



Section II – Other LAER/BACT Determination

Source Type: **Major/LAER**
 Application No.: **N-8044-4-0**
 Equipment Category: **Boiler**
 Equipment Subcategory: **Natural Gas**
> 20 MMBTU/HR
 Date: **February 2, 2024**

1. EQUIPMENT INFORMATION

A. MANUFACTURER: Cleaver Brooks		B. MODEL: CBEX-E 700-722-250ST	
C. DESCRIPTION: Cleaver Brooks model CBEX-E 700-722-250ST natural gas-fired boiler equipped with a CBEX Elite low NOx burner system and Umicore model DNX-1029 Selective Catalytic Reduction (SCR) system.			
D. FUNCTION: Boiler provides steam for process use in corrugated container manufacturing.			
E. SIZE/DIMENSIONS/CAPACITY: 29.47 MMBTU/HR			
COMBUSTION SOURCES			
F. MAXIMUM HEAT INPUT: 29.47 MMBTU/HR			
G. BURNER INFORMATION:			
	TYPE	INDIVIDUAL HEAT INPUT	NUMBER
	Low NOx Burner	29.47 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: N/A			
L. EQUIPMENT INFORMATION COMMENTS: The unit shall only be fired on PUC-quality natural gas.			

2. COMPANY INFORMATION

A. COMPANY: Pacific Southwest Container, LLC		B. FAC ID:	
C. ADDRESS: 671 Mariposa Rd. CITY: Modesto STATE: CA ZIP: 95354		D. NAICS CODE: 322211	
E. CONTACT PERSON: Mac McCullough		F. TITLE:	
G. PHONE NO.: (209) 604-6815		H. EMAIL: macm@teampsc.com	

3. PERMIT INFORMATION

A. AGENCY: San Joaquin Valley Air Pollution Control District	B. APPLICATION TYPE: NEW CONSTRUCTION
C. SCAQMD ENGINEER: SJVAPCD Engineer: James Harader	
D. PERMIT INFORMATION: PC ISSUANCE DATE: P/O NO.: N-8044-4-2 PO ISSUANCE DATE: 9/21/2018	
E. START-UP DATE: 5/7/2019	
F. OPERATIONAL TIME: Over 3 years	

4. EMISSION INFORMATION

A. BACT EMISSION LIMITS AND AVERAGING TIMES: -						
	VOC	NOx	SOx	CO	PM OR PM₁₀	INORGANIC
BACT Limit		2.5 PPMV 0.0030 lb/MMBtu		50 PPMV 0.037 lb/MMBtu		
Averaging Time		15 minutes		15 minutes		
Correction		3% O ₂		3% O ₂		
B. OTHER BACT REQUIREMENTS: There is a 10 ppmv ammonia slip limit, the source test shows the ammonia slip limit is 2.8 ppm. The current South Coast AQMD ammonia slip BACT is 5 ppmv.						
C. BASIS OF THE BACT/LAER DETERMINATION: Achieved in Practice/New Technology						
D. EMISSION INFORMATION COMMENTS: Although not a part of this BACT determination, the following limits are included in the permit: SOx – 0.00285 lb/MMBtu PM ₁₀ – 0.003 lb/MMBtu VOC – 0.0055 lb/MMBtu NH ₃ – 10 PPMVD @ 3% O ₂						

5. CONTROL TECHNOLOGY

A. MANUFACTURER: UMICORE		B. MODEL: DNX-1029	
C. DESCRIPTION: Selective Catalytic Reduction (SCR) system. The DNX® catalyst is a fiber reinforced Vanadium-Tungsten-Titania catalyst.			
D. SIZE/DIMENSIONS/CAPACITY: -			
E. CONTROL EQUIPMENT PERMIT INFORMATION: APPLICATION NO.: N-8044-4-0 PC ISSUANCE DATE: PO NO.: N-8044-4-2 PO ISSUANCE DATE: 9/21/2018			
F. REQUIRED CONTROL EFFICIENCIES: N/A			
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: 7/6/2020												
C. COLLECTION EFFICIENCY METHOD: N/A												
D. COLLECTION EFFICIENCY PARAMETERS: N/A												
E. SOURCE TEST/PERFORMANCE DATA:												
<table border="1"> <thead> <tr> <th>Pollutant</th> <th>Average Test Result</th> <th>Emission Limit</th> </tr> </thead> <tbody> <tr> <td>NOx, ppmv @ 3% O₂</td> <td>1.4</td> <td>2.5</td> </tr> <tr> <td>CO, ppmv @ 3% O₂</td> <td><0.1</td> <td>50</td> </tr> <tr> <td>NH₃, ppmv @ 3% O₂</td> <td>2.8</td> <td>10</td> </tr> </tbody> </table>	Pollutant	Average Test Result	Emission Limit	NOx, ppmv @ 3% O ₂	1.4	2.5	CO, ppmv @ 3% O ₂	<0.1	50	NH ₃ , ppmv @ 3% O ₂	2.8	10
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NH ₃ , ppmv @ 3% O ₂	2.8	10										

F. TEST OPERATING PARAMETERS AND CONDITIONS: Condition 24) All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate.	
G. TEST METHODS (SPECIFY AGENCY):	
Pollutant	Test Method
NOx	EPA Method 7E or ARB Method 100
CO	EPA Method 10 or ARB Method 100
H. MONITORING AND TESTING REQUIREMENTS: Monthly testing for NOx, CO, and O ₂ using a portable analyzer and for NH ₃ using Draeger tubes or a District approved method during each month in which source testing is not performed.	
I. DEMONSTRATION OF COMPLIANCE COMMENTS: Permit Condition 18) Source testing to measure NOx, CO, and NH ₃ emissions during steady state operation from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit.	

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 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:			