



SEP 12 2014

Mr. John E. Haley  
Aera Energy, LLC  
PO Box 11164  
Bakersfield, CA 93389-1164

**Re: Notice of Minor Title V Permit Modification**  
**District Facility # S-1543**  
**Project # 1143505**

Dear Mr. Haley:

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-1543-5-18 and '6-19 into the Title V operating permit. The Authority to Construct permits authorized increasing the ammonia slip limits for two gas turbine engines and removed the requirement to convert their NH<sub>3</sub> ppmv readings to their value at 15% O<sub>2</sub>.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued S-1543-5-18 and '6-19, 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-1143505

Engineer: David Torii  
Reviewing Engineer: Steve Leonard

Facility Number: S-1543  
Facility Name: Aera Energy, LLC  
Mailing Address: PO Box 11164  
Bakersfield, CA 93389-1164  
Contact Name: John E. Haley  
Phone: 661-665-6279

Responsible Official: R.A. Roeder  
Title: Process Supervisor

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## I. PROPOSAL

Aera Energy, LLC (Aera) is proposing a Title V minor permit modification to incorporate the recently issued Authorities to Construct (ATCs) S-1543-5-18 and '6-19 into the Title V operating permit. The ATCs authorized modification of gas fired turbine engines S-1543-5 and '6 by increasing their ammonia slip limit to 30 ppm and by removing the requirement to convert the NH<sub>3</sub> ppmv readings to their value at 15% O<sub>2</sub>.

ATCs S-1543-5-18 and '6-19 require that ATCs S-1543-5-17 and '6-18, respectively, be implemented prior-to or concurrently with them. ATCs S-1543-5-17 and '6-19 are currently undergoing a Title V minor permit modification. Therefore, draft permits S-1543-5-19 and '6-20 will be considered the base documents for this Title V minor permit modification.

## II. FACILITY LOCATION

The equipment is located at the Section 32 Gas Plant located in the Belridge Oil Field, within the SW/4 of Section 32, Township 28S, Range 21E.

## III. EQUIPMENT DESCRIPTION

Proposed Title V Operating Permit:

S-1543-5-20: 13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK™ SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION A

S-1543-6-21: 13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK<sup>TM</sup> SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION B

**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**

The Changes to the original Permits to Operate are as follows

<b>S-1543-5-20</b>		
<b>Condition # on Proposed Permits Minor Modification PTOs</b>	<b>Condition is New, Revised, moved or Removed</b>	<b>Reason for Change from Current PTO</b>
13	Revised	Condition revised to reflect proposed ammonia slip ppmvd limit
19	Revised	Condition wording changed to more generic requirement to allow use of "gas detection tubes" as opposed to "Draeger" tubes
23	Revised	Condition revised to not require record keeping of NH3 concentrations at 15% O2.

<b>S-1543-6-21</b>		
<b>Condition # on Proposed Permits Minor Modification PTOs</b>	<b>Condition is New, Revised, moved or Removed</b>	<b>Reason for Change from Current PTO</b>
13	Revised	Condition revised to reflect proposed ammonia slip ppmvd limit
22	Revised	Condition wording changed to more generic requirement to allow use of "gas detection tubes" as opposed to "Draeger" tubes
23	Revised	Condition revised to not require record keeping of NH3 concentrations at 15% O2.

## 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.

# ATTACHMENT A

Proposed Modified Title V Operating Permits  
S-1543-5-20 and '6-21

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1543-5-20

EXPIRATION DATE: 05/31/2016

SECTION: 32 TOWNSHIP: 28S RANGE: 21E

## EQUIPMENT DESCRIPTION:

13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK TM SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION A

## PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. Operation shall include fuel gas piping from inlet scrubber MS-101 and inlet water knockout vessel MS-102, and compressor discharge piping to knockout vessel MS-301. [District Rule 2010, 4.0] Federally Enforceable Through Title V Permit
7. Fugitive volatile organic compound (VOC) emission sources shall be inspected, repaired, and maintained such that the total stationary source VOC emission rate does not exceed the stationary source limit specified in permit S-1543-4. [District NSR Rule] Federally Enforceable Through Title V Permit
8. "Startup" and "shutdown" of gas turbine engine and/or duct burner, defined in 40CFR 60.2, shall not exceed a time period of two hours for each occurrence. [District Rules 2080, 3.0 and 4703, 3.25] Federally Enforceable Through Title V Permit
9. Total gas consumption rate for gas turbine engine/compressor and duct burner shall not exceed 468 MMBtu/day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Total gas consumption rate for gas turbine engine/compressors S-1543-5 and S-1543-6 and waste gas flare S-1543-7 shall not exceed 1,601,176 scf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Gas turbine engine with duct burner on emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0205 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.0918 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0118 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] 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.

12. Gas turbine engine with duct burner off emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0279 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.1287 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0147 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] Federally Enforceable Through Title V Permit
13. The ammonia (NH<sub>3</sub>) emissions from the exhaust of the SCR system serving this gas turbine shall not exceed 30 ppmvd. [District Rule 4102]
14. Permittee shall maintain accurate records of weekly fuel gas sulfur content (as H<sub>2</sub>S) and shall make such records available for District inspection for five years. Draeger tubes may be utilized to satisfy this monitoring requirement. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Permittee shall maintain accurate daily records of total gas consumed in S-1543-5, '6, and '7, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. Compliance with NO<sub>x</sub>, CO, and NH<sub>3</sub> emission limits shall be demonstrated annually by District witnessed sample collection by independent laboratory. If duct burner is operated intermittently, compliance shall be demonstrated with duct burner both on and off. [District Rule 4703, 6.3.1 and 6.3.3] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081, 5.0, 6.0, and 7.1] Federally Enforceable Through Title V Permit
18. The following methods shall be used for testing required by this permit: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, Stack gas Oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H<sub>2</sub>S and Mercaptans, Fuel gas h<sub>h</sub>v - ASTM D1826 or D1945 in conjunction with ASTM D3588, Ammonia slip - BAAQMD method ST-1B. [District Rules 1081; 40 CFR 60.8(a); and 4703, 6.4] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH<sub>3</sub> monitoring shall be conducted utilizing gas detection tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rule 4703] Federally Enforceable Through Title V Permit
20. If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, 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 that is subject to enforcement action has occurred. 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 the performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
21. All NO<sub>x</sub>, CO, O<sub>2</sub> and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4703] 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. Ammonia emission readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. [District Rule 4102]
23. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume, measured NH<sub>3</sub> concentration, and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4703] Federally Enforceable Through Title V Permit
24. This unit shall be fired exclusively on natural gas which has a sulfur content of less than or equal to 0.015% by weight (75 ppmv as S). [40 CFR 60.333(b) and subpart GG; District Rule 4801, 3.1; and Kern County Rule 407] Federally Enforceable Through Title V Permit
25. If this unit is not fired on natural gas certified by the supplier to have a sulfur content (as S) not exceeding 0.015% by weight, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
26. If this unit is not fired on supplier-certified natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(j)(2)] Federally Enforceable Through Title V Permit
27. If this unit is not fired on supplier-certified natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 4084 or D 3246 or double GC for H<sub>2</sub>S and mercaptans. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
28. If this unit is fired on supplier-certified natural gas, then copies of fuel certifications (or specifications) and natural gas bills shall be maintained on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

DRAFT

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-1543-6-21

**EXPIRATION DATE:** 05/31/2016

**SECTION:** 32 **TOWNSHIP:** 28S **RANGE:** 21E

**EQUIPMENT DESCRIPTION:**

13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK TM SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION B

## PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. Operation shall include fuel gas piping from inlet scrubber MS-101 and inlet water knockout vessel MS-102, and compressor discharge piping to knockout vessel MS-301. [District Rule 2010, 4.0] Federally Enforceable Through Title V Permit
7. Fugitive volatile organic compound (VOC) emission sources shall be inspected, repaired, and maintained such that the total stationary source VOC emission rate does not exceed the stationary source limit specified in permit S-1543-4. [District NSR Rule] Federally Enforceable Through Title V Permit
8. "Startup" and "shutdown" of gas turbine engine and/or duct burner, defined in 40CFR 60.2, shall not exceed a time period of two hours for each occurrence. [District Rules 2080, 3.0 and 4703, 3.25] Federally Enforceable Through Title V Permit
9. Total gas consumption rate for gas turbine engine/compressor and duct burner shall not exceed 468 MMBtu/day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Total gas consumption rate for gas turbine engine/compressors S-1543-5 and S-1543-6 and waste gas flare S-1543-7 shall not exceed 1,601,176 scf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Gas turbine engine with duct burner on emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0205 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.0918 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0118 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] Federally Enforceable Through Title V Permit

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13. The ammonia (NH<sub>3</sub>) emissions from the exhaust of the SCR system serving this gas turbine shall not exceed 30 ppmvd. [District Rule 4102]
14. Permittee shall maintain accurate records of weekly fuel gas sulfur content (as H<sub>2</sub>S) and shall make such records available for District inspection for five years. Draeger tubes may be utilized to satisfy this monitoring requirement. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Permittee shall maintain accurate daily records of total gas consumed in S-1543-5, '6, and '7, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. Compliance with NO<sub>x</sub>, CO, and NH<sub>3</sub> emission limits shall be demonstrated annually by District witnessed sample collection by independent laboratory. If duct burner is operated intermittently, compliance shall be demonstrated with duct burner both on and off. [District Rule 4703, 6.3.1 and 6.3.3] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081, 5.0, 6.0, and 7.1] Federally Enforceable Through Title V Permit
18. The following methods shall be used for testing required by this permit: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, Stack gas Oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H<sub>2</sub>S and Mercaptans, Fuel gas h<sub>h</sub>v - ASTM D1826 or D1945 in conjunction with ASTM D3588, Ammonia slip - BAAQMD method ST-1B. [District Rules 1081; 40 CFR 60.8(a); and 4703, 6.4] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH<sub>3</sub> monitoring shall be conducted utilizing gas detection tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rule 4703] Federally Enforceable Through Title V Permit
20. If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, 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 that is subject to enforcement action has occurred. 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 the performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
21. All NO<sub>x</sub>, CO, O<sub>2</sub> and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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22. Ammonia emission readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. [District Rule 4102]
23. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume, measured NH<sub>3</sub> concentration, and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4703] Federally Enforceable Through Title V Permit
24. This unit shall be fired exclusively on natural gas which has a sulfur content of less than or equal to 0.015% by weight (75 ppmv as S). [40 CFR 60.333(b) and subpart GG; District Rule 4801, 3.1; and Kern County Rule 407] Federally Enforceable Through Title V Permit
25. If this unit is not fired on natural gas certified by the supplier to have a sulfur content (as S) not exceeding 0.015% by weight, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
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27. If this unit is not fired on supplier-certified natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 4084 or D 3246 or double GC for H<sub>2</sub>S and mercaptans. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
28. If this unit is fired on supplier-certified natural gas, then copies of fuel certifications (or specifications) and natural gas bills shall be maintained on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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DRAFT

**ATTACHMENT B**  
Authority to Construct Permits  
S-1543-5-18 and '6-19



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1543-5-18

**ISSUANCE DATE:** 08/18/2014

**LEGAL OWNER OR OPERATOR:** AERA ENERGY LLC  
**MAILING ADDRESS:** PO BOX 11164  
BAKERSFIELD, CA 93389-1164

**LOCATION:** BELRIDGE GAS PLANT  
CA

**SECTION:** 32 **TOWNSHIP:** 28S **RANGE:** 21E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK™ SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION A: INCREASE AMMONIA SLIP LIMIT TO 30 PPM AND REMOVE REQUIREMENT TO CONVERT NH3 PPMV TO 15% O2

## CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

7. Operation shall include fuel gas piping from inlet scrubber MS-101 and inlet water knockout vessel MS-102, and compressor discharge piping to knockout vessel MS-301. [District Rule 2010, 4.0] Federally Enforceable Through Title V Permit
8. Fugitive volatile organic compound (VOC) emission sources shall be inspected, repaired, and maintained such that the total stationary source VOC emission rate does not exceed the stationary source limit specified in permit S-1543-4. [District NSR Rule] Federally Enforceable Through Title V Permit
9. "Startup" and "shutdown" of gas turbine engine and/or duct burner, defined in 40CFR 60.2, shall not exceed a time period of two hours for each occurrence. [District Rules 2080, 3.0 and 4703, 3.25] Federally Enforceable Through Title V Permit
10. Total gas consumption rate for gas turbine engine/compressor and duct burner shall not exceed 468 MMBtu/day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Total gas consumption rate for gas turbine engine/compressors S-1543-5 and S-1543-6 and waste gas flare S-1543-7 shall not exceed 1,601,176 scf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Gas turbine engine with duct burner on emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0205 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.0918 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0118 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] Federally Enforceable Through Title V Permit
13. Gas turbine engine with duct burner off emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0279 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.1287 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0147 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] Federally Enforceable Through Title V Permit
14. The ammonia (NH<sub>3</sub>) emissions from the exhaust of the SCR system serving this gas turbine shall not exceed 30 ppmvd. [District Rule 4102]
15. Permittee shall maintain accurate records of weekly fuel gas sulfur content (as H<sub>2</sub>S) and shall make such records available for District inspection for five years. Draeger tubes may be utilized to satisfy this monitoring requirement. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. Permittee shall maintain accurate daily records of total gas consumed in S-1543-5, '6, and '7, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
17. Compliance with NO<sub>x</sub>, CO, and NH<sub>3</sub> emission limits shall be demonstrated annually by District witnessed sample collection by independent laboratory. If duct burner is operated intermittently, compliance shall be demonstrated with duct burner both on and off. [District Rule 4703, 6.3.1 and 6.3.3] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081, 5.0, 6.0, and 7.1] Federally Enforceable Through Title V Permit
19. The following methods shall be used for testing required by this permit: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, Stack gas Oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H<sub>2</sub>S and Mercaptans, Fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, Ammonia slip - BAAQMD method ST-1B. [District Rules 1081; 40 CFR 60.8(a); and 4703, 6.4] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH<sub>3</sub> monitoring shall be conducted utilizing gas detection tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rule 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, 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 that is subject to enforcement action has occurred. 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 the performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
22. All NO<sub>x</sub>, CO, O<sub>2</sub> and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4703] Federally Enforceable Through Title V Permit
23. Ammonia emission readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. [District Rule 4102]
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume, measured NH<sub>3</sub> concentration, and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4703] Federally Enforceable Through Title V Permit
25. This unit shall be fired exclusively on natural gas which has a sulfur content of less than or equal to 0.015% by weight (75 ppmv as S). [40 CFR 60.333(b) and subpart GG; District Rule 4801, 3.1; and Kern County Rule 407] Federally Enforceable Through Title V Permit
26. If this unit is not fired on natural gas certified by the supplier to have a sulfur content (as S) not exceeding 0.015% by weight, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
27. If this unit is not fired on supplier-certified natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(j)(2)] Federally Enforceable Through Title V Permit
28. If this unit is not fired on supplier-certified natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 4084 or D 3246 or double GC for H<sub>2</sub>S and mercaptans. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
29. If this unit is fired on supplier-certified natural gas, then copies of fuel certifications (or specifications) and natural gas bills shall be maintained on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. ATC S-1543-5-17 shall be implemented prior-to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1543-6-19

**ISSUANCE DATE:** 08/18/2014

**LEGAL OWNER OR OPERATOR:** AERA ENERGY LLC  
**MAILING ADDRESS:** PO BOX 11164  
BAKERSFIELD, CA 93389-1164

**LOCATION:** BELRIDGE GAS PLANT  
CA

**SECTION:** 32 **TOWNSHIP:** 28S **RANGE:** 21E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK™ SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION B: INCREASE AMMONIA SLIP LIMIT TO 30 PPM AND REMOVE REQUIREMENT TO CONVERT NH3 PPMV TO 15% O2

## CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

S-1543-6-19 · Aug 29 2014 3:29PM -- TORID · Joint Inspection NOT Required

7. Operation shall include fuel gas piping from inlet scrubber MS-101 and inlet water knockout vessel MS-102, and compressor discharge piping to knockout vessel MS-301. [District Rule 2010, 4.0] Federally Enforceable Through Title V Permit
8. Fugitive volatile organic compound (VOC) emission sources shall be inspected, repaired, and maintained such that the total stationary source VOC emission rate does not exceed the stationary source limit specified in permit S-1543-4. [District NSR Rule] Federally Enforceable Through Title V Permit
9. "Startup" and "shutdown" of gas turbine engine and/or duct burner, defined in 40CFR 60.2, shall not exceed a time period of two hours for each occurrence. [District Rules 2080, 3.0 and 4703, 3.25] Federally Enforceable Through Title V Permit
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14. The ammonia (NH<sub>3</sub>) emissions from the exhaust of the SCR system serving this gas turbine shall not exceed 30 ppmvd. [District Rule 4102]
15. Permittee shall maintain accurate records of weekly fuel gas sulfur content (as H<sub>2</sub>S) and shall make such records available for District inspection for five years. Draeger tubes may be utilized to satisfy this monitoring requirement. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. Permittee shall maintain accurate daily records of total gas consumed in S-1543-5, '6, and '7, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
17. Compliance with NO<sub>x</sub>, CO, and NH<sub>3</sub> emission limits shall be demonstrated annually by District witnessed sample collection by independent laboratory. If duct burner is operated intermittently, compliance shall be demonstrated with duct burner both on and off. [District Rule 4703, 6.3.1 and 6.3.3] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081, 5.0, 6.0, and 7.1] Federally Enforceable Through Title V Permit
19. The following methods shall be used for testing required by this permit: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, Stack gas Oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H<sub>2</sub>S and Mercaptans, Fuel gas h<sub>h</sub>v - ASTM D1826 or D1945 in conjunction with ASTM D3588, Ammonia slip - BAAQMD method ST-1B. [District Rules 1081; 40 CFR 60.8(a); and 4703, 6.4] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH<sub>3</sub> monitoring shall be conducted utilizing gas detection tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rule 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, 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 that is subject to enforcement action has occurred. 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 the performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
22. All NO<sub>x</sub>, CO, O<sub>2</sub> and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4703] Federally Enforceable Through Title V Permit
23. Ammonia emission readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. [District Rule 4102]
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume, measured NH<sub>3</sub> concentration, and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4703] Federally Enforceable Through Title V Permit
25. This unit shall be fired exclusively on natural gas which has a sulfur content of less than or equal to 0.015% by weight (75 ppmv as S). [40 CFR 60.333(b) and subpart GG; District Rule 4801, 3.1; and Kern County Rule 407] Federally Enforceable Through Title V Permit
26. If this unit is not fired on natural gas certified by the supplier to have a sulfur content (as S) not exceeding 0.015% by weight, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
27. If this unit is not fired on supplier-certified natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(j)(2)] Federally Enforceable Through Title V Permit
28. If this unit is not fired on supplier-certified natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 4084 or D 3246 or double GC for H<sub>2</sub>S and mercaptans. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
29. If this unit is fired on supplier-certified natural gas, then copies of fuel certifications (or specifications) and natural gas bills shall be maintained on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. ATC S-1543-6-18 shall be implemented prior-to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

# ATTACHMENT C

“Current” Permits to Operate  
(Title V Minor Modification Permits for ATCs  
S-1543-5-17 and ‘6-19)  
S-1543-5-19 and ‘6-20

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1543-5-19

EXPIRATION DATE: 05/31/2016

SECTION: 32 TOWNSHIP: 28S RANGE: 21E

## EQUIPMENT DESCRIPTION:

13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK TM SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION A

## PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. Operation shall include fuel gas piping from inlet scrubber MS-101 and inlet water knockout vessel MS-102, and compressor discharge piping to knockout vessel MS-301. [District Rule 2010, 4.0] Federally Enforceable Through Title V Permit
7. Fugitive volatile organic compound (VOC) emission sources shall be inspected, repaired, and maintained such that the total stationary source VOC emission rate does not exceed the stationary source limit specified in permit S-1543-4. [District NSR Rule] Federally Enforceable Through Title V Permit
8. "Startup" and "shutdown" of gas turbine engine and/or duct burner, defined in 40CFR 60.2, shall not exceed a time period of two hours for each occurrence. [District Rules 2080, 3.0 and 4703, 3.25] Federally Enforceable Through Title V Permit
9. Total gas consumption rate for gas turbine engine/compressor and duct burner shall not exceed 468 MMBtu/day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Total gas consumption rate for gas turbine engine/compressors S-1543-5 and S-1543-6 and waste gas flare S-1543-7 shall not exceed 1,601,176 scf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Gas turbine engine with duct burner on emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0205 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.0918 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0118 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] 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.

12. Gas turbine engine with duct burner off emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0279 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.1287 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0147 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] Federally Enforceable Through Title V Permit
13. The ammonia (NH<sub>3</sub>) emissions from the exhaust of the SCR system serving this gas turbine shall not exceed 20 ppmvd @ 15% O<sub>2</sub>. [District Rule 4102]
14. Permittee shall maintain accurate records of weekly fuel gas sulfur content (as H<sub>2</sub>S) and shall make such records available for District inspection for five years. Draeger tubes may be utilized to satisfy this monitoring requirement. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
15. Permittee shall maintain accurate daily records of total gas consumed in S-1543-5, '6, and '7, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. Compliance with NO<sub>x</sub>, CO, and NH<sub>3</sub> emission limits shall be demonstrated annually by District witnessed sample collection by independent laboratory. If duct burner is operated intermittently, compliance shall be demonstrated with duct burner both on and off. [District Rule 4703, 6.3.1 and 6.3.3] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081, 5.0, 6.0, and 7.1] Federally Enforceable Through Title V Permit
18. The following methods shall be used for testing required by this permit: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, Stack gas Oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H<sub>2</sub>S and Mercaptans, Fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, Ammonia slip - BAAQMD method ST-1B. [District Rules 1081; 40 CFR 60.8(a); and 4703, 6.4] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH<sub>3</sub> monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rule 4703] Federally Enforceable Through Title V Permit
20. If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, 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 that is subject to enforcement action has occurred. 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 the performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
21. All NO<sub>x</sub>, CO, O<sub>2</sub> and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4703] 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. Ammonia emission readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. The readings shall be converted to ppmvd @ 15% O<sub>2</sub>. [District Rule 4703] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub>, CO and NH<sub>3</sub> concentrations corrected to 15% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4703] Federally Enforceable Through Title V Permit
24. This unit shall be fired exclusively on natural gas which has a sulfur content of less than or equal to 0.015% by weight (75 ppmv as S). [40 CFR 60.333(b) and subpart GG; District Rule 4801, 3.1; and Kern County Rule 407] Federally Enforceable Through Title V Permit
25. If this unit is not fired on natural gas certified by the supplier to have a sulfur content (as S) not exceeding 0.015% by weight, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
26. If this unit is not fired on supplier-certified natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(j)(2)] Federally Enforceable Through Title V Permit
27. If this unit is not fired on supplier-certified natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 4084 or D 3246 or double GC for H<sub>2</sub>S and mercaptans. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
28. If this unit is fired on supplier-certified natural gas, then copies of fuel certifications (or specifications) and natural gas bills shall be maintained on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

DRAFT

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1543-6-20

EXPIRATION DATE: 05/31/2016

SECTION: 32 TOWNSHIP: 28S RANGE: 21E

## EQUIPMENT DESCRIPTION:

13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK TM SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION B

## PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. Operation shall include fuel gas piping from inlet scrubber MS-101 and inlet water knockout vessel MS-102, and compressor discharge piping to knockout vessel MS-301. [District Rule 2010, 4.0] Federally Enforceable Through Title V Permit
7. Fugitive volatile organic compound (VOC) emission sources shall be inspected, repaired, and maintained such that the total stationary source VOC emission rate does not exceed the stationary source limit specified in permit S-1543-4. [District NSR Rule] Federally Enforceable Through Title V Permit
8. "Startup" and "shutdown" of gas turbine engine and/or duct burner, defined in 40CFR 60.2, shall not exceed a time period of two hours for each occurrence. [District Rules 2080, 3.0 and 4703, 3.25] Federally Enforceable Through Title V Permit
9. Total gas consumption rate for gas turbine engine/compressor and duct burner shall not exceed 468 MMBtu/day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Total gas consumption rate for gas turbine engine/compressors S-1543-5 and S-1543-6 and waste gas flare S-1543-7 shall not exceed 1,601,176 scf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Gas turbine engine with duct burner on emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0205 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.0918 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0118 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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12. Gas turbine engine with duct burner off emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0279 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.1287 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0147 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] Federally Enforceable Through Title V Permit
13. The ammonia (NH<sub>3</sub>) emissions from the exhaust of the SCR system serving this gas turbine shall not exceed 20 ppmvd @ 15% O<sub>2</sub>. [District Rule 4102]
14. Permittee shall maintain accurate records of weekly fuel gas sulfur content (as H<sub>2</sub>S) and shall make such records available for District inspection for five years. Draeger tubes may be utilized to satisfy this monitoring requirement. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
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16. Compliance with NO<sub>x</sub>, CO, and NH<sub>3</sub> emission limits shall be demonstrated annually by District witnessed sample collection by independent laboratory. If duct burner is operated intermittently, compliance shall be demonstrated with duct burner both on and off. [District Rule 4703, 6.3.1 and 6.3.3] Federally Enforceable Through Title V Permit
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18. The following methods shall be used for testing required by this permit: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, Stack gas Oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H<sub>2</sub>S and Mercaptans, Fuel gas h<sub>h</sub>v - ASTM D1826 or D1945 in conjunction with ASTM D3588, Ammonia slip - BAAQMD method ST-1B. [District Rules 1081; 40 CFR 60.8(a); and 4703, 6.4] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH<sub>3</sub> monitoring shall be conducted utilizing gas detection tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rule 4703] Federally Enforceable Through Title V Permit
20. If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, 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 that is subject to enforcement action has occurred. 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 the performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
21. All NO<sub>x</sub>, CO, O<sub>2</sub> and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4703] Federally Enforceable Through Title V Permit

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23. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub>, CO and NH<sub>3</sub> concentrations corrected to 15% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4703] Federally Enforceable Through Title V Permit
24. This unit shall be fired exclusively on natural gas which has a sulfur content of less than or equal to 0.015% by weight (75 ppmv as S). [40 CFR 60.333(b) and subpart GG; District Rule 4801, 3.1; and Kern County Rule 407] Federally Enforceable Through Title V Permit
25. If this unit is not fired on natural gas certified by the supplier to have a sulfur content (as S) not exceeding 0.015% by weight, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
26. If this unit is not fired on supplier-certified natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(j)(2)] Federally Enforceable Through Title V Permit
27. If this unit is not fired on supplier-certified natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 4084 or D 3246 or double GC for H<sub>2</sub>S and mercaptans. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
28. If this unit is fired on supplier-certified natural gas, then copies of fuel certifications (or specifications) and natural gas bills shall be maintained on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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

DRAFT

# ATTACHMENT D

## Emissions Increases

SSIPE (lb/yr)				
NOx	VOC	CO	SOx	PM10
0	0	0	0	0

# ATTACHMENT E

## Application



RECEIVED  
AUG 25 2014  
SJVAPCD  
Southern Region

August 25, 2014

Mr. Leonard Scandura, P.E.  
Regional Manager, Permit Services  
San Joaquin Valley APCD  
34946 Flyover Court  
Bakersfield, CA 93308

**RE: S-1543 Title V Minor Modification Application  
Section 32 Gas Plant**

Dear Mr. Scandura:

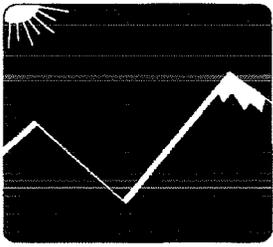
The Section 32 Gas Plant processes produced gas from the Belridge Oil Field. Aera Energy LLC (Aera) recently received Authorities to Construct #S-1543-5-18 and S-1543-6-19 to increase the ammonia slip from the two turbines. Aera is requesting that these Authorities to Construct be converted to Permits to Operate. In support of this request, attached are the completed application form, compliance certification form, and copies of the Authorities to Construct.

Should you have any questions, please feel free to contact me at (661) 665-5279.

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Haley", is positioned above the typed name and title.

John E. Haley  
Environmental Engineer



# San Joaquin Valley Unified Air Pollution Control District

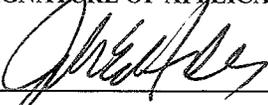
RECEIVED

AUG 25 2014

SJVAPCD  
Southern Region

## APPLICATION FOR TITLE V MODIFICATION:

- ADMINISTRATIVE AMENDMENT
- MINOR MODIFICATION
- SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO: <b>Aera Energy LLC</b>	
2. MAILING ADDRESS: STREET/P.O. BOX: <b>P.O. Box 11164</b> CITY: <b>Bakersfield</b> STATE: <b>CA</b> 9-DIGIT ZIP CODE: <b>93389-1164</b>	
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED: STREET: <b>Section 32 Gas Plant</b> CITY: _____ 1/4 SECTION <b>32</b> TOWNSHIP <b>28S</b> RANGE <b>21E</b>	INSTALLATION DATE: _____
4. GENERAL NATURE OF BUSINESS: <b>Oil and Natural Gas Production</b>	
5. EQUIPMENT FOR WHICH APPLICATION IS MADE (Include Permit Nos.): <b>Implement Authorities to Construct #S-1543-5-18 and S-1543-6-19 into the Title V permit for the Section 32 Gas Plant source.</b>	
(Use additional sheets if necessary)	
6. DO YOU REQUEST A CERTIFICATE OF CONFORMITY WITH THIS ACTION? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
7. IS THIS APPLICATION SUBMITTED AS A RESULT OF A NOV/NTC? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO    NOV/NTC No.: _____	
8. SIGNATURE OF APPLICANT/CONTACT PERSON: 	TYPE OR PRINT TITLE OF APPLICANT: <b>Environmental Engineer</b>
9. TYPE OR PRINT NAME OF APPLICANT/CONTACT: <b>John E. Haley</b>	DATE: <b>8/25/14</b>
10. FAX NUMBER: <b>(661) 665-7437</b>	TELEPHONE NUMBER: <b>(661) 665-5279</b>

FOR APCD USE ONLY: **NO \$**

DATE STAMP	FILING FEE RECEIVED: \$ _____
	DATE PAID: _____
	PROJECT NO.: <b>S-1143505</b> FACILITY REGION & ID: <b>S-1543</b>

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V COMPLIANCE CERTIFICATION FORM**

RECEIVED  
**AUG 25 2014**

SJVAPCD  
Southern Region

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

- SIGNIFICANT PERMIT MODIFICATION       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                       AMENDMENT

COMPANY NAME: Aera Energy LLC	FACILITY ID: S-1543
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Aera Energy LLC	
3. Agent to the Owner: N/A	

**II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial each circle for confirmation):**

- Based on information and belief formed after reasonable inquiry, the emission units identified in this application will continue to comply with the applicable federal requirement(s) which the emission units are in compliance.
- Based on information and belief formed after reasonable inquiry, the emission units 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:

  
Signature of Responsible Official

8-25-14  
Date

R.A. Roeder  
Name of Responsible Official (please print)

Process Supervisor  
Title of Responsible Official (please print)



## AUTHORITY TO CONSTRUCT

PERMIT NO: S-1543-5-18

ISSUANCE DATE: 08/18/2014

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC  
MAILING ADDRESS: PO BOX 11164  
BAKERSFIELD, CA 93389-1164

LOCATION: BELRIDGE GAS PLANT  
CA

SECTION: 32 TOWNSHIP: 28S RANGE: 21E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK™ SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION A: INCREASE AMMONIA SLIP LIMIT TO 30 PPM AND REMOVE REQUIREMENT TO CONVERT NH3 PPMV TO 15% O2

### CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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



Arnaud Marjollet, Director of Permit Services  
S-1543-5-18 Aug 18 2014 9:26AM -- TORID Joint Inspection NOT Required

7. Operation shall include fuel gas piping from inlet scrubber MS-101 and inlet water knockout vessel MS-102, and compressor discharge piping to knockout vessel MS-301. [District Rule 2010, 4.0] Federally Enforceable Through Title V Permit
8. Fugitive volatile organic compound (VOC) emission sources shall be inspected, repaired, and maintained such that the total stationary source VOC emission rate does not exceed the stationary source limit specified in permit S-1543-4. [District NSR Rule] Federally Enforceable Through Title V Permit
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10. Total gas consumption rate for gas turbine engine/compressor and duct burner shall not exceed 468 MMBtu/day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Total gas consumption rate for gas turbine engine/compressors S-1543-5 and S-1543-6 and waste gas flare S-1543-7 shall not exceed 1,601,176 scf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Gas turbine engine with duct burner on emission rates shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 9 ppmv @ 15% O<sub>2</sub> or 0.0332 lb-NO<sub>x</sub>/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.0205 lb-SO<sub>x</sub>/MMBtu, PM<sub>10</sub>: 0.0918 lb-PM<sub>10</sub>/MMBtu, CO: 250 ppmv @ 15% O<sub>2</sub> or 0.5605 lb-CO/MMBtu, or VOC: 0.0118 lb-VOC/MMBtu. [District NSR Rule, District Rule 4703, 5.1.2 and 5.2, and 40 CFR 60.332(c)] Federally Enforceable Through Title V Permit
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14. The ammonia (NH<sub>3</sub>) emissions from the exhaust of the SCR system serving this gas turbine shall not exceed 30 ppmvd. [District Rule 4102]
15. Permittee shall maintain accurate records of weekly fuel gas sulfur content (as H<sub>2</sub>S) and shall make such records available for District inspection for five years. Draeger tubes may be utilized to satisfy this monitoring requirement. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. Permittee shall maintain accurate daily records of total gas consumed in S-1543-5, '6, and '7, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
17. Compliance with NO<sub>x</sub>, CO, and NH<sub>3</sub> emission limits shall be demonstrated annually by District witnessed sample collection by independent laboratory. If duct burner is operated intermittently, compliance shall be demonstrated with duct burner both on and off. [District Rule 4703, 6.3.1 and 6.3.3] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081, 5.0, 6.0, and 7.1] Federally Enforceable Through Title V Permit
19. The following methods shall be used for testing required by this permit: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, Stack gas Oxygen - EPA Method 3 or 3A or ARB Method 100, SO<sub>x</sub> (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H<sub>2</sub>S and Mercaptans, Fuel gas h<sub>h</sub>v - ASTM D1826 or D1945 in conjunction with ASTM D3588, Ammonia slip - BAAQMD method ST-1B. [District Rules 1081; 40 CFR 60.8(a); and 4703, 6.4] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH<sub>3</sub> monitoring shall be conducted utilizing gas detection tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rule 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, 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 that is subject to enforcement action has occurred. 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 the performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
22. All NO<sub>x</sub>, CO, O<sub>2</sub> and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer 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 readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4703] Federally Enforceable Through Title V Permit
23. Ammonia emission readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. [District Rule 4102]
24. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume, measured NH<sub>3</sub> concentration, and the measured NO<sub>x</sub> and CO concentrations corrected to 15% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4703] Federally Enforceable Through Title V Permit
25. This unit shall be fired exclusively on natural gas which has a sulfur content of less than or equal to 0.015% by weight (75 ppmv as S). [40 CFR 60.333(b) and subpart GG; District Rule 4801, 3.1; and Kern County Rule 407] Federally Enforceable Through Title V Permit
26. If this unit is not fired on natural gas certified by the supplier to have a sulfur content (as S) not exceeding 0.015% by weight, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
27. If this unit is not fired on supplier-certified natural gas, the operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(j)(2)] Federally Enforceable Through Title V Permit
28. If this unit is not fired on supplier-certified natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 4084 or D 3246 or double GC for H<sub>2</sub>S and mercaptans. [40 CFR 60.335(b)(10)] Federally Enforceable Through Title V Permit
29. If this unit is fired on supplier-certified natural gas, then copies of fuel certifications (or specifications) and natural gas bills shall be maintained on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. ATC S-1543-5-17 shall be implemented prior-to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit



## AUTHORITY TO CONSTRUCT

PERMIT NO: S-1543-6-19

ISSUANCE DATE: 08/18/2014

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC  
MAILING ADDRESS: PO BOX 11164  
BAKERSFIELD, CA 93389-1164

LOCATION: BELRIDGE GAS PLANT  
CA

SECTION: 32 TOWNSHIP: 28S RANGE: 21E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 13.6 MMBTU/HR GAS-FIRED SOLAR SATURN GAS TURBINE ENGINE/COMPRESSOR WITH GAS FIRED 5.9 MMBTU/HR DUCT BURNER DRIVING GAS COMPRESSOR SERVED BY CATASTAK™ SELECTIVE CATALYST REDUCTION (SCR) SYSTEM - OPERATION B: INCREASE AMMONIA SLIP LIMIT TO 30 PPM AND REMOVE REQUIREMENT TO CONVERT NH3 PPMV TO 15% O2

### CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

  
Arnaud Marjollet, Director of Permit Services

S-1543-6-19 Aug 18 2014 8:28AM - 1:00 PM Joint Inspection NOT Required

7. Operation shall include fuel gas piping from inlet scrubber MS-101 and inlet water knockout vessel MS-102, and compressor discharge piping to knockout vessel MS-301. [District Rule 2010, 4.0] Federally Enforceable Through Title V Permit
8. Fugitive volatile organic compound (VOC) emission sources shall be inspected, repaired, and maintained such that the total stationary source VOC emission rate does not exceed the stationary source limit specified in permit S-1543-4. [District NSR Rule] Federally Enforceable Through Title V Permit
9. "Startup" and "shutdown" of gas turbine engine and/or duct burner, defined in 40CFR 60.2, shall not exceed a time period of two hours for each occurrence. [District Rules 2080, 3.0 and 4703, 3.25] Federally Enforceable Through Title V Permit
10. Total gas consumption rate for gas turbine engine/compressor and duct burner shall not exceed 468 MMBtu/day. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Total gas consumption rate for gas turbine engine/compressors S-1543-5 and S-1543-6 and waste gas flare S-1543-7 shall not exceed 1,601,176 scf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
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CONDITIONS CONTINUE ON NEXT PAGE

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29. If this unit is fired on supplier-certified natural gas, then copies of fuel certifications (or specifications) and natural gas bills shall be maintained on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. ATC S-1543-6-18 shall be implemented prior-to or concurrently with this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit