: NonSCAQMD BACT Determination

Source Type: **Minor**
 Application No.: **558783**
 Equipment Category: **I.C. Engine, Stationary, Non-Emergency, Electrical Generators**
 Equipment Subcategory: _____
 Date: **April 14, 2015**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: GM/Tecogen		B. MODEL: TECODRIVE 7400	
C. DESCRIPTION: Spark Ignition, Rich Burn, Four-Cycle, 8 cylinders.			
D. FUNCTION: On-site electrical power generation			
E. SIZE/DIMENSIONS/CAPACITY: 108 HP, driving 75 KW generator			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: ---			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	
---		---	
Enter additional burner types, as needed, add extra rows			
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: ---	
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST: Not Available			
L. EQUIPMENT INFORMATION COMMENTS: Engine is equipped with emission control consisting of non-selective catalytic converter.			

2. COMPANY INFORMATION

A. COMPANY: Playa Capital Company LLC		B. FAC ID: 176353	
C. ADDRESS: 12852 Runway Road CITY: Playa Vista STATE: CA ZIP: 90094		D. NAICS CODE: Click "NAICS" for link	
E. CONTACT PERSON: Derek Fraychineaud		F. TITLE: VP Residential Dev.	
G. PHONE NO.: 310-448-4682		H. EMAIL: derek.fraychineaud@brookfieldrp.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION PERMIT TO OPERATE
C. SCAQMD ENGINEER: Jason Taylor	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 3/18/14 P/O NO.: G39943 PO ISSUANCE DATE: 4/14/2015	
E. START-UP DATE: 8/21/2015	
F. OPERATIONAL TIME: 1+ years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: List all criteria contaminant or precursor emission limits, including facility limits, on the permit(s) that affects the equipment. Include units, averaging times and corrections (%O₂, %CO₂, dry, etc). For VOC, values must include if the concentration is reported as methane, hexane or any other compound. VOC mass emissions should include the molecular weight-to-carbon ratio, if applicable.

	VOC	NOx	SOx	CO	PM OR PM ₁₀	INORGANIC
BACT Limit	0.222 LB/MW-HR	0.156 LB/MW-HR		0.444 LB/MW-HR	RULE 404	
Averaging Time	Per Rule 1110.2 requirements	Per Rule 1110.2 requirements		Per Rule 1110.2 requirements		
Correction						

B. OTHER BACT REQUIREMENTS: Compliance with emission requirements of Rule 1110.2(d)(1)(L)

C. BASIS OF THE BACT/LAER DETERMINATION: Compliance with Rule 1110.2(d)(1)(L) and achieved in practiceOther (add comment)

4. EMISSION INFORMATION

D. EMISSION INFORMATION COMMENTS: In accordance with Rule 1110.2(d)(1)(K)(i) the NO_x, VOC and CO emissions are greater than Table IV since the engine produces both heat and electrical power and therefore allowed to adjusted emission limit through a thermal credit by applying an Electrical Energy Factor.

DRAFT

5. CONTROL TECHNOLOGY

A. MANUFACTURER: SUD-CHEMIE NSCR		B. MODEL: ENVICAT 7319	
C. DESCRIPTION: Non-Selective Catalytic Converter with automatic air/fuel ratio controller, Tecogen, model Teconet Stoichiometric AFRC.			
D. SIZE/DIMENSIONS/CAPACITY: ---			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 558783 PC ISSUANCE DATE: 3/18/14 PO NO.: G39943 PO ISSUANCE DATE: 4/14/2015			
F. REQUIRED CONTROL EFFICIENCIES: Maintain compliance with Rule 1110.2(d)(1)(L) for engine emissions.			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	___%	___%	___%
NO _x	___%	___%	___%
SO _x	___%	___%	___%
CO	___%	___%	___%
PM	___%	___%	___%
PM ₁₀	___%	___%	___%
INORGANIC	___%	___%	___%
G. CONTROL TECHNOLOGY COMMENTS two stage system with three way catalyst followed by air injection and additional catalyst. Manages air/fuel ratio slightly rich of stoichiometric via oxygen sensors located before and after the first stage three way catalyst.			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source test.
B. DATE(S) OF SOURCE TEST: August 21, 2015
C. COLLECTION EFFICIENCY METHOD: The method used to determine collection efficiency of the system (e.g., EPA Method 204, mass balance), if applicable. A brief description of the collection efficiency test may be included if there is no applicable method (e.g., OVA measurements, smoke tests)
D. COLLECTION EFFICIENCY PARAMETERS: The quantitative parameters used to verify the method or procedures in Section 6(C). Examples include static pressure measurements, anemometer measurements, and mass balance results.
E. SOURCE TEST/PERFORMANCE DATA: NO _x = 0.014 lb/MWe-hr, CO = 0.083 lb/MWe-hr, VOC = 0.116 lb/MWe-hr.
F. TEST OPERATING PARAMETERS AND CONDITIONS: List any important operating conditions maintained during the source test or normal operations. Examples include, but may not be limited to, pressure differentials across control devices, feed rates, firing rates, temperatures, flow rates, or other parameters used to evaluate the level of operation of the equipment during the test or operations that may affect emissions from the equipment.

G. TEST METHODS (SPECIFY AGENCY): NO _x , CO and O ₂ determined using SCAQMD Method 100.1. VOC determined using SCAQMD Method 25.3.
H. MONITORING AND TESTING REQUIREMENTS: Compliance with Rule 1110.2(f)
I. DEMONSTRATION OF COMPLIANCE COMMENTS: Enter comments for additional information for Demonstration of Compliance.

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: Click here to enter text.	B. CCAT: Click here to enter text.	C. APPLICATION TYPE CODE: Click here to enter text.	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input type="checkbox"/>	E. TITLE V FAC: YES <input type="checkbox"/> NO <input type="checkbox"/>	F. SOURCE TEST ID(S): Click here to enter text.	
G. SCAQMD SOURCE SPECIFIC RULES: Click here to enter text.			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR: Click here to enter text.	H2. MICR DATE: Click here to enter a date.	H3. CANCER BURDEN: Click here to enter text.	H4. CB DATE: Click here to enter a date.
H5: HIA: Click here to enter text.	H6. HIA DATE: Click here to enter a date.	H7. HIC: Click here to enter text.	H8. HIC DATE: Click here to enter a date.