



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 | |
| --- | | --- | |
| 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

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|--|--|---------------------------------|--|
| 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

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| 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: | | | |