

LAER Part B, Sections I and III Draft Proposals

BACT Scientific Review Committee Meeting

December 12, 2017

1. New LAER Part B, Section 1 – SCAQMD LAER
 - a. Furnace, Heat Treating Aluminum $\leq 900^{\circ}\text{F}$
 - b. Food Oven, Bakery w/ CatOx
 - c. Food Oven, Tortilla Chip
 - d. Food Oven, Snack Food
 - e. Flare, Biogas
 - f. Flare, Landfill Gas

2. Updated LAER Part B, Section 1– SCAQMD LAER
 - a. Boiler, with SCR
 - b. I.C. Engine – Digester Gas-Fired with digester gas clean up, SCR & Oxidation Catalyst

3. Part B, Section 3 – Other Technologies

These are emerging technologies which have been in operation with an air quality permit, however do not yet qualify as LAER

 - a. I.C. Engine, Stationary, Emergency, Compression Ignition, with SCR & DPF
 - b. Fuel Cell, 1.4MW Electrical Power Generation, Digester Gas-Fired with digester gas clean up



Part B, Section 1, SCAQMD BACT Determination

Source Type: **Major/LAER**
 Application No.: **560283, 560285**
 Equipment Category: **Furnace, Heating**
 Equipment Subcategory: **Aluminum, ≤ 900°F**
 Date: **September 15, 2016**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Custom		B. MODEL: Aluminum	
C. DESCRIPTION: Aluminum forging furnace			
D. FUNCTION: Furnace heats aluminum billets prior and during forging process			
E. SIZE/DIMENSIONS/CAPACITY: 32'-9" x 11'-10.5" x 6'-2.5"			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 5.0 MMBtu/hr			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	NUMBER
ECLIPSE WINNOX		5.0 MMBtu/hr	1
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: N/A	
J. OPERATING SCHEDULE: 24 7 52			
K. EQUIPMENT COST:			
L. EQUIPMENT INFORMATION COMMENTS:			

2. COMPANY INFORMATION

A. COMPANY: Carlton Forge Works		B. FAC ID: 22911	
C. ADDRESS: 7743 E. Adams St. CITY: Paramount STATE: CA ZIP: 90723		D. NAICS CODE: 33211	
E. CONTACT PERSON: Armando Bautista		F. TITLE:	
G. PHONE NO.: (562) 633-1131		H. EMAIL: abautista@cfworks.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: MODIFICATION
C. SCAQMD ENGINEER: Monica Fernandez-Neild	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 5/27/14 P/O NO.: G42717,-8 PO ISSUANCE DATE: 9/19/2016	
E. START-UP DATE: 8/1/2014	
F. OPERATIONAL TIME: 2+ years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit		30 PPMV	NATURAL GAS			NATURAL GAS
Averaging Time		1 HOUR				
Correction		@ 3% O ₂				
B. OTHER BACT REQUIREMENTS:						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: The BACT requirements are based on Part D of the BACT Guidelines. No more stringent, achieved in practice, requirements were found in EPA, CARB, or SCAQMD BACT listings or elsewhere.						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Eclipse Winnox		B. MODEL: Low NOx	
C. DESCRIPTION: Low NOx burner			
D. SIZE/DIMENSIONS/CAPACITY:			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 560283,-5 PC ISSUANCE DATE: 5/27/14 PO NO.: G42717, -8 PO ISSUANCE DATE: 9/9/2016			
F. REQUIRED CONTROL EFFICIENCIES:			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	%	%	%
NOx	%	%	%
SOx	%	%	%
CO	%	%	%
PM	%	%	%
PM ₁₀	%	%	%
INORGANIC	%	%	%
G. CONTROL TECHNOLOGY COMMENTS			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Method 100.1 Source Test
B. DATE(S) OF SOURCE TEST: 10/5/2014 and 10/19/2014
C. COLLECTION EFFICIENCY METHOD: N/A
D. COLLECTION EFFICIENCY PARAMETERS: N/A
E. SOURCE TEST/PERFORMANCE DATA: <10 PPMV NOx @3% O2 for both furnaces, and <143 PPMV CO @3% O2 (CO was measured well below 20% of full scale and was increased to 20% of scale or 40 ppmvd and corrected to 3% O2
F. TEST OPERATING PARAMETERS AND CONDITIONS:
G. TEST METHODS (SPECIFY AGENCY): SCAQMD Method 100.1
H. MONITORING AND TESTING REQUIREMENTS:
I. DEMONSTRATION OF COMPLIANCE COMMENTS:

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT:	B. CCAT:	C. APPLICATION TYPE CODE: 50	
D. RECLAIM FAC? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	E. TITLE V FAC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	F. SOURCE TEST ID(S):	
G. SCAQMD SOURCE SPECIFIC RULES:			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR:	H2. MICR DATE:	H3. CANCER BURDEN:	H4. CB DATE:
H5. HIA:	H6. HIA DATE:	H7. HIC:	H8. HIC DATE:

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Part B, Section 1, SCAQMD BACT Determination

Source Type: **Major/LAER**
 Application No.: **Oven 1-580239, Oven 1B-580240, Oven 5-440543, Oven 6-440544, Cat Ox-563257**
 Equipment Category: **Food Oven**
 Equipment Subcategory: **Bakery**
 Date: **April 7, 2016**

1. EQUIPMENT INFORMATION		
A. MANUFACTURER: Oven No. 1 and 1B; Chubco/Winkler; Oven No. 5 Baker Perkins; Oven No 6 Lanham Machinery		B. MODEL: #1 – BE/W; #1B – Superflo 2328075, #5- 960, #6- N/A
C. DESCRIPTION: Four bakery ovens manifolded to a single catalytic oxidizer for VOC control		
D. FUNCTION: Four natural gas-fired bakery ovens are used to bake bread products such as rolls and buns. Yeast is used in the products resulting in the release of VOCs which are collected by a ventilation system and control by a catalytic oxidizer		
E. SIZE/DIMENSIONS/CAPACITY: Catalytic Oxidizer – 7’ W x 20’ L x 6’ H with a 50 HP blower		
COMBUSTION SOURCES		
F. MAXIMUM HEAT INPUT: Cat Ox 4.0 MMBtu/hr; Oven 1 – 3.2 MMBtu/hr; Oven 5 – 2.8 MMBtu ; Oven 1B – 5.4 MMBtu/hr; Oven 6 – 3.2 MMBtu/hr		
G. BURNER INFORMATION		
TYPE	INDIVIDUAL HEAT INPUT	NUMBER
OVEN 1 UNKNOWN “LOW NOX”	1.6 MMBtu/hr	2
OVEN 1B UNKNOWN “LOW NOX”	5.4 MMBtu/hr	1
OVEN 5 – BAKER PERKINS		42
OVEN 6 – FLYNN NO. 156HN		24
CAT OX – MAXON OVENPACK 400 EB-4 BURNER	4.0 MMBtu/hr	1
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: N/A
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR		
K. EQUIPMENT COST:		
L. EQUIPMENT INFORMATION COMMENTS: OPERATING TEMP LESS THAN 500OF		

