



APR 07 2015

Mr. Ralph Braboy  
Bakersfield City Wastewater #3  
6901 McCutchen Rd  
Bakersfield, CA 93313

**Re: Notice of Minor Title V Permit Modification**  
**District Facility # S-3103**  
**Project # S-1150219**

Dear Mr. Braboy:

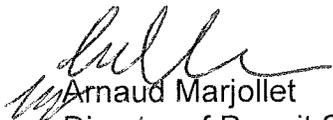
Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to incorporate recently issued S-3103-19-2, '-20-2, and '-28-1 (under project S-1114745) into the Title V operating permit. The project modifies flare permit S-3103-28 by removing its emergency use provisions, increasing its annual operational limit from 200 to 3000 hour, reducing its VOC emission limit, and combining its permitted emissions with those of permits '-19 and '-20 into a specific limiting condition plan.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued S-3103-19-2, '-20-2, and '-28-1, emission increases, application, and previous Title V permit. This project will be subject to a 45-day EPA commenting period prior to the District taking final action.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

  
Arnaud Marjollet  
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin  
Executive Director/Air Pollution Control Officer

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**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585

# TITLE V APPLICATION REVIEW

Minor Modification  
Project #: S-1150219

Engineer: Homero Ramirez  
Date: April 2, 2015

Facility Number: S-3103  
Facility Name: Bakersfield City Wastewater #3  
Mailing Address: 6901 McCutchen Rd  
Bakersfield, CA 93313

*RWK*  
*4-6-15*

Contact Name: Ralph Braboy  
Phone: (661) 326-3249

Responsible Official: Ralph Braboy  
Title: Wastewater Manager

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## I. PROPOSAL

Bakersfield City Wastewater #3 is proposing a Title V minor permit modification to incorporate Authorities to Construct (ATC) S-3103-19-2, -20-2, -28-1 (under project S-1114745) into the Title V operating permit. Those ATCs modify emergency flare permit S-3103-28 by removing its emergency use provisions, increasing its annual operational limit from 200 to 3,000 hour per year, reducing its VOC emission limit to comply with Rule 4311 requirements, and combining its permitted emissions with those of permits '-19 and '-20 (for two digester gas-fired engines) into a specific limiting condition (SLC) plan .

Please note that those ATCs were inadvertently converted into Permits to Operate (without first going through the required Title V minor permit modification process) after the facility's initial Title V permit had already been issued.<sup>1</sup> This application was submitted and is being processed to correct that oversight.

The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with the applicable requirements and to provide the legal and factual basis for the proposed revisions.

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<sup>1</sup> The ATCs were issued (on 6/4/12) before the initial Title V permit issuance date of 9/30/12 but they were inadvertently converted after that date (11/21/13) without the required Title V Minor Modification process.

## II. FACILITY LOCATION

The facility is located at 8101 Ashe Road in Bakersfield.

## III. EQUIPMENT DESCRIPTION

**S-3103-19-4:** 1,175 BHP JENBACHER MODEL JMS316 DIGESTER GAS-FIRED IC ENGINE COGENERATION SYSTEM WITH TURBOCHARGER AND AIR TO FUEL RATIO CONTROLLER AND SULFATREAT FUEL GAS DRY SULFUR SCRUBBING SYSTEM SHARED WITH UNITS S-3103-13, '-14, '-15, '-16, '-17, '-18, '-20, AND '-28

**S-3103-20-4:** 1,175 BHP JENBACHER MODEL JMS316 DIGESTER GAS-FIRED IC ENGINE COGENERATION SYSTEM WITH TURBOCHARGER AND AIR TO FUEL RATIO CONTROLLER

**S-3103-28-3:** 16.5 MMBTU/HR FLARE INDUSTRIES ENCLOSED FLARE

## IV. SCOPE OF EPA AND PUBLIC REVIEW

This change to a Title V permit is considered to be a minor modification and, as such, requires no public review.

## V. APPLICABLE REQUIREMENTS

District Rule 2520, Federally Mandated Operating Permits (Adopted June 21, 2001)

## VI. DESCRIPTION OF PROPOSED MODIFICATIONS

Bakersfield City Wastewater #3 was issued Authorities to Construct S-3010-19-2, -20-2, and -28-1 to modify emergency flare permit S-3103-28 to remove its emergency use provisions, increase its annual operational limit from 200 to 3,000 hour per year, reduce the VOC emission limit on the permit to comply with Rule 4311 requirements, and combine the permit's permitted emissions with those of permits '-19 and '-20 (for two digester gas-fired engines) into a specific limiting condition (SLC) plan. This Title V minor permit modification is to incorporate those ATCs into the Title V operating permit.

S-3103-19-2:

- Condition 9 was added to the Permit to Operate to allow for an annual shared emission limit (also known as a specific limiting condition (SLC) plan) for units S-3103-19, -20, and -28.
- Condition 28 was added to the Permit to Operate to require the permittee to keep the necessary records to show compliance with the annual shared emission limit.

S-3103-20-2:

- Condition 9 was added to the Permit to Operate to allow for an annual shared emission limit for units S-3103-19, -20, and -28.
- Condition 22 was added to the Permit to Operate to require the permittee to keep the necessary records to show compliance with the annual shared emission limit.

S-3103-28-1:

Please note that S-3103-28-0 and -28-1 were converted concurrently, so the condition comparison below will be based on Authority to Construct -28-0.

- Conditions 1 and 2 on ATC S-3103-28-0 were removed as they were instructions indicating that -28-0 cancelled and replaced ATC S-3103-2-0 and required the surrender of -2-0.
- Conditions 3-7, 11-13, and 23 on ATC S-3103-28-0 were removed as those conditions referred to the flare's former emergency designation.
- Condition 1 was added to the Permit to Operate to require that the flare be equipped with a totalizing gas volume flow meter.
- Conditions 2-4, 9-16 and -26 on the Permit to Operate were retained (but renumbered) from ATC S-3103-28-0.
- Condition 5 on the Permit to Operate is a modified condition with a lower VOC emission limit.
- Condition 6 was added to the Permit to Operate to allow for an annual shared emission limit for units S-3103-19, -20, and -28.

- Condition 7 was added to the Permit to Operate to specify that the flare can only operate when both engines S-3103-19 and -20 are shutdown for service or due to mechanical problems.
- Condition 8 was added to the Permit to Operate to limit the flare annual hours of operation.
- Conditions 17-23 and 25 were added to the Permit to Operate to address Rule 4311 requirements for non-emergency flares.
- Condition 24 was added to the Permit to Operate to require the permittee to keep the necessary records to show compliance with the annual shared emission limit.

## VII. COMPLIANCE

In accordance with Rule 2520, 3.20, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
  - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including;

1. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
2. The source's suggested draft permit; and
3. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used.

## **VIII. ATTACHMENTS**

- A. Proposed Modified Title V Operating Permit No. S-3103-19-4, -20-4, -28-3
- B. Authorities to Construct No. S-3103-19-2, -20-2, -28-1
- C. Application
- D. Previous Title V Operating Permit No.'s S-3103-19-1, -20-1, -28-0

# ATTACHMENT A

Proposed Modified Title V Operating Permit No.  
S-3103-19-4, -20-4, -28-3

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3103-19-4

**EXPIRATION DATE:** 01/31/2017

**EQUIPMENT DESCRIPTION:**

1,175 BHP JENBACHER MODEL JMS316 DIGESTER GAS-FIRED IC ENGINE COGENERATION SYSTEM WITH TURBOCHARGER AND AIR TO FUEL RATIO CONTROLLER AND SULFATREAT FUEL GAS DRY SULFUR SCRUBBING SYSTEM SHARED WITH UNITS S-3103-13, '-14, '-15, '-16, '-17, '-18, '-20, AND '-28

## PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] Federally Enforceable Through Title V Permit
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
5. Total annual operating hours of digester gas fired cogeneration engines S-3103-19 and '-20 shall not exceed 17,196 hours per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Engine shall operate according to the manufacturer's specifications. [District Rule 4701] Federally Enforceable Through Title V Permit
7. Total sulfur content of digester gas combusted in this unit shall not exceed 20 ppmvd. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 0.6 g/bhp-hr, PM<sub>10</sub>: 0.04 g/bhp-hr, CO: 2.5 g/bhp-hr, or VOC (as methane): 0.25 g/bhp-hr. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
9. Combined annual emissions from permit units S-3103-19, '-20 and '-28 shall not exceed any one of the following: 26,726 lb-NO<sub>x</sub>/yr; 824 lb-SO<sub>x</sub>/yr; 1,782 lb-PM<sub>10</sub>/yr; 111,360 lb-CO/yr; 11,136 lb-VOC/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
14. Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit while firing digester gas shall be conducted not less than once every 24 months. [District Rule 4702] Federally Enforceable Through Title V Permit
15. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
17. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
21. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. All vessel hatches and openings shall remain closed during operation of SulfaTreat H2S scrubber. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
23. No components (i.e., valves, flanges, etc.) associated with the SulfaTreat unit shall be the source of any leak greater than 10,000 ppmv (as methane) when measured at a distance no greater than 1 cm from the potential source per EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Influent and effluent gas streams of SulfaTreat system shall be sampled at least monthly for H2S content of effluent gas to determine when recharging is required. [District Rule 2201] Federally Enforceable Through Title V Permit
25. During recharging of the H2S scrubber, untreated vapors shall not be introduced into the fuel system or vented to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
26. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Record of H2S content of effluent gas shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2201] Federally Enforceable Through Title V Permit
28. The permittee shall maintain all necessary records in order to show compliance with the annual shared emission limit from permit units S-3103-19, '-20 and '-28. [District Rule 2201] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3103-20-4

**EXPIRATION DATE:** 01/31/2017

**EQUIPMENT DESCRIPTION:**

1,175 BHP JENBACHER MODEL JMS316 DIGESTER GAS-FIRED IC ENGINE COGENERATION SYSTEM WITH TURBOCHARGER AND AIR TO FUEL RATIO CONTROLLER

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## PERMIT UNIT REQUIREMENTS

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] Federally Enforceable Through Title V Permit
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
5. Total annual operating hours of digester gas fired cogeneration engines S-3103-19 and '-20 shall not exceed 17,196 hours per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Engine shall operate according to the manufacturer's specifications. [District Rule 4701] Federally Enforceable Through Title V Permit
7. Total sulfur content of digester gas combusted in this unit shall not exceed 20 ppmvd. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 0.6 g/bhp-hr, PM<sub>10</sub>: 0.04 g/bhp-hr, CO: 2.5 g/bhp-hr, or VOC (as methane): 0.25 g/bhp-hr. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
9. Combined annual emissions from permit units S-3103-19, '-20 and '-28 shall not exceed any one of the following: 26,726 lb-NO<sub>x</sub>/yr; 824 lb-SO<sub>x</sub>/yr; 1,782 lb-PM<sub>10</sub>/yr; 111,360 lb-CO/yr; 11,136 lb-VOC/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

11. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
14. Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit while firing digester gas shall be conducted not less than once every 24 months. [District Rule 4702] Federally Enforceable Through Title V Permit
15. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
17. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
21. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

22. The permittee shall maintain all necessary records in order to show compliance with the annual shared emission limit from permit units S-3103-19, '-20 and '-28. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3103-28-3

**EXPIRATION DATE:** 01/31/2017

**EQUIPMENT DESCRIPTION:**

16.5 MMBTU/HR FLARE INDUSTRIES ENCLOSED FLARE

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## PERMIT UNIT REQUIREMENTS

1. Flare shall be equipped with a non-resettable, totalizing flare gas volume flow meter. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
2. Flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311]
3. If the flare uses a flow-sensing automatic ignition system and does not use a continuous flame pilot, the flare shall use purge gas for purging. [District Rule 4311] Federally Enforceable Through Title V Permit
4. A flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
5. The flare's emissions rates shall not exceed any of the following: 0.06 lb-NO<sub>x</sub>/MMBtu; 0.006 lb-SO<sub>x</sub> (as SO<sub>2</sub>)/MMBtu; 0.020 lb-PM<sub>10</sub>/MMBtu; 0.25 lb-CO/MMBtu; or 0.0020 lb-VOC/MMBtu. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
6. Combined annual emissions from permit units S-3103-19, '-20 and '-28 shall not exceed any one of the following: 26,726 lb-NO<sub>x</sub>/yr; 824 lb-SO<sub>x</sub>/yr; 1,782 lb-PM<sub>10</sub>/yr; 111,360 lb-CO/yr; 11,136 lb-VOC/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The flare shall only operate when both engines S-3103-19 and '-20 are shutdown for service or due to mechanical problems. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The flare shall not operate more than 3,000 hours per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Hydrogen sulfide (H<sub>2</sub>S) content of digester gas combusted shall not exceed 20 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Sampling facilities shall be provided to allow for fuel gas sampling at inlet to flare. [District Rule 1081] Federally Enforceable Through Title V Permit
11. Source testing to measure NO<sub>x</sub> and VOC emissions from this unit shall be conducted within 60 days of initial start-up and at least once every 12 months thereafter. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
12. The results of the source test shall be submitted to the District within 45 days thereafter. [District Rules 1081, 2201, 4311] Federally Enforceable Through Title V Permit
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 30 days prior to testing. [District Rules 1081 and 4311] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

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14. VOC emissions for source test purposes, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case Method 25a may be used, and analysis of halogenated exempt compounds shall be analyzed by EPA Method 18 or ARB Method 422 "Determination of Volatile organic Compounds in Emission from Stationary Sources". [District Rule 4311] Federally Enforceable Through Title V Permit
15. NOx and O2 concentrations shall be determined by using EPA Method 3A, EPA Method 7E, or ARB 100 [District Rule 4311] Federally Enforceable Through Title V Permit
16. NOx emissions for source test purposes, in pounds per million Btu, shall be determined by using EPA Method 19 [District Rule 4311] Federally Enforceable Through Title V Permit
17. Prior to startup under the terms of the Authority to Construct and as required thereafter, the permittee shall submit a flare minimization plan (FMP) that complies with the requirements of Rule 4311 Section 6.5 to the APCO for approval. [District Rule 4311] Federally Enforceable Through Title V Permit
18. A copy of approved flare minimization plan pursuant to Rule 4311 Section 6.5 shall be maintained and made readily available to the APCO, ARB, and EPA upon request for a minimum of 5 years. [District Rule 4311] Federally Enforceable Through Title V Permit
19. Copies of compliance determination pursuant to 40 CFR 60.18 shall be made readily available to the APCO, ARB, and EPA upon request for a minimum of 5 years. [40 CFR 60.18, District Rule 4311] Federally Enforceable Through Title V Permit
20. Copies of monitoring data collected pursuant to Rule 4311 Section 5.10 shall be made readily available to the APCO, ARB, and EPA upon request for a minimum of 5 years. [District Rule 4311] Federally Enforceable Through Title V Permit
21. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Rule 4311 Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. [District Rule 4311] Federally Enforceable Through Title V Permit
22. The operator of a flare subject to flare monitoring requirements pursuant to Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO as specified in Rule 4311 Section 6.2.3 within 30 days following the end of each 12 month period. [District Rule 4311] Federally Enforceable Through Title V Permit
23. Permittee shall maintain records of the time and date of operation, duration of flare operation, amount of gas burned, and the purpose of the operation. [District Rules 1070, 2201, and 4311] Federally Enforceable Through Title V Permit
24. The permittee shall maintain all necessary records in order to show compliance with the annual shared emission limit from permit units S-3103-19, '-20 and '-28. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Permittee shall maintain onsite a copy of the source test results. [District Rule 4311]
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

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# ATTACHMENT B

Authorities to Construct No.  
S-3103-19-2, -20-2, -28-1



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-3103-19-2

**ISSUANCE DATE:** 06/04/2012

**LEGAL OWNER OR OPERATOR:** BAKERSFIELD CITY WASTEWATER #3  
**MAILING ADDRESS:** 6901 MCCUTCHEN RD.  
BAKERSFIELD, CA 93313

**LOCATION:** 6901 MCCUTCHEN ROAD  
BAKERSFIELD, CA 93313

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 1,175 BHP JENBACHER MODEL JMS316 DIGESTER GAS-FIRED IC ENGINE COGENERATION SYSTEM WITH TURBOCHARGER AND AIR TO FUEL RATIO CONTROLLER AND SULFATREAT FUEL GAS DRY SULFUR SCRUBBING SYSTEM SHARED WITH UNITS S-3103-13, '-14, '-15, '-16, '-17, '-18, '-20, AND '-21; COMBINE PERMIT UNITS S-3103-19, '-20 AND '-28 IN A SPECIFIC LIMITING CONDITION (SLC) PLAN; REPLACE PERMIT UNIT S-3103-21 WITH '-28 IN GROUP OF UNITS SHARING SULFATREAT SYSTEM LISTED ON PERMIT

### CONDITIONS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
5. Total annual operating hours of digester gas fired cogeneration engines S-3103-19 and '-20 shall not exceed 17,196 hours per calendar year. [District Rule 2201]
6. Engine shall operate according to the manufacturer's specifications. [District Rule 4701]
7. Total sulfur content of digester gas combusted in this unit shall not exceed 20 ppmvd. [District Rule 2201]
8. Emission rates shall not exceed any of the following: NOx (as NO2): 0.6 g/bhp-hr, PM10: 0.04 g/bhp-hr, CO: 2.5 g/bhp-hr, or VOC (as methane): 0.25 g/bhp-hr. [District Rules 2201 and 4702]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Sayed Sadredin, Executive Director / APCO

*Richard W Warner*

DAVID WARNER, Director of Permit Services

9. Combined annual emissions from permit units S-3103-19, '-20 and '-28 shall not exceed any one of the following: 26,726 lb-NOx/yr; 824 lb-SOx/yr; 1,782 lb-PM10/yr; 111,360 lb-CO/yr; 11,136 lb-VOC/yr. [District Rule 2201]
10. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702]
11. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702]
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702]
13. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702]
14. Source testing to measure NOx, CO, and VOC emissions from this unit while firing digester gas shall be conducted not less than once every 24 months. [District Rule 4702]
15. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702]
16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702]
17. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702]
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
20. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702]

21. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702]
22. All vessel hatches and openings shall remain closed during operation of SulfaTreat H2S scrubber. [District Rules 2201 and 4102]
23. No components (i.e., valves, flanges, etc.) associated with the SulfaTreat unit shall be the source of any leak greater than 10,000 ppmv (as methane) when measured at a distance no greater than 1 cm from the potential source per EPA Method 21. [District Rule 2201]
24. Influent and effluent gas streams of SulfaTreat system shall be sampled at least monthly for H2S content of effluent gas to determine when recharging is required. [District Rule 2201]
25. During recharging of the H2S scrubber, untreated vapors shall not be introduced into the fuel system or vented to the atmosphere. [District Rule 2201]
26. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rule 2201]
27. Record of H2S content of effluent gas shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2201]
28. The permittee shall maintain all necessary records in order to show compliance with the annual shared emission limit from permit units S-3103-19, '-20 and '-28. [District Rule 2201]
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702]
30. Authorities to Construct (ATC) S-3103-19-2, -20-2, and -28-1 shall be implemented concurrently. [District Rule 2201]



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-3103-20-2

**ISSUANCE DATE:** 06/04/2012

**LEGAL OWNER OR OPERATOR:** BAKERSFIELD CITY WASTEWATER #3  
**MAILING ADDRESS:** 6901 MCCUTCHEN RD.  
BAKERSFIELD, CA 93313

**LOCATION:** 6901 MCCUTCHEN ROAD  
BAKERSFIELD, CA 93313

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 1,175 BHP JENBACHER MODEL JMS316 DIGESTER GAS-FIRED IC ENGINE COGENERATION SYSTEM WITH TURBOCHARGER AND AIR TO FUEL RATIO CONTROLLER: COMBINE PERMIT UNITS S-3103-19, '-20 AND '-28 IN A SPECIFIC LIMITING CONDITION (SLC) PLAN

### CONDITIONS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
5. Total annual operating hours of digester gas fired cogeneration engines S-3103-19 and '-20 shall not exceed 17,196 hours per calendar year. [District Rule 2201]
6. Engine shall operate according to the manufacturer's specifications. [District Rule 4701]
7. Total sulfur content of digester gas combusted in this unit shall not exceed 20 ppmvd. [District Rule 2201]
8. Emission rates shall not exceed any of the following: NOx (as NO2): 0.6 g/bhp-hr, PM10: 0.04 g/bhp-hr, CO: 2.5 g/bhp-hr, or VOC (as methane): 0.25 g/bhp-hr. [District Rules 2201 and 4702]
9. Combined annual emissions from permit units S-3103-19, '-20 and '-28 shall not exceed any one of the following: 26,726 lb-NOx/yr; 824 lb-SOx/yr; 1,782 lb-PM10/yr; 111,360 lb-CO/yr; 11,136 lb-VOC/yr. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

*Richard W. Warner*

DAVID WARNER, Director of Permit Services

10. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702]
11. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702]
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702]
13. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702]
14. Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit while firing digester gas shall be conducted not less than once every 24 months. [District Rule 4702]
15. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702]
16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702]
17. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702]
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
20. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702]
21. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702]

22. The permittee shall maintain all necessary records in order to show compliance with the annual shared emission limit from permit units S-3103-19, '-20 and '-28. [District Rule 2201]
23. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702]
24. Authorities to Construct (ATC) S-3103-19-2, -20-2, and -28-1 shall be implemented concurrently. [District Rule 2201]



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-3103-28-1

**ISSUANCE DATE:** 06/04/2012

**LEGAL OWNER OR OPERATOR:** BAKERSFIELD CITY WASTEWATER #3  
**MAILING ADDRESS:** 6901 MCCUTCHEN RD.  
BAKERSFIELD, CA 93313

**LOCATION:** 6901 MCCUTCHEN ROAD  
BAKERSFIELD, CA 93313

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 16.5 MMBTU/HR FLARE INDUSTRIES ENCLOSED EMERGENCY FLARE: REMOVE EMERGENCY DESIGNATION AND 200 HR/YR LIMIT OF NON-EMERGENCY OPERATION FROM PERMIT, INCREASE ANNUAL OPERATIONAL LIMIT TO 3,000 HR/YR, REDUCE VOC EMISSION LIMIT ON PERMIT, AND COMBINE PERMIT UNITS S-3103-19, '-20 AND '-28 IN A SPECIFIC LIMITING CONDITION (SLC) PLAN

### CONDITIONS

1. Flare shall be equipped with a non-resettable, totalizing flare gas volume flow meter. [District Rules 2201 and 4311]
2. Flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311]
3. If the flare uses a flow-sensing automatic ignition system and does not use a continuous flame pilot, the flare shall use purge gas for purging. [District Rule 4311]
4. A flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311]
5. The flare's emissions rates shall not exceed any of the following: 0.06 lb-NOx/MMBtu; 0.006 lb-SOx (as SO2)/MMBtu; 0.020 lb-PM10/MMBtu; 0.25 lb-CO/MMBtu; or 0.0020 lb-VOC/MMBtu. [District Rules 2201 and 4311]
6. Combined annual emissions from permit units S-3103-19, '-20 and '-28 shall not exceed any one of the following: 26,726 lb-NOx/yr; 824 lb-SOx/yr; 1,782 lb-PM10/yr; 111,360 lb-CO/yr; 11,136 lb-VOC/yr. [District Rule 2201]
7. The flare shall only operate when both engines S-3103-19 and '-20 are shutdown for service or due to mechanical problems. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment

Seyed Sadredin, Executive Director / APCO

*Richard W. Kury*  
DAVID WARNER, Director of Permit Services

8. The flare shall not operate more than 3,000 hours per calendar year. [District Rule 2201]
9. Hydrogen sulfide (H<sub>2</sub>S) content of digester gas combusted shall not exceed 20 ppmv. [District Rule 2201]
10. Sampling facilities shall be provided to allow for fuel gas sampling at inlet to flare. [District Rule 1081]
11. Source testing to measure NO<sub>x</sub> and VOC emissions from this unit shall be conducted within 60 days of initial start-up and at least once every 12 months thereafter. [District Rules 2201 and 4311]
12. The results of the source test shall be submitted to the District within 45 days thereafter. [District Rules 1081, 2201, 4311]
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 30 days prior to testing. [District Rules 1081 and 4311]
14. VOC emissions for source test purposes, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case Method 25a may be used, and analysis of halogenated exempt compounds shall be analyzed by EPA Method 18 or ARB Method 422 "Determination of Volatile organic Compounds in Emission from Stationary Sources". [District Rule 4311]
15. NO<sub>x</sub> and O<sub>2</sub> concentrations shall be determined by using EPA Method 3A, EPA Method 7E, or ARB 100 [District Rule 4311]
16. NO<sub>x</sub> emissions for source test purposes, in pounds per million Btu, shall be determined by using EPA Method 19 [District Rule 4311]
17. Prior to startup under the terms of the Authority to Construct and as required thereafter, the permittee shall submit a flare minimization plan (FMP) that complies with the requirements of Rule 4311 Section 6.5 to the APCO for approval. [District Rule 4311]
18. A copy of approved flare minimization plan pursuant to Rule 4311 Section 6.5 shall be maintained and made readily available to the APCO, ARB, and EPA upon request for a minimum of 5 years. [District Rule 4311]
19. Copies of compliance determination pursuant to 40 CFR 60.18 shall be made readily available to the APCO, ARB, and EPA upon request for a minimum of 5 years. [40 CFR 60.18, District Rule 4311]
20. Copies of monitoring data collected pursuant to Rule 4311 Section 5.10 shall be made readily available to the APCO, ARB, and EPA upon request for a minimum of 5 years. [District Rule 4311]
21. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Rule 4311 Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. [District Rule 4311]
22. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO as specified in Rule 4311 Section 6.2.3 within 30 days following the end of each 12 month period. [District Rule 4311]
23. Permittee shall maintain records of the time and date of operation, duration of flare operation, amount of gas burned, and the purpose of the operation. [District Rules 1070, 2201, and 4311]
24. The permittee shall maintain all necessary records in order to show compliance with the annual shared emission limit from permit units S-3103-19, '-20 and '-28. [District Rule 2201]
25. Permittee shall maintain onsite a copy of the source test results. [District Rule 4311]
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070]
27. Authority to Construct (ATC) S-3103-28-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
28. Authorities to Construct (ATC) S-3103-19-2, -20-2, and -28-1 shall be implemented concurrently. [District Rule 2201]

# ATTACHMENT C

Application



# San Joaquin Valley Air Pollution Control District

www.valleyair.org



**JAN 26 2015**

SJVAPCD  
Southern Region

## Permit Application For:

ADMINISTRATIVE AMENDMENT     MINOR MODIFICATION     SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO: <u>Bakersfield City Wastewater #3</u>	
2. MAILING ADDRESS:  STREET/P.O. BOX: <u>6901 McCutchen Road</u>  CITY: <u>Bakersfield</u> STATE: <u>CA</u> 9-DIGIT ZIP CODE: <u>93313</u>	
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:  STREET: <u>6901 McCutchen Road</u> CITY: <u>Bakersfield</u>  <u>      </u> ¼ SECTION <u>33</u> TOWNSHIP <u>30S</u> RANGE <u>27E</u>	INSTALLATION DATE:  <u>3/29/2011</u>
4. GENERAL NATURE OF BUSINESS: Facility is a wastewater treatment plant that processes wastewater into secondary and tertiary effluent and biosolids.	
5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary)  ATC # S-3103-19-2: 1,175 BHP Jenbacher Model JMS316 digester gas-fired IC cogeneration engine ATC # S-3103-20-2: 1,175 BHP Jenbacher Model JMS316 digester gas-fired IC cogeneration engine ATC # S-3103-28-1: 16.5 MMBtu/hr Flare Industries enclosed flare This application is being submitted, per Valarie Ballard's request, in order to incorporate the above mentioned ATCs into the facility's Title V permits. It should be noted that the District is currently in the process of reviewing an ATC modification application submitted on 11/14/2014 for unit S-3103-28-1 as well.	
6. TYPE OR PRINT NAME OF APPLICANT: <u>Ralph Braboy</u>	TITLE OF APPLICANT: <u>Wastewater Manager</u>
7. SIGNATURE OF APPLICANT: 	DATE: <u>1-22-15</u> PHONE: (661) 326-3249 FAX: (661) 852-2125 EMAIL: <u>rbraboy@bakersfieldcity.us</u>

### For APCD Use Only:

DATE STAMP	FILING FEE RECEIVED: \$ _____ CHECK#: _____
	DATE PAID: _____
	PROJECT NO: <u>S-1150219</u> FACILITY ID: <u>S-3103</u>



**B A K E R S F I E L D**  
**PUBLIC WORKS DEPARTMENT**  
NICK FIDLER • DIRECTOR • CITY ENGINEER  
WASTEWATER DIVISION

RECEIVED  
JAN 26 2015  
SJVAPCD  
Southern Region

January 22, 2015

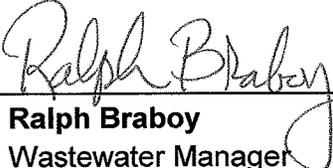
San Joaquin Valley  
Air Pollution Control District  
Southern Region Office  
34946 Flyover Court  
Bakersfield, CA 93308

**RE: Cogeneration and Flare Minor Modification Application**

Enclosed please find Bakersfield Wastewater #3's application to incorporate permits S-3103-19-2, S-3103-20-2, and S3103-28-1 into the facility's overall Title V permit.

If you have any questions please contact Evette Roldan at 661-326-3249.

Very Truly Yours,  
Nick Fidler  
Public Works Director

By:   
**Ralph Braboy**  
Wastewater Manager

RECEIVED

JAN 26 2015

SJVAPCD  
Southern Region



# San Joaquin Valley Unified Air Pollution Control District

## TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

### I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                                       AMENDMENT

COMPANY NAME: Bakersfield City Wastewater #3	FACILITY ID: S-3103
1. Type of Organization: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input checked="" type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: City of Bakersfield	
3. Agent to the Owner: N/A	

### II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Ralph Braboy  
Signature of Responsible Official

1-22-15  
Date

Ralph Braboy  
Name of Responsible Official (please print)

Wastewater Manager  
Title of Responsible Official (please print)

# ATTACHMENT D

Previous Title V Operating Permit No.'s  
S-3103-19-1, -20-1, -28-0

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3103-19-1

**EXPIRATION DATE:** 01/31/2017

**EQUIPMENT DESCRIPTION:**

1,175 BHP JENBACHER MODEL JMS316 DIGESTER GAS-FIRED LEAN-BURN IC ENGINE COGENERATION SYSTEM WITH TURBOCHARGER AND AIR TO FUEL RATIO CONTROLLER AND SULFATREAT FUEL GAS DRY SULFUR SCRUBBING SYSTEM SHARED WITH UNITS S-3103-13, '-14, '-15, '-16, '-17, '-18, '-20, AND '-21

## PERMIT UNIT REQUIREMENTS

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1. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
2. Total annual operating hours of digester gas fired cogeneration engines S-3103-19 and S-3103-20 shall not exceed 17,196 hours per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Engine shall operate according to the manufacturer's specifications. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Total sulfur content of digester gas combusted in this unit shall not exceed 20 ppmvd. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Emission rates shall not exceed any of the following; NO<sub>x</sub> (as NO<sub>2</sub>): 0.6 g/bhp-hr, PM<sub>10</sub>: 0.04 g/bhp-hr, CO: 2.5 g/bhp-hr, or VOC (as methane): 0.25 g/bhp-hr. [District Rule 2201 and CFR 40, Subpart JJJJ] Federally Enforceable Through Title V Permit
7. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
8. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
10. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
11. Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted at least once every 8,760 hours of operation or 24 months, whichever comes first. [District Rules 1081, 2201, and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit
12. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
14. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit
18. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
19. All vessel hatches and openings shall remain closed during operation of Sulfa treat H<sub>2</sub>S scrubber. [District Rule 2201, 4102] Federally Enforceable Through Title V Permit
20. No components (i.e., valves, flanges, etc.) associated with the Sulfa treat unit shall be the source of any leak greater than 10,000 ppmv (as methane) when measured at a distance no greater than 1 cm from the potential source per EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Influent and effluent gas streams of Sulfa treat system shall be sampled at least monthly for H<sub>2</sub>S content of effluent gas to determine when recharging is required. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. During recharging of the H<sub>2</sub>S scrubber, untreated vapors shall not be introduced into the fuel system or vented to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
23. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H<sub>2</sub>S and mercaptans. [District Rule 2520] Federally Enforceable Through Title V Permit
24. Record of H<sub>2</sub>S content of effluent gas shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520] Federally Enforceable Through Title V Permit
25. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3103-20-1

EXPIRATION DATE: 01/31/2017

## EQUIPMENT DESCRIPTION:

1,175 BHP JENBACHER MODEL JMS316 DIGESTER GAS-FIRED LEAN-BURN IC ENGINE COGENERATION SYSTEM WITH TURBOCHARGER AND AIR TO FUEL RATIO CONTROLLER

## PERMIT UNIT REQUIREMENTS

---

1. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
2. Total annual operating hours of digester gas fired cogeneration engines S-3103-19 and S-3103-20 shall not exceed 17,196 hours per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Engine shall operate according to the manufacturer's specifications. [District Rule 4702] Federally Enforceable Through Title V Permit
4. Total sulfur content of digester gas combusted in this unit shall not exceed 20 ppmvd. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Emission rates shall not exceed any of the following; NOx (as NO<sub>2</sub>): 0.6 g/bhp-hr, PM<sub>10</sub>: 0.04 g/bhp-hr, CO: 2.5 g/bhp-hr, or VOC (as methane): 0.25 g/bhp-hr. [District Rule 2201 and CFR 40, Subpart JJJJ] Federally Enforceable Through Title V Permit
7. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
8. If either the NO<sub>x</sub> or CO concentrations corrected to 15% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
10. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
11. Source testing to measure NO<sub>x</sub>, CO, and VOC emissions from this unit shall be conducted at least once every 8,760 hours of operation or 24 months, whichever comes first. [District Rules 1081, 2201, and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit
12. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NO<sub>x</sub>, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
14. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit
18. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3103-22-1

**EXPIRATION DATE:** 01/31/2017

**EQUIPMENT DESCRIPTION:**

2,937 BHP CATERPILLAR MODEL 3516C TA TIER 2 CERTIFIED DIESEL FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (AERATION BLOWER 1)

## PERMIT UNIT REQUIREMENTS

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1. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 40 CFR Part 60, Subpart IIII, and 17 CCR 93115] Federally Enforceable Through Title V Permit
2. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 40 CFR Part 60, Subpart IIII, and 17 CCR 93115] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with either a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion, or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702, 40 CFR Part 60, Subpart IIII, and 17 CCR 93115] Federally Enforceable Through Title V Permit
5. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] Federally Enforceable Through Title V Permit
6. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702] Federally Enforceable Through Title V Permit
7. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Emissions from this IC engine shall not exceed any of the following limits: 5.39 g-NOx/bhp-hr, 0.29 g-CO/bhp-hr, or 0.11 g-VOC/bhp-hr. [District Rule 2201 and 13 CCR 2423 and 17 CCR 93115] Federally Enforceable Through Title V Permit
10. Emissions from this IC engine shall not exceed 0.026 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115] Federally Enforceable Through Title V Permit
11. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR Part 60, Subpart IIII] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-3103-28-0

**ISSUANCE DATE:** 03/25/2009

**LEGAL OWNER OR OPERATOR:** BAKERSFIELD CITY WASTEWATER #3  
**MAILING ADDRESS:** 1501 TRUXTUN AVE  
BAKERSFIELD, CA 93301

**LOCATION:** 8101 ASHE RD  
BAKERSFIELD, CA 93313

**EQUIPMENT DESCRIPTION:**  
16.5 MMBTU/HR FLARE INDUSTRIES ENCLOSED EMERGENCY FLARE (REPLACING PREVIOUSLY APPROVED S-3103-21-0)

## CONDITIONS

1. This ATC cancels and replaces ATC S-3103-21-0. [District Rule]
2. Within 90 days after startup of the equipment authorized by this Authority to Construct, Permit to Operate S-3103-2 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable. [District Rule 2201]
3. This flare shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the flare for maintenance, testing, and required regulatory purposes shall not exceed 200 hours per year. [District Rules 2201 and 4311]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2010]
6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

S-3103-28-0 Mar 25 2009 4:04PM - GOUGHD Joint Inspection Required with GOUGHD

7. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]
8. Flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311]
9. If the flare uses a flow-sensing automatic ignition system and does not use a continuous flame pilot, the flare shall use purge gas for purging. [District Rule 4311]
10. A flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311]
11. Operation of flare for other than maintenance and testing shall be limited to unforeseen electrical power outages or emergencies (as defined below) that results in the inability to dispose of the vapors in devices approved for that purpose. Emergency is defined as an unforeseeable failure or malfunction of operating equipment that 1) is not due to neglect or disregard of air pollution laws or rules; 2) is not intentional or the result of negligence; 3) is not due to improper maintenance; 4) does not constitute a nuisance; and 5) results in the use of equipment exempted from offsets by Rule 2201 to prevent or ameliorate an unsafe situation. [District Rule 2201]
12. The owner or operator shall notify the District of any emergency use of the flare within one hour after confirmation that an actual flaring event has occurred, unless the owner or operator demonstrates to the District's satisfaction that a longer notification period was necessary. However, in the event that confirmation of an actual flaring event cannot be made, then the owner or operator shall notify the District no more than 3 hours after an alarm indicates that a flaring event may have occurred, unless the owner or operator demonstrates to the District's satisfaction that a longer notification period was necessary. [District Rule 1070]
13. The permittee shall report to the District in writing within ten days following the emergency use of the flare. The report shall include 1) a statement that the failure or malfunction has been corrected, the date corrected, and proof of correction; 2) a specific statement of the reason or cause for the occurrence; 3) a description of the corrective measures undertaken and/or to be undertaken to avoid such an occurrence in the future; and 4) an estimate of the emissions caused by the emergency use, specifically including duration of flare operation and amount of gas burned. [District Rules 1070 and 4311]
14. For purposes of flare maintenance and testing, emissions rates shall not exceed any of the following: 0.06 lb-NO<sub>x</sub>/MMBtu; 0.006 lb-SO<sub>x</sub> (as SO<sub>2</sub>)/MMBtu; 0.020 lb-PM<sub>10</sub>/MMBtu, 0.25 lb-CO/MMBtu; or 0.068 lb-VOC/MMBtu. [District Rule 2201]
15. Hydrogen sulfide (H<sub>2</sub>S) content of digester gas combusted shall not exceed 20 ppmv. [District Rule 2201]
16. Sampling facilities shall be provided to allow for fuel gas sampling at inlet to flare. [District Rule 1081]
17. Initial source testing to measure NO<sub>x</sub> and VOC emissions from this unit while flaring digester gas is required to demonstrate compliance with best available control technology (BACT) requirements. Testing shall be conducted within 60 days of initial start-up. [District Rule 2201]
18. The results of the source test shall be submitted to the District within 45 days thereafter. [District Rules 1081, 2201]
19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
20. VOC emissions for source test purposes, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case Method 25a may be used, and analysis of halogenated exempt compounds shall be analyzed by EPA Method 18 or ARB Method 422 "Determination of Volatile organic Compounds in Emission from Stationary Sources". [District Rule 4311]
21. NO<sub>x</sub> and O<sub>2</sub> concentrations shall be determined by using EPA Method 3A, EPA Method 7E, or ARB 100 [District Rule 4311]
22. NO<sub>x</sub> emissions for source test purposes, in pounds per million Btu, shall be determined by using EPA Method 19 [District Rule 4311]

CONDITIONS CONTINUE ON NEXT PAGE

23. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (e.g., weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring (e.g. maintenance schedule as recommended by the manufacturer). [District Rules 1070, 2201, and 4311]
24. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070]