2. COMPANY INFORMATION

A. COMPANY: Galasso's Bakery	B. FAC ID: 72351
C. ADDRESS: 10820 San Sevaine Way CITY: Mira Loma STATE: CA ZIP: 91752	D. NAICS CODE: 311812
E. CONTACT PERSON: Brian Workman	F. TITLE: Chief Engineer
G. PHONE NO.: (951) 360-1211	H. EMAIL: bworkman@galassos.com

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3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: OTHER
C. SCAQMD ENGINEER: Vicky Lee	
D. PERMIT INFORMATION: PC ISSUANCE DATE: P/O NO.: G43113, G43117, F83743, F83744, G32643 PO ISSUANCE DATE: 10/6/2016	
E. START-UP DATE:	
F. OPERATIONAL TIME: > 10 years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit	CAT Ox: 95% OVERALL CONTROL EFFICIENCY (MASS BASIS)	Ovens: 40 PPM CAT Ox: COMPLIANCE WITH RULE 1147 AT TIME OF APPLICABILITY.		Ovens: 800 PPMV (COMPLIANCE WITH RULE 1153.1)		
Averaging Time	CAT OX: 1 HR	Ovens: 15 MIN		Ovens: COMPLIANCE WITH RULE 1153.1		
Correction		Ovens: 3% O ₂		Ovens: COMPLIANCE WITH RULE 1153.1		
B. OTHER BACT REQUIREMENTS:						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS:						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Anguil		B. MODEL: 100	
C. DESCRIPTION: Catalytic Oxidizer			
D. SIZE/DIMENSIONS/CAPACITY: 4.00 MMBtu/hr Maxon burner venting ovens Oven 1, 1B, 5 and 6			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 563257 PC ISSUANCE DATE: PO NO.: G32643 PO ISSUANCE DATE: 10/6/2016			
F. REQUIRED CONTROL EFFICIENCIES:			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	95%	%	%
NO _x	%	%	%
SO _x	%	%	%
CO	%	%	%
PM	%	%	%
PM ₁₀	%	%	%
INORGANIC	%	%	%
G. CONTROL TECHNOLOGY COMMENTS Inlet temp catalyst bed $\geq 600^{\circ}\text{F}$. Average uncontrolled emission rate 14.7 lb. VOC/day/oven (from permit evaluation)			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Test
B. DATE(S) OF SOURCE TEST: Cat Ox (VOC) April 6, 2006 & March 8, 2011, Ovens (NO _x): #1- May 21, 2015, #1B - April 8, 2016, #5 - June 9, 2006, #6 - June 21, 2006
C. COLLECTION EFFICIENCY METHOD: Smoke test
D. COLLECTION EFFICIENCY PARAMETERS: Inward air flow at oven openings. Exhaust rate 3556 dscfm (inlet to Cat Ox).
E. SOURCE TEST/PERFORMANCE DATA: Actual Control Efficiency 95.04%, Inlet VOC 20.6 lb/hr Outlet 1.02 lb/hr (both as ethanol). Outlet VOC Conc. 34.3 ppmv VOC (as ethanol).
F. TEST OPERATING PARAMETERS AND CONDITIONS: Normal operation processing rolls, bread sticks and buns
G. TEST METHODS (SPECIFY AGENCY): SCAQMD Method 25.1 and 25.3, SCAQMD Method 100.1

H. MONITORING AND TESTING REQUIREMENTS:

I. DEMONSTRATION OF COMPLIANCE COMMENTS:

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT:	B. CCAT:	C. APPLICATION TYPE CODE:	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	E. TITLE V FAC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	F. SOURCE TEST ID(S): PR11031, 06151A-B, 14410	
G. SCAQMD SOURCE SPECIFIC RULES: 1153, 1153.1			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR:	H2. MICR DATE:	H3. CANCER BURDEN:	H4. CB DATE:
H5: HIA:	H6. HIA DATE:	H7. HIC:	H8. HIC DATE:



Part B, Section 1, SCAQMD BACT Determination

Source Type: **Major/LAER**
 Application No.: **551284**
 Equipment Category: **Food Oven**
 Equipment Subcategory: **Tortilla Chip Oven**
 Date: **March 8, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Casa Herrera		B. MODEL: C1 120-28 RGX (E)	
C. DESCRIPTION: Natural gas-fired food oven to dry and bake tortilla chips.			
D. FUNCTION: Food oven equipped with IR burners to dry masa and ribbon burners to bake masa into tortilla chips prior to cooking in a deep fat fryer.			
E. SIZE/DIMENSIONS/CAPACITY:			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 5.774 MMBtu/hr			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	NUMBER
CASA HERRERA ENSIGN RIBBON		4.032 MMBtu/hr	
IR IET COMB. ULTRA GLO 7D-400P		1.742 MMBtu/hr	
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: N/A	
J. OPERATING SCHEDULE: 24 7 52			
K. EQUIPMENT COST:			
L. EQUIPMENT INFORMATION COMMENTS: RECLAIM Device ID D85. The facility also operates an identical line under D86, Appl. No. 551289, which has identical emission limits.			

2. COMPANY INFORMATION

A. COMPANY: Frito-Lay, Inc.		B. FAC ID: 000346	
C. ADDRESS: 9535 Archibald Ave. CITY: Rancho Cucamonga STATE: CA ZIP: 91730		D. NAICS CODE: 311919	
E. CONTACT PERSON: Bob Biasci		F. TITLE: Technical Director	
G. PHONE NO.: (909) 941-6203		H. EMAIL: bob.biacsi@pepsico.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE:
C. SCAQMD ENGINEER: Michael Solis	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 9/15/09 P/O NO.: G28761 PO ISSUANCE DATE: 9/15/2009	
E. START-UP DATE: 3/17/2014	
F. OPERATIONAL TIME: 3 years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit		54 PPMV		2000 PPMV		
Averaging Time		1 HOUR		15 MIN		
Correction		@ 3% O ₂		STACK CONDITIONS		
B. OTHER BACT REQUIREMENTS: CO limit based on SCAQMD Rule 407 requirements						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS:						

5. CONTROL TECHNOLOGY

A. MANUFACTURER:		B. MODEL:	
C. DESCRIPTION: N/A. No add-on control equipment			
D. SIZE/DIMENSIONS/CAPACITY:			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. PC ISSUANCE DATE: PO NO.: PO ISSUANCE DATE:			
F. REQUIRED CONTROL EFFICIENCIES:			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	%	%	%
NOx	%	%	%
SOx	%	%	%
CO	%	%	%
PM	%	%	%
PM ₁₀	%	%	%
INORGANIC	%	%	%
G. CONTROL TECHNOLOGY COMMENTS			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: SCAQMD Method 100.1 Source Test
B. DATE(S) OF SOURCE TEST: January 13, 2015
C. COLLECTION EFFICIENCY METHOD: N/A
D. COLLECTION EFFICIENCY PARAMETERS: N/A
E. SOURCE TEST/PERFORMANCE DATA: 43 PPMV NOx @3% O2. 36 PPMV CO @ stack conditions. (Identical Unit D86: 22.9 PPMV NOx @3% O2. 85 PPMV CO @ stack conditions)
F. TEST OPERATING PARAMETERS AND CONDITIONS: Tested at normal load. Burner firing rate 50%. Stack Fan Temp >560°F. Oven Temps: Top: 302°F, Middle:470°F, Lower: 299°F
G. TEST METHODS (SPECIFY AGENCY): SCAQMD Method 100.1

H. MONITORING AND TESTING REQUIREMENTS:

I. DEMONSTRATION OF COMPLIANCE COMMENTS: 54 ppmv @3%O2 limit was established during permit evaluation to ensure there was no increase in emissions due to a modification with an increased rating of the unit. Previous source test prior to modification showed unit tested at 53.7 ppm @3%O2.

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 000264	B. CCAT:	C. APPLICATION TYPE CODE: 50	
D. RECLAIM FAC? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	E. TITLE V FAC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	F. SOURCE TEST ID(S): PR14386	
G. SCAQMD SOURCE SPECIFIC RULES:			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR:	H2. MICR DATE:	H3. CANCER BURDEN:	H4. CB DATE:
H5. HIA:	H6. HIA DATE:	H7. HIC:	H8. HIC DATE:



Part B, Section 1, SCAQMD BACT Determination

Source Type: **Major/LAER**
 Application No.: **499293/551284**
 Equipment Category: **Food Oven**
 Equipment Subcategory: **Snack Food**
 Date: **March 8, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Maxon		B. MODEL: C1 120-28 RGX (E)	
C. DESCRIPTION: Natural gas-fired food oven to bake corn meal cheese puffs			
D. FUNCTION: Food oven equipped with 1.6 MMBtu/hr burner to bake Frito Lay cheese puffs. The combustion air is recirculated in the oven with a 0.5 HP blower to distribute the heat before exhausting to atmosphere.			
E. SIZE/DIMENSIONS/CAPACITY: Cheese Puff production line capable of frying or baking cheese puffs. Oven is conveyORIZED and equipped with one Maxon low NOx burner.			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 1.6 MMBtu/hr			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	NUMBER
MAXON CYCLOMAX		1.6 MMBtu/hr	1
H. PRIMARY FUEL: NATURAL GAS		I. OTHER FUEL: N/A	
J. OPERATING SCHEDULE: 24 7 52			
K. EQUIPMENT COST:			
L. EQUIPMENT INFORMATION COMMENTS:			

2. COMPANY INFORMATION

A. COMPANY: Frito-Lay, Inc.		B. FAC ID: 000346	
C. ADDRESS: 9535 Archibald Ave. CITY: Rancho Cucamonga STATE: CA ZIP: 91730		D. NAICS CODE: 311919	
E. CONTACT PERSON: Bob Biasci		F. TITLE: Technical Director	
G. PHONE NO.: (909) 941-6203		H. EMAIL: bob.biacsi@pepsico.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: MODIFICATION
C. SCAQMD ENGINEER: Michael Solis	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 9/15/09 P/O NO.: G4333 PO ISSUANCE DATE: 9/15/2009	
E. START-UP DATE: 4/15/2008	
F. OPERATIONAL TIME: 8 years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit		25 PPMV		75 PPMV		
Averaging Time		1 HOUR		1 HOUR		
Correction		@ 3% O ₂		@ 3% O ₂		
B. OTHER BACT REQUIREMENTS: Method 100.1 Source Test every 5 years pursuant to Permit Condition D28.9						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: Emissions guaranteed by manufacturer per application package						

H. MONITORING AND TESTING REQUIREMENTS: Source testing every 5 years pursuant to Permit Condition D28.9
I. DEMONSTRATION OF COMPLIANCE COMMENTS:

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 000255	B. CCAT:	C. APPLICATION TYPE CODE: 50	
D. RECLAIM FAC? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	E. TITLE V FAC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	F. SOURCE TEST ID(S): PR09058	
G. SCAQMD SOURCE SPECIFIC RULES:			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR:	H2. MICR DATE:	H3. CANCER BURDEN:	H4. CB DATE:
H5: HIA:	H6. HIA DATE:	H7. HIC:	H8. HIC DATE:

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Part B, Section 1, SCAQMD BACT Determination

Source Type: **Major/LAER**
 Application No.: **513835**
 Equipment Category: **Flare**
 Equipment Subcategory: **Digester Gas, Wastewater**
 Date: **March 15, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Bekaert		B. MODEL: CEB 350	
C. DESCRIPTION: 12 MMBtu/hr enclosed flare, digester gas fired with natural gas pilots			
D. FUNCTION: Flare incinerates excess digester gas not used as fuel in the boilers or fuel cell system, or to relieve pressure from storage tanks.			
E. SIZE/DIMENSIONS/CAPACITY: 3'-8" W. x 3' 8" L. x 23'-4" H., 12 MMBtu/hr, 333 SCFM digester gas permitted limit			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 12 MMBtu/hr			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	
NIT MESH		12 MMBtu/hr	
		NUMBER	
		1	
H. PRIMARY FUEL: DIGESTER GAS		I. OTHER FUEL: NATURAL GAS (PILOT)	
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST:			
L. EQUIPMENT INFORMATION COMMENTS: FLARE OPERATES INTERMITTANTLY AS NEEDED SECONDARY TO FUEL CELLS AND BOILER. MAINTENANCE IMPROVEMENTS FOR THERMOCOUPLES, IGNITERS AND THE EXHAUST STACK WERE MADE BY THE FACILITY TO IMPROVE RELIABLE OPERATION. THE FLARE IS LOCATED AT A SEWAGE TREATMENT PLANT.			

2. COMPANY INFORMATION

A. COMPANY: EMWD-PVRWRF		B. FAC ID: 7417	
C. ADDRESS: 1301 Case Rd. CITY: Perris STATE: CA ZIP: 92570		D. NAICS CODE: 221320	
E. CONTACT PERSON: Alison Torres		F. TITLE: Sr. AQ Compliance Analyst	
G. PHONE NO.: 951-928-3777 x 6345		H. EMAIL: torresa@emwd.org	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION
C. SCAQMD ENGINEER: Angela Shibata	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 6/27/12 P/O NO.: G25306 PO ISSUANCE DATE: 6/26/2013	
E. START-UP DATE: 11/9/2011	
F. OPERATIONAL TIME: 5 years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit	0.038 lb/MMBtu	0.025 lb/MMBtu		0.06 lb/MMBtu		
Averaging Time	1 HR	1 HR		1 HR		
Correction						
B. OTHER BACT REQUIREMENTS:						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: Maximum 333 scfm digester gas (Condition 11 – project specific). 1600°F Min temp (Condition 7 - project specific). Performance tests every five years (Condition 18). BACT Limits apply when fired on digester gas.						

5. CONTROL TECHNOLOGY

A. MANUFACTURER:		B. MODEL:	
C. DESCRIPTION:			
D. SIZE/DIMENSIONS/CAPACITY:			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. PC ISSUANCE DATE: PO NO.: PO ISSUANCE DATE:			
F. REQUIRED CONTROL EFFICIENCIES:			
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 Test
B. DATE(S) OF SOURCE TEST: 11/9/2011
C. COLLECTION EFFICIENCY METHOD: N/A
D. COLLECTION EFFICIENCY PARAMETERS: N/A
E. SOURCE TEST/PERFORMANCE DATA: 96.9% TGNMO Destruction Effic., 99.99 HC destruction Effic., 0.70 ppm VOC (as hexane) @3%O ₂ , 0.011 lb CO/MMBtu; 13.8 ppm CO@ 3%O ₂ , 0.014 lb/MMBtu NO _x , 10.45 ppm NO _x @3%O ₂ ; 0.455 lb SO _x /hr (as SO ₂)
F. TEST OPERATING PARAMETERS AND CONDITIONS: 246 dscfm digester gas
G. TEST METHODS (SPECIFY AGENCY): SCAQMD 25.3, 100.1, ARB Mod. Method 307.91
H. MONITORING AND TESTING REQUIREMENTS: Source Testing every five years for TGNMO, NO _x , CO, PM ₁₀ , O ₂ , N ₂ , H ₂ O, Temp and BTU Value
I. DEMONSTRATION OF COMPLIANCE COMMENTS:

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT:		B. CCAT: 50		C. APPLICATION TYPE CODE: 10	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input type="checkbox"/>		E. TITLE V FAC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		F. SOURCE TEST ID(S):	
G. SCAQMD SOURCE SPECIFIC RULES:					
H. HEALTH RISK FOR PERMIT UNIT					
H1. MICR: 6.55 x10-9		H2. MICR DATE: 6/19/13		H3. CANCER BURDEN: <0.5	
H4. CB DATE: 6/19/13		H5: HIA:		H6. HIA DATE:	
H7. HIC:		H8. HIC DATE:			

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Part B, Section 1, SCAQMD BACT Determination

Source Type: **Major/LAER**
 Application No.: **448345**
 Equipment Category: **Flare**
 Equipment Subcategory: **Digester Gas, Food Waste and Manure Digester**
 Date: **March 17, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: John Zink		B. MODEL: Zink Ultra Low Emission (ZULE)	
C. DESCRIPTION: 39.3 MMBtu/hr enclosed flare, digester gas fired with natural gas pilots			
D. FUNCTION: Flare incinerates digester gas vented from food waste and manure anaerobic digesters. Natural gas (or propane) pilot.			
E. SIZE/DIMENSIONS/CAPACITY: 7'D. x 40' H., 39.3 MMBtu/hr, 32.4 MMBtu/hr permitted limit			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 39.3 MMBtu/hr			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	
ZULE		13.1 MMBtu/hr	
		NUMBER	
		3	
H. PRIMARY FUEL: DIGESTER GAS		I. OTHER FUEL: NAT GAS/PROPANE	
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST:			
L. EQUIPMENT INFORMATION COMMENTS: INTERMITTANT OPERATION TO PROCESS DIGESTER GAS.			

2. COMPANY INFORMATION

A. COMPANY: Inland Empire Utilities Agency RP-5 SHF		B. FAC ID: 147371	
C. ADDRESS: 6063 Kimball Ave. CITY: Chino STATE: CA ZIP: 91708		D. NAICS CODE: 582212	
E. CONTACT PERSON: Sylvie Lee		F. TITLE: Manager	
G. PHONE NO.: 909-993-1646		H. EMAIL: slee@ieua.org	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION
C. SCAQMD ENGINEER: Angela Shibata	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 8/8/06 P/O NO.: G28957 PO ISSUANCE DATE: 12/12/2013	
E. START-UP DATE: 10/30/2008 Source Test Date	
F. OPERATIONAL TIME: > 6 months	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit		0.025 lb/MMBtu		0.06 lb/MMBtu		
Averaging Time		1 HR		1 HR		
Correction						
B. OTHER BACT REQUIREMENTS: Maximum 32.4 MMBtu/hr digester gas (Condition 7 – project specific). 1500°F Min temp (Condition 9 – project specific). Performance tests every 5 years (Condition 12). Per source test PM10 as PM.						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: Permit does not have minimum VOC destruction efficiency or residence time requirements.						

5. CONTROL TECHNOLOGY

A. MANUFACTURER:		B. MODEL:	
C. DESCRIPTION:			
D. SIZE/DIMENSIONS/CAPACITY:			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. PC ISSUANCE DATE: PO NO.: PO ISSUANCE DATE:			
F. REQUIRED CONTROL EFFICIENCIES:			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	%	%	%
NOx	%	%	%
SOx	%	%	%
CO	%	%	%
PM	%	%	%
PM ₁₀	%	%	%
INORGANIC	%	%	%
G. CONTROL TECHNOLOGY COMMENTS			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Test
B. DATE(S) OF SOURCE TEST: 10/30/2008
C. COLLECTION EFFICIENCY METHOD: N/A
D. COLLECTION EFFICIENCY PARAMETERS: N/A
E. SOURCE TEST/PERFORMANCE DATA: 5.05 ppm VOC (as CH ₄); 0.08 lb VOC/hr (as CH ₄); < 0.0046 lb CO/MMBtu; 5.9 ppm CO @ 3% O ₂ ; 0.016 lb/MMBtu NO _x ; 12.3 ppm NO _x @ 3% O ₂ ; 0.01 lb SO _x /hr (as SO ₂); 0.096 lb PM/hr;
F. TEST OPERATING PARAMETERS AND CONDITIONS: 279 dscfm digester gas. Minimum flow during S/T run 133.5 dscfm.
G. TEST METHODS (SPECIFY AGENCY): SCAQMD 25.3, 100.1, SCAQMD 5.1, ARB Mod. Method 307.91

H. MONITORING AND TESTING REQUIREMENTS: Source Testing every 5 years for Methane, TGNMO, NOx, CO, SOx, PM10 (as PM), O2, N2, H2O, Temp and Flow

I. DEMONSTRATION OF COMPLIANCE COMMENTS:

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT:	B. CCAT: 50	C. APPLICATION TYPE CODE: 10	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input type="checkbox"/>	E. TITLE V FAC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	F. SOURCE TEST ID(S): PR03440	
G. SCAQMD SOURCE SPECIFIC RULES:			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR: 2.36x10 ⁻⁷	H2. MICR DATE: 11/12/13	H3. CANCER BURDEN: <0.5	H4. CB DATE: 11/12/13
H5. HIA: <1.0	H6. HIA DATE: 11/12/13	H7. HIC: <1.0	H8. HIC DATE: 11/12/13



Part B, Section 1, SCAQMD BACT Determination

Source Type: **Major/LAER**
 Application No.: **491442**
 Equipment Category: **Flare**
 Equipment Subcategory: **Landfill Gas, Active Solid Waste
 Landfill, Non-Hazardous Waste**
 Date: **March 17, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: John Zink		B. MODEL: Zink Ultra Low Emission (ZULE)	
C. DESCRIPTION: 120 MMBtu/hr maximum input to enclosed flares, landfill gas fired with propane pilot			
D. FUNCTION: Flare incinerates landfill gas vented from landfill gas collection system. Flare is part of a two flare system. Propane gas pilot.			
E. SIZE/DIMENSIONS/CAPACITY: 12'D. x 50' H., 120 MMBtu/hr, 4000 SCFM landfill gas permitted limit			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 120 MMBtu/hr			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	NUMBER
ZULE		120 MMBtu/hr	1
H. PRIMARY FUEL: LANDFILL GAS		I. OTHER FUEL: PROPANE GAS (PILOT)	
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST:			
L. EQUIPMENT INFORMATION COMMENTS:			

2. COMPANY INFORMATION

A. COMPANY: Chiquita Canyon, LLC		B. FAC ID: 119219	
C. ADDRESS: 29201 Henry Mayo Drive CITY: Valencia STATE: CA ZIP: 91355		D. NAICS CODE: 582212	
E. CONTACT PERSON: Mike Dean		F. TITLE: General Manager	
G. PHONE NO.: 661-257-3655		H. EMAIL: deanmj@reprsv.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION
C. SCAQMD ENGINEER: Guarang Rawal	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 6/27/12 P/O NO.: G25306 PO ISSUANCE DATE: 3/7/2013	
E. START-UP DATE: 12/7/2009 Source Test Date	
F. OPERATIONAL TIME: 7 years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit		0.025 lb/MMBtu		0.06 lb/MMBtu		
Averaging Time		1 HR		1 HR		
Correction						
B. OTHER BACT REQUIREMENTS:						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: Maximum 4000 scfm landfill gas (Condition 8 - project specific). 1400°F Min temp (Condition 5 – project specific). Annual performance tests (Condition 12). Per source test PM10 as PM. BACT Limits apply when unit is fired on landfill gas.						

5. CONTROL TECHNOLOGY

A. MANUFACTURER:		B. MODEL:	
C. DESCRIPTION:			
D. SIZE/DIMENSIONS/CAPACITY:			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. _____ PC ISSUANCE DATE: _____ PO NO.: _____ PO ISSUANCE DATE: _____			
F. REQUIRED CONTROL EFFICIENCIES:			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	98%	%	%
NO _x	%	%	%
SO _x	%	%	%
CO	%	%	%
PM	%	%	%
PM ₁₀	%	%	%
INORGANIC	%	%	%
G. CONTROL TECHNOLOGY COMMENTS 99% by wt. Destruction Efficiency Methane. 98% by wt destruction efficiency or less than 20 ppmvd, hexane, @ 3% O ₂			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Test
B. DATE(S) OF SOURCE TEST: 12/7/2009
C. COLLECTION EFFICIENCY METHOD: N/A
D. COLLECTION EFFICIENCY PARAMETERS: N/A
E. SOURCE TEST/PERFORMANCE DATA: 98.9% TGNMO Destruction Eff., 2.13 ppm VOC (as hexane) @3% O ₂ , < 0.02 lb CO/MMBtu; <23.3 ppm CO@ 3% O ₂ , 0.01 lb/MMBtu NO _x , 6.7 ppm NO _x @3% O ₂ ; 1.22 lb SO _x /hr (as SO ₂); 0.75 lb PM/hr;
F. TEST OPERATING PARAMETERS AND CONDITIONS: 2367 dscfm landfill_gas
G. TEST METHODS (SPECIFY AGENCY): SCAQMD 25.3, 100.1, SCAQMD 5.1, ARB Mod. Method 307.91
H. MONITORING AND TESTING REQUIREMENTS: Source Testing annually for Methane, TGNMO, NO _x , CO, SO _x , PM ₁₀ (as PM), O ₂ , N ₂ , H ₂ O, Temp and Flow
I. DEMONSTRATION OF COMPLIANCE COMMENTS:

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT:	B. CCAT: 50	C. APPLICATION TYPE CODE: 10	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input type="checkbox"/>	E. TITLE V FAC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	F. SOURCE TEST ID(S): PR09359	
G. SCAQMD SOURCE SPECIFIC RULES:			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR:	H2. MICR DATE:	H3. CANCER BURDEN:	H4. CB DATE:
H5: HIA:	H6. HIA DATE:	H7. HIC:	H8. HIC DATE:

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Part B, Section 1, SCAQMD BACT Determination

Source Type: **Major/LAER**
 Application No.: **562449**
 Equipment Category: **Boiler**
 Equipment Subcategory: **39.9 MMBtu/hr with SCR**
 Date: **March 22, 2016**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Simoneau		B. MODEL: FX2-35	
C. DESCRIPTION: 39.9 MMBtu watertube boiler with low NOx burner and SCR			
D. FUNCTION: Boilers provides steam for laundry facilities, hospital heating and sterilization procedures.			
E. SIZE/DIMENSIONS/CAPACITY: Boiler No. 2			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 39.9 MMBtu/hr			
G. BURNER INFORMATION			
TYPE		INDIVIDUAL HEAT INPUT	
WEBSTER		39.9 MMBtu/hr	
NUMBER		1	
H. PRIMARY FUEL: NATURAL GAS		FUEL OIL	
J. OPERATING SCHEDULE: 24 7 52			
K. EQUIPMENT COST:			
L. EQUIPMENT INFORMATION COMMENTS: EQUIPMENT IS NEW CONSTRUCTION. THREE IDENTICAL BOILERS AND SCR WITH IDENTICAL LIMITS. ADD'L PERMIT NO. BOILER 1 G36227, BOILER 3 G36229, SCR 1 G36231, SCR 3 G36234			

2. COMPANY INFORMATION

A. COMPANY: US GOVT, VET. AFFAIRS MED CTR (LONG BEACH)		B. FAC ID: 13990	
C. ADDRESS: 5901 E. 7 th ST. CITY: Long Beach STATE: CA ZIP: 90822		D. NAICS CODE: 622110	
E. CONTACT PERSON: Jason Thompson		F. TITLE: Env Protection Spec.	
G. PHONE NO.: 562-826-8000 x3083		H. EMAIL:	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION
C. SCAQMD ENGINEER: Roy Olivares	
D. PERMIT INFORMATION: PC ISSUANCE DATE: P/O NO.: G36227 PO ISSUANCE DATE: 6/18/2015	
E. START-UP DATE: 8/7/2015	
F. OPERATIONAL TIME: > 1 year	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit		5 ppmvd		100 ppmvd		5 ppmvd NH3 slip
Averaging Time		15 min		15 MIN		60 MIN
Correction		@ 3% O ₂		@ 3% O ₂		@ 3% O ₂
B. OTHER BACT REQUIREMENTS: When firing on Standby fuel: 40 ppmvd NOx @3%O ₂ , 15 min avg; 400 ppmvd CO @3%O ₂ .						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS:						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Pasasia		B. MODEL: Custom	
C. DESCRIPTION: Selective Catalytic Reduction, low temp de-NOx, haldor topsoe, model dnx-1029. Ammonia injection, three 150 lb cylinders, feed forward			
D. SIZE/DIMENSIONS/CAPACITY: 4'-9" W x 4'-9" L x 9'-0" H			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 562452 PC ISSUANCE DATE: PO NO.: G36233 PO ISSUANCE DATE: 6/18/2015			
F. REQUIRED CONTROL EFFICIENCIES: Emission requirements are mass based and listed in Section 4 emission Information			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	%	%	%
NOx	%	%	%
SOx	%	%	%
CO	%	%	%
PM	%	%	%
PM ₁₀	%	%	%
INORGANIC	%	%	%
G. CONTROL TECHNOLOGY COMMENTS Pressure drop not to exceed 2.5" H2O. SCR be temperature 400-650oF. Ammonia injection shall not exceed 0.55 lb/hr. Ammonia injection to start when cat bed outlet temp reaches 400oF. Start-ups not to exceed 120 min for cold start and 30 min for warm start.			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source Test PR16435
B. DATE(S) OF SOURCE TEST: October 12, 2016
C. COLLECTION EFFICIENCY METHOD:
D. COLLECTION EFFICIENCY PARAMETERS:
E. SOURCE TEST/PERFORMANCE DATA: low mid and high fire each tested for NOx, CO and NH3. Reference source test report for details of each load tested. All loads met emission limits for each contaminant,
F. TEST OPERATING PARAMETERS AND CONDITIONS: Low fire 322 Mcfd, mid fire 437 Mcfd, 814 Mcfd
G. TEST METHODS (SPECIFY AGENCY): SCAQMD Method 207.1, SCAQMD 100.1

H. MONITORING AND TESTING REQUIREMENTS: NH3 slip test every 3 months for first year.

I. DEMONSTRATION OF COMPLIANCE COMMENTS:

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT: 011204	B. CCAT: 81	C. APPLICATION TYPE CODE: 10	
D. RECLAIM FAC? YES <input type="checkbox"/> NO <input type="checkbox"/>	E. TITLE V FAC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	F. SOURCE TEST ID(S): PR16435	
G. SCAQMD SOURCE SPECIFIC RULES: 1146			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR:	H2. MICR DATE:	H3. CANCER BURDEN:	H4. CB DATE:
H5. HIA:	H6. HIA DATE:	H7. HIC:	H8. HIC DATE:



Part B, Section I: SCAQMD BACT Determination

Source Type: **Major/LAER**
 Application No.: **546360**
 Equipment Category: **I.C. Engine, Digester Gas Fired**
 Equipment Subcategory:
 Date: **April 4, 2017**

1. EQUIPMENT INFORMATION		
A. MANUFACTURER: Cooper Bessmer		B. MODEL: LSVB-12-SGC
C. DESCRIPTION: Spark Ignition, four strokes with modified turbocharged-intercooled, V-12 type		
D. FUNCTION: On-site electrical power generation		
E. SIZE/DIMENSIONS/CAPACITY: 3471 HP, driving 2500 kW generator		
COMBUSTION SOURCES		
F. MAXIMUM HEAT INPUT: ---		
G. BURNER INFORMATION		
TYPE	INDIVIDUAL HEAT INPUT	NUMBER
---	<input type="checkbox"/>	<input type="checkbox"/>
H. PRIMARY FUEL: Digester and/or 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 an exhaust heat recovery steam generator, 5,008,500 Btu/hr capacity and digester gas cleaning system to remove siloxanes and other contaminants that may damage and reduce performance of SCR and oxidation exhaust control system. Inlet siloxane loading levels of less than 1 ppmv for D4 and less than 5 ppmv for D5.		

2. COMPANY INFORMATION	
A. COMPANY: Orange County Sanitation District	B. FAC ID: 017301
C. ADDRESS: 10844 Ellis Avenue CITY: Fountain Valley STATE: CA ZIP: 92708	D. NAICS CODE:
E. CONTACT PERSON: Terry Ahn	F. TITLE: Regulatory Specialist
G. PHONE NO.: 714-593-7082	H. EMAIL: tahn@ocsd.com

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: PERMIT TO OPERATE
C. SCAQMD ENGINEER:	
D. PERMIT INFORMATION: P/O NO.: G45189	PC ISSUANCE DATE: PO ISSUANCE DATE: 3/3/2017
E. START-UP DATE:	
F. OPERATIONAL TIME:	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOX	SOX	CO	PM OR PM₁₀	INORGANIC
BACT Limit	30 PPM	11 PPM		250 PPM	RULE 404	
Averaging Time	Per 1110.2 requirements	Per 1110.2 requirements		Per 1110.2 requirements		
Correction	15% O ₂	15% O ₂		15% O ₂		
B. OTHER BACT REQUIREMENTS: Compliance with emission requirements of Rule 1110.2(d)(1)(C)						
C. BASIS OF THE BACT/LAER DETERMINATION: New listing to show compliance with the more stringent Rule 1110.2. Other (add comment)						
D. EMISSION INFORMATION COMMENTS:						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Johnson Matthey, Inc.		B. MODEL: 79449	
C. DESCRIPTION: Selective Catalytic Reduction and Catalytic Oxidizer			
D. SIZE/DIMENSIONS/CAPACITY: SCR metallic substrate with 37.33 cu.ft. volume and CatOx aluminum oxide or platinum with 200 CPSI oxidation catalyst, 18.67 cu.ft. volume			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 559225 PC ISSUANCE DATE: PO NO.: G45196 PO ISSUANCE DATE: 3/3/2017			
F. REQUIRED CONTROL EFFICIENCIES: Maintain compliance with Rule 1110.2(d)(1)(C) for engine emissions.			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	%	%	%
NOx	%	%	%
SOx	%	%	%
CO	%	%	%
PM	%	%	%
PM ₁₀	%	%	%
INORGANIC	%	%	%
G. CONTROL TECHNOLOGY COMMENTS Maintain compliance with Rule 1110.2(d)(1)(C) for engine emissions. H2S compliance with Rule 431.1.			

6. DEMONSTRATION OF COMPLIANCE

A. COMPLIANCE DEMONSTRATED BY: Source test conducted when equipment was under Permit to Construct (A/N 497717).
B. DATE(S) OF SOURCE TEST: November 20, 2014
C. COLLECTION EFFICIENCY METHOD:
D. COLLECTION EFFICIENCY PARAMETERS:
E. SOURCE TEST/PERFORMANCE DATA:
F. TEST OPERATING PARAMETERS AND CONDITIONS:
G. TEST METHODS (SPECIFY AGENCY): NOx, CO and O2 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:

7. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT:	B. CCAT:	C. APPLICATION TYPE CODE:	
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):	
G. SCAQMD SOURCE SPECIFIC RULES:			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR:	H2. MICR DATE:	H3. CANCER BURDEN:	H4. CB DATE:
H5. HIA:	H6. HIA DATE:	H7. HIC:	H8. HIC DATE:

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Part B, Section III: Other Technologies



(These are emerging technologies which have been in operation with an air quality permit, however do not yet qualify as LAER)

Source Type: **Major/LAER**

Application No.: **567735**

Equipment Category: **I.C. Engine, Stationary, Emergency, Electrical Generators**

Equipment Subcategory:

Date: **December 11, 2016**

1. EQUIPMENT INFORMATION		
A. MANUFACTURER: Cummins	B. MODEL: QST30-G5	
C. DESCRIPTION: EPA-certified Compression Ignition, diesel engine, 12 cylinders, turbocharged and aftercooled, Engine Family CCEXL030.AAD.		
D. FUNCTION: On-site emergency electrical power generation.		
E. SIZE/DIMENSIONS/CAPACITY: 1490 BHP, driving 1000 kW generator		
COMBUSTION SOURCES		
F. MAXIMUM HEAT INPUT: ---		
G. BURNER INFORMATION		
TYPE	INDIVIDUAL HEAT INPUT	NUMBER
---	<input type="checkbox"/>	<input type="checkbox"/>
H. PRIMARY FUEL: DIESEL		
I. OTHER FUEL: ---		
J. OPERATING SCHEDULE: <1 HRS/DAY 1 DAYS/WEEK 52 WKS/YR		
K. EQUIPMENT COST: Not Available		
L. EQUIPMENT INFORMATION COMMENTS: Engine is equipped with an Aftertreatment system consisting of Selective Catalytic Reduction and Diesel Particulate Filter.		

2. COMPANY INFORMATION	
A. COMPANY: Praxair, Inc.	B. FAC ID: 007416
C. ADDRESS: 2300 E. Pacific Coast Highway CITY: Wilmington STATE: CA ZIP: 90744	D. NAICS CODE:
E. CONTACT PERSON: Laura Cremer	F. TITLE: Environmental Specialist
G. PHONE NO.: 925-866-6851	H. EMAIL: laura_cremer@praxair.com

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION PERMIT TO OPERATE
C. SCAQMD ENGINEER: Tracy Nguyen	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 6/16/15 P/O NO.: G43499 PO ISSUANCE DATE: 10/27/2016	
E. START-UP DATE: 10/1/2015	
F. OPERATIONAL TIME: Intermittent--for engine readiness test. Limited to 200 hrs/year which includes no more than 50 hours/year and 4.2 hour/month for maintenance and testing.	

4. EMISSION INFORMATION

A. EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit	0.19 G/KW-HR 0.14 G/BHP-HR)	0.67 G/KW-HR (0.5 G/BHP-HR)		3.5 G/KW-HR (2.61 G/BHP-HR)	0.03 G/KW-HR (0.022 G/BHP-HR)	
Averaging Time						
Correction						
B. OTHER REQUIREMENTS: Compliance with rules 404, 431.2 and 1470.						
C. PENDING STATUS: Technology has been in operation with an active air quality permit. Other (add comment)						
D. EMISSION INFORMATION COMMENTS: A certified Tier 2 Engine is equipped with a Tier 4 Aftertreatment to comply with EPA Tier 4 Requirements.						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: Cummins		B. MODEL: S4F-H-T4F	
C. DESCRIPTION: Selective Catalytic Reduction and Diesel Particulate Filter with an electric heater.			
D. SIZE/DIMENSIONS/CAPACITY: 85% DPF efficiency.			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. 567735 PC ISSUANCE DATE: 6/16/15 PO NO.: G43499 PO ISSUANCE DATE: 10/27/2016			
F. REQUIRED CONTROL EFFICIENCIES:			
CONTAMINANT	OVERALL CONTROL EFFICIENCY	CONTROL DEVICE EFFICIENCY	COLLECTION EFFICIENCY
VOC	%	%	%
NO _x	%	%	%
SO _x	%	%	%
CO	%	%	%
PM	85%	%	%
PM ₁₀	%	%	%
INORGANIC	%	%	%
G. CONTROL TECHNOLOGY COMMENTS Engine is certified to comply with EPA Tier 4 requirements: NMHC=0.14 g/bhp-hr, NO _x =0.5 g/bhp-hr, CO=2.61 g/bhp-hr and PM=0.022 g/bhp-hr.			

6. DEMONSTRATION STATUS

A. COMPLIANCE DEMONSTRATED BY: Compliance with EPA Tier 4 standards is based on EPA nonroad engine test methods and duty cycles. Tests conducted under other duty cycles or using different test methods may produce different results and are not indicative of noncompliance with the BACT levels.
B. DATE(S) OF SOURCE TEST:
C. COLLECTION EFFICIENCY METHOD:
D. COLLECTION EFFICIENCY PARAMETERS:
E. SOURCE TEST/PERFORMANCE DATA:

F. TEST OPERATING PARAMETERS AND CONDITIONS:
G. TEST METHODS (SPECIFY AGENCY):
H. MONITORING AND TESTING REQUIREMENTS:
I. DEMONSTRATION OF COMPLIANCE COMMENTS:

7. PENDING CONSIDERATIONS

A. SCR GETTING UP TO TEMPERATURE AND RUN TIME: Equipped with exhaust heater/load bank and control to regulate temperatures and assure quick (<10 minute) full SCR efficiency.
B. TIER 4 ENGINES WITH INDUCEMENT THAT MAY BE BYPASSED: In July 2016 EPA amended 40 CFR Part 60, Subpart IIII to allow manufacturers to design engines so that operators can temporarily override performance inducements related to emission control system during emergency situations to protect human life and require Tier 1 compliance during such emergencies. EPA is confident that Tier 4 engines will function properly in emergency situations and expects that auxiliary emission control devices allowed under this provision will rarely be activated.
C. CERTIFICATION OF EMERGENCY ENGINE AT DIFFERENT DUTY CYCLE THAT MAY NOT ACHIEVE CLAIMED EMISSION LEVELS: Emissions testing was done on the ISO 8178 D2 Cycle consistent with constant speed stationary engines. (5% @ 100% Torque, 25% @75%, 30% @50%, 30% @25% and 10% @10%).
D. COST EFFECTIVENESS ANALYSIS: TBD

8. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT:	B. CCAT:	C. APPLICATION TYPE CODE:	
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):	
G. SCAQMD SOURCE SPECIFIC RULES:			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR:	H2. MICR DATE:	H3. CANCER BURDEN:	H4. CB DATE:
H5: HIA:	H6. HIA DATE:	H7. HIC:	H8. HIC DATE:

Part B, Section III: Other Technologies



(These are emerging technologies which have been in operation with an air quality permit, however do not yet qualify as LAER)

Source Type: **Minor**
 Application No.: **591787**
 Equipment Category: **Fuel Cell Electricity Generator – Digester Gas fueled**

Equipment Subcategory:

Date: **March 1, 2017**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Fuel Cell Energy		B. MODEL: DFC 1500	
C. DESCRIPTION: Fuel Cell, digester gas fueled with biogas clean-up system and start-up air heater with natural gas burner (Rule 222 Registration per Rule 219(b)(5)).			
D. FUNCTION: On-site electrical power generation and heat recovery.			
E. SIZE/DIMENSIONS/CAPACITY: 1.4 MW, 355 scfm Digester gas flow			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: ---			
G. BURNER INFORMATION			
TYPE	INDIVIDUAL HEAT INPUT	NUMBER	
---	<input type="checkbox"/>	<input type="checkbox"/>	
H. PRIMARY FUEL: DIGESTER GAS		I. OTHER FUEL: NATURAL GAS	
J. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WEEK 52 WKS/YR			
K. EQUIPMENT COST: Not Available			
L. EQUIPMENT INFORMATION COMMENTS: Biogas clean-up system consists of condensate drain tank, hydrogen sulfide removal vessel, siloxane removal vessels, polishing vessel and refrigerant chiller.			

2. COMPANY INFORMATION

A. COMPANY: Riverside Fuel Cell, LLC		B. FAC ID: 181483	
C. ADDRESS: 5950 Acorn Street CITY: Riverside STATE: CA ZIP: 92504		D. NAICS CODE:	
E. CONTACT PERSON: Don Bell		F. TITLE: Field Service Manager	
G. PHONE NO.: 203-648-3658		H. EMAIL: dbell@fce.com	

3. PERMIT INFORMATION

A. AGENCY: SCAQMD	B. APPLICATION TYPE: NEW CONSTRUCTION PERMIT TO OPERATE
C. SCAQMD ENGINEER: Gaurang Rawal	
D. PERMIT INFORMATION: PC ISSUANCE DATE: 2/25/17 P/O NO.: G45213 PO ISSUANCE DATE: 3/1/2017	
E. START-UP DATE: 10/1/2015	
F. OPERATIONAL TIME: Fuel cell is operational 24 hour/day, 365 days/year.	

4. EMISSION INFORMATION

A. EMISSION LIMITS AND AVERAGING TIMES:						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit	0.10 LBS/MW-HR	0.07 LBS/MW-HR		0.10 LBS/MW-HR		
Averaging Time	Per test method					
Correction						
B. OTHER REQUIREMENTS:						
C. PENDING STATUS: Technology has been in operation with an active air quality permit. <i>Other (add comment)</i>						
D. EMISSION INFORMATION COMMENTS: Fuel cells are typically tested during steady state mode, not during startup or shutdown.						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: ---		B. MODEL: ---	
C. DESCRIPTION: ---			
D. SIZE/DIMENSIONS/CAPACITY: ---.			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO. --- PC ISSUANCE DATE: --- PO NO.: --- PO ISSUANCE DATE: ---			
F. REQUIRED CONTROL EFFICIENCIES: ---			
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 STATUS

A. COMPLIANCE DEMONSTRATED BY: Source Test
B. DATE(S) OF SOURCE TEST: December 20, 2016
C. COLLECTION EFFICIENCY METHOD:
D. COLLECTION EFFICIENCY PARAMETERS:
E. SOURCE TEST/PERFORMANCE DATA: < 0.024 lb NO _x /MW-hr; <0.012 lb CO/MW-hr; 0.045 lb VOC/MW-hr (as hexane)
F. TEST OPERATING PARAMETERS AND CONDITIONS: Testing performed under steady state conditions. Method 100.1 results for NO _x and CO had to be corrected up to 20% full scale range of analyzer, but still demonstrated compliance with permit limits.
G. TEST METHODS (SPECIFY AGENCY): SCAQMD M. 100.1, 25.3

H. MONITORING AND TESTING REQUIREMENTS:
I. DEMONSTRATION OF COMPLIANCE COMMENTS:

7. PENDING CONSIDERATIONS

A. START-UP AIR HEATER WITH COMBUSTION BURNER EXHAUST EMISSIONS: Testing commenced after the fuel cell reached stable steady state operation.
B. COST EFFECTIVENESS: TBD

8. ADDITIONAL SCAQMD REFERENCE DATA

A. BCAT:	B. CCAT:	C. APPLICATION TYPE CODE:	
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):	
G. SCAQMD SOURCE SPECIFIC RULES:			
H. HEALTH RISK FOR PERMIT UNIT			
H1. MICR:	H2. MICR DATE:	H3. CANCER BURDEN:	H4. CB DATE:
H5. HIA:	H6. HIA DATE:	H7. HIC:	H8. HIC DATE: