JUN 07 2011

Mr. Brent Winn
Aera Energy, LLC
P.O. Box 11164
Bakersfield, CA  93389

Re:  Final - Authority to Construct / Certificate of Conformity (Significant Mod)
District Facility # S-1547
Project # S-1084210 & 1084433

Dear Mr. Winn:

The Air Pollution Control Officer has issued Authorities to Construct (S-1547-1162-0 through '-1180-0) with Certificates of Conformity to Aera Energy, LLC at Heavy Oil Western stationary source. The project is to install up to eleven (11) new 85 MMBtu/hr steam generators equipped with low NOx burners.

Enclosed are the Authorities to Construct. The application and proposal were sent to US EPA Region IX on 10/13/2010. All comments received have been addressed by the District. A summary of the comments and the District's response to each comment is included as an attachment to this correspondence.

The notice of final decision for this project will be published approximately three days from the date of this letter.

Prior to operating with modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

David Warner
Director of Permit Services

DW:DG/dg

Enclosures
JUN 07 2011

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

Re: Final - Authority to Construct / Certificate of Conformity (Significant Mod)
District Facility # S-1547
Project # S-1084210 & 1084433

Dear Mr. Rios:

The Air Pollution Control Officer has issued Authorities to Construct (S-1547-1162-0
type 1180-0) with Certificates of Conformity to Aera Energy, LLC at Heavy Oil
Western stationery source. The project is to install up to eleven (11) new 85 MMBtu/hr
steam generators equipped with low NOx burners.

Enclosed is a copy of the Authorities to Construct. The application and proposal were
sent to US EPA Region IX on 10/13/2010. All comments received have been
addressed by the District. A summary of the comments and the District’s response to
each comment is included as an attachment to this correspondence.

The notice of final decision for this project will be published approximately three days
from the date of this letter.

Thank you for your cooperation in this matter. If you have any questions, please contact
Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

[Signature]
David Warner
Director of Permit Services

DW:DG/dg

Enclosures
JUN 07 2011

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

Re: Final - Authority to Construct / Certificate of Conformity (Significant Mod)
District Facility # S-1547
Project # S-1084210 & 1084433

Dear Mr. Tollstrup:

The Air Pollution Control Officer has issued Authorities to Construct (S-1547-1162-0
through '1180-0) with Certificates of Conformity to Aera Energy, LLC at Heavy Oil
Western stationary source. The project is to install up to eleven (11) new 85 MMBtu/hr
steam generators equipped with low NOx burners.

Enclosed is a copy of the Authorities to Construct. The application and proposal were
sent to US EPA Region IX on 10/13/2010. All comments received have been
addressed by the District. A summary of the comments and the District’s response to
each comment is included as an attachment to this correspondence.

The notice of final decision for this project will be published approximately three days
from the date of this letter.

Thank you for your cooperation in this matter. If you have any questions, please contact
Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

David Warner
Director of Permit Services

DW:DG/dg

Enclosures
NOTICE OF FINAL DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District has made its final decision to issue Authorities to Construct to Aera Energy, LLC for heavy oil operation located at at Heavy Oil Western stationary source, California. The project is to install up to eleven (11) new 85 MMBtu/hr steam generators equipped with low NOx burners.

The District's analysis of the legal and factual basis for this proposed action, project #S-1084210 & 1084433, is available for public inspection at the District office at the address below. For additional information regarding this matter, please call Mr. Leonard Scandura, Permit Services Manager at (661) 392-5500, or contact David Warner, Director of Permit Services, in writing at SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVENUE, FRESNO, CA 93276-0244.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1162-0

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS: PO BOX 11164

BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY, CA

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 26, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

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 Sededin, Executive Director / APÇO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Fwyver Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3]

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM₁₀ emissions from Units S-1547-1162-0 though -1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM₁₀ emissions from Units S-1547-1162 through -1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM₁₀ emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOₓ: 5 ppmvd @ 3% O₂ or 0.006 lb-NOₓ/MMBtu; PM₁₀: 0.0076 lb-PM₁₀/MMBtu; CO: 25 ppmvd @ 3% O₂ or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO₂ per hour, or 2000 ppmv as SO₂, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO₂ - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through -1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOₓ: 49,990 lb/yr; SOₓ: 17,210 lb/yr; PM₁₀: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCS identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOₓ and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOₓ and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hrv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the allowable emissions limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 24 hours and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC-quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reassessed, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1.1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1163-0

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
           KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX
BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED
COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT
VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and
   NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
   hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
   1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per
   MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and
   water pump. [CEQA]

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
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all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Floyer Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
Conditions for S-1547-1163-0 (continued)

7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 though '1-1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through '1-1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOX: 5 ppmvd @ 3% O2 or 0.0001 lb-NOX/MMBtu; PM10: 0.0006 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through '1-1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOX: 49,990 lb/yr; SOX: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of 
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. 
District Rules 4305, 4306 and 4320 Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - 
EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or 
ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA 
Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hlv (MMBtu) - 
ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally 
Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District 
Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] 
Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in 
which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. 
[District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the allowable 
emissions limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no 
longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable 
emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must 
then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the 
deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply 
with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 
4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of 
normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, 
maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol 
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by 
either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced 
out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through 
Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 
concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and 
model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective 
action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally 
Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal 
operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination 
of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off 
for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For 
the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time 
after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally 
Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by 
submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2281] Federally 
Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ACT. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1164-0
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QULN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]
4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]
6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

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 Sededin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-1164-0, Jul 9 2011 JAN - DOUGS / Joint Inspection Register DOUGS
Southern Regional Office • 34548 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
Conditions for S-1547-1164-0 (continued)

7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to
12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3]

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof
overhang, or any other obstruction. [District Rule 4102]

9. The total PM₁₀ emissions from Units S-1547-1162-0 through '1180-0 shall not exceed 124 lb/day at location #2038
in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM₁₀ emissions from Units S-1547-1162 through '1180-0 shall not exceed 168 lb/day at location #2972 in
the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM₁₀ emissions from Units S-1547-1162-0 through S-1547-1180-0 at
locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and
4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOₓ: 5 ppmvd @ 3% O₂ or
0.0061 lb-NOₓ/MMBTu; PM₁₀: 0.0076 lb-PM₁₀/MMBTu; CO: 25 ppmvd @ 3% O₂ or 0.0185 lb-CO/MMBTu or
VOC: 0.003 lb-VOC/MMBTu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per
hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO₂ per hour, or 2000 ppmv as SO₂, or 0.11
pounds sulfur (as S) per MMBTu on average-wide basis for all units in Rule 4406 plan; NO₂ - 140 pounds per hour or
0.14 pounds per MMBTu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through '1180 may be installed provided that permitted annual emissions do not exceed any
of the following limits: NOₓ: 49,990 lb/yr; SOₓ: 17,210 lb/yr; PM₁₀: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585
lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable
Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBTU/year. [District
Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320]
Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of
refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306
and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five
years and make such records readily available for District inspection upon request. [District Rule 4320] Federally
Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOₓ and CO emission limits shall be performed within 60 days of
startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOₓ and CO emissions from this unit shall be conducted at least
once every twelve (12) months (no more than 30 days before or after the required annual source test date). After
demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every
thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of
the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing
frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be
notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at
least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hH (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3% as measured by the portable analyzer, exceed the allowable emissions limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4366 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-013-2, S-013-2, S-1821-2, S-40130321-2, S-794-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawings(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1165-0

ISSUANCE DATE: 06/02/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11184
                   BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
           KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX
BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED
COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT
VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and
   NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
   hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
   1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per
   MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and
   water pump. [CEQA]

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 2650, 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 Sadedin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
9. The total PM10 emissions from Units S-1547-1162-0 through '1-1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]
10. The total PM10 emissions from Units S-1547-1162 through '1-1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]
11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]
12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 5 ppmvd @ 3% O2 or 0.0061 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. Emission rates during start-up, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit
15. Any of units S-1547-1162 through '1-1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOX: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.
[District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) -
EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; stack gas oxygen (O2) - EPA Method 3 or 3A or
ARB Method 100; stack gas velocities - EPA Method 2; stack gas moisture content - EPA Method 4; SOx - EPA
Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hvi (MMBtu) -
ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District
Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in
which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month.
[District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3% as measured by the portable analyzer, exceed the allowable
emissions limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no
longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable
emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must
then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the
deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply
with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305,
4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of
normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated,
maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by
either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced
out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through
Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2
concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and
model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective
action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal
operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination
of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off
for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For
the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time
after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by
submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally
Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/2/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-013-2, S-013-2, S-1821-2, S-4013031-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1166-0
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

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 canceled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
Conditions for S-1547-1166-0 (continued)

7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 though -1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through -1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 5 ppmvd @ 3% O2 or 0.0061 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during start-up, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through -1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ECRs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of these runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100; NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be restarted solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the allowable emissions limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,156 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1167-0

ISSUANCE DATE: 06/02/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS: PO BOX 11164

BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY, CA

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520. 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1079] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-6500 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 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 Sadreddin, Executive Director / APCO

David Warner, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Particulate matter emissions shall not exceed 0.1 grain/scf at operating conditions, not 0.1 grain/scf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3]

8. The exhaust stack shall all vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 though '1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through '1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 5 ppmvd @ 3% O2 or 0.0061 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CC/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grain/scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through '1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOX - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel heat (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the allowable emissions limit, the permittee shall report the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 48 hours and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

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37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

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40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

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53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1168-0
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 through -1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through -1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 5 ppmvd @ 3% O2 or 0.0061 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during start-up, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through -1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.
[District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) -
EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or
ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA
Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel lhv (MMBtu) -
ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District
Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in
which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month.
[District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the allowable
emissions limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no
longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable
emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must
then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the
deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply
with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305,
4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of
normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated,
maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by
either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced
out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through
Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2
concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and
model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective
action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal
operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination
of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off
for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For
the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time
after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by
submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally
Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfate per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1169-0

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
          KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX
BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED
COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT
VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and
   NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
   hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
   1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per
   MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and
   water pump. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
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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
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Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/yr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 though S-1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through S-1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 5 ppmvd @ 3% O₂ or 0.0061 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O₂ or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO₂ per hour, or 2000 ppmv as SO₂, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NOX - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through S-1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1881] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel lHV (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the allowable emissions limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,222 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2959-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1170-0

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
                  BAKERSFIELD, CA 93369-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
          KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NATIONWIDE BOILER MODEL CATASTAK
SELECTIVE CATALYTIC REDUCTION SYSTEM OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS
SPECFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
   to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and
   NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
   hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
   1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per
   MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and
   water pump. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-6500 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 Sadredlin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-6500 • Fax (661) 392-5585
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 through ′-1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through ′-1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 5 ppmvd @ 3% O2 or 0.0061 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801]

15. Any of units S-1547-1162 through ′-1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 69 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of the three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100; NOX (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 5 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hiv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NH3 at least once during each month in which a source test is not performed. NH3 monitoring shall be conducted utilizing District approved 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 one day of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, or the NH3 concentrations corrected to 3% O2, as measured by District approved gas-detection tubes, exceed the allowable emissions limits, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. All NOx, CO, O2 and NH3 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. NH3 emission readings shall be measured in accordance with the gas sample tube manufacturer's specifications and recommendations. Portable analyzer emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of: (1) the date and time of NOx, CO, O2 and NH3 measurements, (2) the O2 concentration in percent by volume and the measured NOx, CO and NH3 concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) method of determining the NH3 concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Ammonia emissions readings shall be conducted at the time the NOX, CO and O2 readings are taken. The readings shall be converted to ppmv at 3% O2. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

35. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

37. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

38. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

39. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

40. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

41. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

42. The permittee shall obtain written District approval for the use of any equivalent SCR equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

43. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

44. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
45. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177; California Environmental Quality Act]

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47. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177; California Environmental Quality Act]

48. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177; California Environmental Quality Act]

49. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177; California Environmental Quality Act]

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51. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177; California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE
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58. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1171-0
ISSUANCE DATE: 06/02/2011

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NATIONWIDE BOILER MODEL CATASTAK
SELECTIVE CATALYTIC REDUCTION SYSTEM OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS
SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-6500 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 Sadreolin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 420t, 430t, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 through '1140-9 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through '1140-9 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1140-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOₓ: 5 ppmvd @ 3% O₂ or 0.0061 lb-NOₓ/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O₂ or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO₂ per hour, or 2000 ppmv as SO₂, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO₂ - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through '1140 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOₓ: 49,990 lb/yr; SOₓ: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOₓ and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOₓ and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.
District Rules 4305, 4306 and 4320 Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) -
ARB Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or
ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA
Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) -
ASTM D 1836 or D 1945 in conjunction with ASTM D 3588. District Rules 4305, 4306 and 4320 Federally
Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance.
District Rules 4305, 4306 and 4320 Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. District Rule 1081
Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in
which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month.
District Rules 4305, 4306, and 4320 Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NH3 at least once during each month in which a
source test is not performed. NH3 monitoring shall be conducted utilizing District approved 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 one day of restarting the unit unless
monitoring has been performed within the last month. District Rules 4305, 4306 and 4320 Federally Enforceable
Through Title V Permit

29. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, or the NH3 concentrations
corrected to 3% O2, as measured by District approved gas-detection tubes, exceed the allowable emissions limit, the
permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of
operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration
after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show
compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying
breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the
notification and testing required by this condition. District Rules 4102, 4305, 4306 and 4320 Federally Enforceable
Through Title V Permit

30. All NOx, CO, O2 and NH3 emission readings shall be taken with the unit operating at either at conditions
representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer
shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and
recommendations or a protocol approved by the APCO. NH3 emission readings shall be measured in accordance with
the gas sample tube manufacturer's specifications and recommendations. Portable analyzer emission readings taken
shall be averaged over a 15 consecutive-minute sample 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 Rules 4102, 4305, 4306 and 4320 Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of: (1) the date and time of NOx, CO, O2 and NH3 measurements, (2) the O2
concentration in percent by volume and the measured NOx, CO and NH3 concentrations corrected to 3% O2, (3) make
and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) method of determining the NH3
concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable
range. District Rules 4305, 4306 and 4320 Federally Enforceable Through Title V Permit

32. Ammonia emissions readings shall be conducted at the time the NOx, CO and O2 readings are taken. The readings
shall be converted to ppmv @ 3% O2. District Rules 4305, 4306 and 4320 Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

35. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

37. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

38. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

39. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

40. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

41. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

42. The permittee shall obtain written District approval for the use of any equivalent SCR equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

43. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

44. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]
45. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

46. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

55. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]
57. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

58. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1172-0
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NATIONWIDE BOILER MODEL CATASTAK
SELECTIVE CATALYTIC REDUCTION SYSTEM OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS
SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and
NW/4, SW/4 & SE/4 of Section 28, T28S, R21W. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per
MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and
water pump. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

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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 Sadrelin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
11/24/11

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Conditions for S-1547-1172-0 (continued)

7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 through `-1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through `-1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 5 ppmvd @ 3% O2 or 0.0061 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 401, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through `-1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 745,000 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as f2S content - EPA Method 11 or 15; and fuel hov (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NH3 at least once during each month in which a source test is not performed. NH3 monitoring shall be conducted utilizing District approved 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 one day of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, or the NH3 concentrations corrected to 3% O2, as measured by District approved gas-detection tubes, exceed the allowable emissions limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. All NOx, CO, O2 and NH3 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. NH3 emission readings shall be measured in accordance with the gas sample tube manufacturer's specifications and recommendations. Portable analyzer emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of: (1) the date and time of NOx, CO, O2 and NH3 measurements, (2) the O2 concentration in percent by volume and the measured NOx, CO and NH3 concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) method of determining the NH3 concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Ammonia emissions readings shall be conducted at the time the NOx, CO and O2 readings are taken. The readings shall be converted to ppmvd @ 3% O2. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

35. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

37. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

38. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4240] Federally Enforceable Through Title V Permit

39. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

40. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,136 lb/quarter; SOx: 391 lb/quarter; PM10: 1,416 lb/quarter and VOC: 559 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

41. ERC Certificate Numbers S-257-2, S-0153-2, S-0133-2, S-1821-2, S-4013021-2, S-784-2, S-796-2, S-2958-2, S-2955-1, S-2910-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

42. The permittee shall obtain written District approval for the use of any equivalent SCR equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

43. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

44. Aerc will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]
45. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/eggs are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

46. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

55. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
57. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

58. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1173-0  ISSUANCE DATE: 06/02/2011

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
          KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX
BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED
COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT
VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
   to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and
   NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
   hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
   1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per
   MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and
   water pump. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT: (561) 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 2850, this
Authority to Construct shall expire and application shall be canceled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34942 Fwyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
Conditions for S-1547-1173-0 (continued)

7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 through '1-1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through '1-1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 7 ppmvd @ 3% O2 or 0.008 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through '1-1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.
District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOX (lb/MMBtu)
- EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A
or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA
Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hlv (MMBtu)
- ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District
Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in
which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month.
District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOX or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable
emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no
longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable
emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the
following 24 hour period to conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a
source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must
then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the
deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply
with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305,
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29. All NOX, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of
normal operations or conditions specified in the Permit to Operate. The NOX, CO, and O2 analyzer shall be calibrated,
maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by
either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced
out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through
Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOX, CO and O2 measurements, (2) the O2
concentration in percent by volume and the measured NOX and CO concentrations corrected to 3% O2, (3) make and
model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective
action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally
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31. All emissions measurements shall be made with the unit operating either at conditions representative of normal
operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination
of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off
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32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by
submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally
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CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

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37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,460 lb/quarter; SOx: 383 lb/quarter; PM10: 1,387 lb/quarter and VOC: 548 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

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42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

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CONDITIONS CONTINUE ON NEXT PAGE
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52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believe to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR’s "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1174-0

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLI-U LN ULTRA LOW NOX
BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED
COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT
VARIOUS SPECIFIED LOCATIONS

ISSUANCE DATE: 06/02/2011

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(e). [District NSR Rule] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and
NW/4, SW/4 & SE/4 of Section 28, T28S, R31E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per
MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and
water pump. [CEQA]

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 Sadrodir, Executive Director / APCO

DAVID WARNER, Director of Permit Services
91547-1174-0; Jun 9 2011 1:25AM - GOUG20G; - Print Box/Paper Generated with GOUG20G

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93302 • (661) 392-5500 • Fax (661) 392-5585
Conditions for S-1547-1174-0 (continued)

7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3]

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 through S-1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through S-1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 7 ppmvd @ 3% O2 or 0.008 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through S-1180 may be installed that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCS identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100, Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hvh (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. Thereafter, the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,460 lb/quarter; SOx: 383 lb/quarter; PM10: 1,387 lb/quarter and VOC: 548 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1175-0

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
            KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBtu/hr NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX
BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED
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VARIOUS SPECIFIED LOCATIONS

ISSUANCE DATE: 06/02/2011

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and
   NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
   hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
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5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per
   MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and
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CONDITIONS CONTINUE ON NEXT PAGE

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Sayed Sadreolin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34948 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 through '1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through '1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 7 ppmvd @ 3% O2 or 0.008 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NOx - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through '1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.
District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) -
EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or
ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA
Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hlv (MMBtu) -
ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

25. The test source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District
Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in
which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month.
District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3% as measured by the portable analyzer, exceed the applicable
emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no
longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable
emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must
then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the
deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply
with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305,
4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of
normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated,
maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by
either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced
out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through
Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2
concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and
model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective
action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal
operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination
of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off
for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For
the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time
after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally
Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by
submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2281] Federally
Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,460 lb/quarter; SOx: 383 lb/quarter; PM10: 1,387 lb/quarter and VOC: 548 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District’s determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer’s maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1.1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1176-0
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

ISSUANCE DATE: 06/02/2011

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5600 WHEN CONSTRUCTION IS COMPLETE AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. THIS IS NOT A PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Fryover Court • Bakersfield, CA 93308 • (661) 392-5900 • Fax (661) 392-5585

Photocopy Prohibited.
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 though '1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through '1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 7 ppmvd @ 3% O2 or 0.008 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through '1180 may be permitted installed that permits annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,740 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of the three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as %S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2281] Federally Enforceable Through Title V Permit

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33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 88% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

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AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1177-0

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1184

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH C0EN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

ISSUANCE DATE: 06/02/2011

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-6500 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 Sadreddin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 through -1180-0 shall not exceed 124 lb/day at location #2038 in the SE/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through -1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102] 

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 7 ppmv @ 3% O2 or 0.008 lb NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmv @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through -1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel lHV (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOX: 1,460 lb/quarter; SOX: 383 lb/quarter; PM10: 1,387 lb/quarter and VOC: 548 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2395-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1.1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1178-0

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

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

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 2055, 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

[Signature]
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM10 emissions from Units S-1547-1162-0 though '1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM10 emissions from Units S-1547-1162 through '1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM10 emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 g-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 7 ppmvd @ 3% O2 or 0.008 lb-NOx/MMBtu; PM10: 0.0076 lb-PM10/MMBtu; CO: 25 ppmvd @ 3% O2 or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through '1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM10: 62,282 lb/yr; CO: 151,508 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ECRs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 106, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320]

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within 2 hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,460 lb/quarter; SOx: 383 lb/quarter; PM10: 1,387 lb/quarter and VOC: 548 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130321-2, S-784-2, S-796-2, S-2958-2, S-2355-1, S-2010-5, S-1825-5, and S-1337-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District’s determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee’s request for approval of equivalent equipment shall include the make, model, manufacturer’s maximum rating, manufacturer’s guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1.1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR's "Well Review Program." [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1179-0

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11184
                    BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
          KERN COUNTY, CA

EQUIPMENT DESCRIPTION: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 4102]

4. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

6. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]

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 1056, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

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Printed on recycled paper.
7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM₁₀ emissions from Units S-1547-1162-0 though ‘1-1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM₁₀ emissions from Units S-1547-1162 through ‘1-1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM₁₀ emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOₓ: 7 ppmvd @ 3% O₂ or 0.008 lb-NOₓ/MMBtu; PM₁₀: 0.0076 lb-PM₁₀/MMBtu; CO: 25 ppmvd @ 3% O₂ or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO₂ per hour; or 2000 ppmv as SC₂, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO₂ - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through ‘1-1180 may be installed provided that permitted emissions do not exceed any of the following limits: NOₓ: 49,990 lb/yr; SOₓ: 17,210 lb/yr; PM₁₀: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCs identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730,000 MMBTU/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOₓ and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOₓ and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of these runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit.

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit.

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit.

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit.

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit.

28. If the NOx or CO concentrations corrected to 3% as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit.

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit.

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit.

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permitter-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit.

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit.

CONDITIONS CONTINUE ON NEXT PAGE.
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AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1160-0
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93369-1164
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

EQUIPMENT DESCRIPTION:
85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ADVANCED COMBUSTION TECHNOLOGY GIDEON ULTRA LOW NOX BURNER OR EQUIVALENT, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. This unit is approved for operation at the following locations: SW/4 of Section 20, NE/4 & SE/4 of Section 29, and NW/4, SW/4 & SE/4 of Section 28, T28S, R21E. [District Rule 1070] Federally Enforceable Through Title V Permit

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5. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]

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Seyed Sadreddin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

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7. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]

9. The total PM₁₀ emissions from Units S-1547-1162-0 through `-1180-0 shall not exceed 124 lb/day at location #2038 in the SW/4 of Section 20, T28S, R21E. [District Rule 4102]

10. The total PM₁₀ emissions from Units S-1547-1162 through S-1180-0 shall not exceed 168 lb/day at location #2972 in the SE/4 of Section 29, T28S, R21E. [District Rule 4102]

11. Permittee shall maintain records of daily PM₁₀ emissions from Units S-1547-1162-0 through S-1547-1180-0 at locations #2038 and #2972. [District Rule 4102]

12. The unit shall only be fired on natural gas with sulfur content not to exceed 0.75 gr-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

13. Emissions from the natural gas-fired unit shall not exceed any of the following limits: NOx: 7 ppmvd @ 3% O₂ or 0.008 lb-NOx/MMBtu; PM₁₀: 0.0076 lb-PM₁₀/MMBtu; CO: 25 ppmvd @ 3% O₂ or 0.0185 lb-CO/MMBtu or VOC: 0.003 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO₂ per hour, or 2000 ppmv as SO₂, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO₂ - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

15. Any of units S-1547-1162 through `-1180 may be installed provided that permitted annual emissions do not exceed any of the following limits: NOx: 49,990 lb/yr; SOx: 17,210 lb/yr; PM₁₀: 62,282 lb/yr; CO: 151,608 lb/yr or VOC: 24,585 lb/yr, consistent with the quantity of ERCS identified in this project. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall keep accurate records of refractory curing duration and make records readily available to the District upon request. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

20. A source test to demonstrate compliance with NOx and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOX (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. 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 monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after 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 has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emission measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

34. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permits shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit

36. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. Prior to operating under this Authority to Construct, permittee shall surrender emission reduction credits for the following quantities of emissions: NOx: 1,460 lb/quarter; SOx: 383 lb/quarter, PM10: 1,387 lb/quarter and VOC: 548 lb/quarter. Offset shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/2006). [District Rule 2201] Federally Enforceable Through Title V Permit

39. ERC Certificate Numbers S-257-2, S-0135-2, S-0133-2, S-1821-2, S-40130521-2, S-784-2, S-796-2, S-2958-2, S-2959-1, S-2010-5, S-1825-5, and S-1317-5 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

40. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternative equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

41. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

42. Aera will surrender ERCs sufficient to fully offset operational emissions as required by District NSR requirements. [Public Resources Code 21000-21177: California Environmental Quality Act]

43. A qualified biologist will conduct a pre-construction survey for sensitive species within 30 days of the onset of ground disturbance. If sensitive species or their nests/dens are detected, the appropriate standardized avoidance measures will be implemented to preclude take of the species. If standardized avoidance measures cannot be achieved, Aera will consult with the CDFG and USFWS to develop alternative compliance measures. [Public Resources Code 21000-21177: California Environmental Quality Act]

44. Impacts to endangered species habitat as identified in pre-construction surveys will be mitigated at the Coles Levee Ecological Preserve at a ratio of 1:1:1. [Public Resources Code 21000-21177: California Environmental Quality Act]

45. Prior to construction, Aera will conduct a sensitive species education program (tailgate briefing) for all Project personnel. Topics to be discussed during the briefing shall include: occurrence and distribution of sensitive species in the project area, take avoidance measures being implemented during the Project, reporting requirements if incidental take occurs, and applicable definitions and prohibitions under the Endangered Species Act. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE
46. During construction, a biological monitor will be present while ground-disturbing activities are occurring based on the sensitivity of the habitat in which a project occurs. [Public Resources Code 21000-21177: California Environmental Quality Act]

47. During construction, pets are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

48. During construction, firearms are prohibited on the construction site. [Public Resources Code 21000-21177: California Environmental Quality Act]

49. During construction, all food-related trash, such as wrappers, cans, bottles, bags, and food scraps will be disposed of daily in containers with secure covers and regularly removed from project sites. [Public Resources Code 21000-21177: California Environmental Quality Act]

50. During construction, USFWS and CDFG will be notified immediately in the event that the Project avoidance measures fail and there is a take of a threatened or endangered species. [Public Resources Code 21000-21177: California Environmental Quality Act]

51. In the event that archaeological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified archaeologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified archaeologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

52. In the event that paleontological resources are discovered during ground-disturbing activities associated with construction of the proposed Project, all work within 100 feet of the find shall cease. Aera will notify and retain a qualified paleontologist to assess and provide an evaluation of the significance of the find. Aera shall determine whether avoidance is necessary and feasible in light of the factors such as the nature of the find, project design, costs, and other considerations, and, if necessary, develop appropriate mitigation measures in consultation with Kern County and other appropriate agencies and individuals. Work may resume on the Project site once the evaluation of the find is complete by the qualified paleontologist. [Public Resources Code 21000-21177: California Environmental Quality Act]

53. In the event that human remains are discovered during construction of the Project, all work within 100 feet shall be ceased and the discovery will immediately be reported to the County Coroner. If the remains are determined to be Native American in origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of the determination. The NAHC will solicit those persons it believes to be the nearest descendants of the remains for recommendations. Aera shall, in consultation with the identified descendants of the remains and/or NAHC, will identify the appropriate measures for the treatment or disposition of the remains. [Public Resources Code 21000-21177: California Environmental Quality Act]

54. Prior to the start of construction activities, Aera shall provide the District with documentation demonstrating that maps identifying all wells in the vicinity of the sites have been submitted to DOGGR for compliance with DOGGR’s "Well Review Program". [Public Resources Code 21000-21177: California Environmental Quality Act]

55. During construction activities, if unknown, unrecorded or abandoned wells are discovered, or if any wells are damaged, Aera shall immediately notify the DOGGR. [Public Resources Code 21000-21177: California Environmental Quality Act]

56. Any wells discovered or exposed during construction activities will be tested for flammable vapors. [Public Resources Code 21000-21177: California Environmental Quality Act]
The following are Aera's comments received (11/2/10) during the EPA noticing period and the District's response:

1. Aera stipulates and wants to clarify that the two projects (locations) are separate and the statement in Section I of the Engineering Evaluation "As both Projects 1 and 2 are part of a common business plan by Aera, they are the same "project" for Federal NSR applicability" is not accurate or appropriate.

District Response: As projects 1 and 2 are in close proximity of each other in the Belridge oil field, both projects involve installation of steam generators, and the applications for both projects were submitted within one month of each other, the presumption is that projects 1 and 2 are part of a single project for purposes of Federal New source review applicability purposes.

Aera mentioned that the ultimate decision to construct the steam generators in project 2 depends in part on the success of the Aera/Global Greensteam generator construction project. While this may be the case, the overall goal of projects 1 and 2 are to increase steaming capacity in the same area of the Belridge oilfield. As such, we believe that both projects should be evaluated as a single project for Federal New Source Review applicability.

2. Page 2, Section I (Proposal) of the Engineering Evaluation: Aera commented on clarifying the equipment description for Option 1:

(Current) "For Option 1, three (3) of the eleven (11) steam generators will be equipped with Selective Catalytic Reduction (SCR) system to achieve 5 ppm NOx @ 3% O2 to satisfy BACT and Rule 4320 requirements. Eight of the steam generators will be equipped with ultra-low NOx burner capable of achieving 5 ppmv NOx @ 3% O2. Eleven ATCs will be issued for this option."

(Proposed) "For Option 1, three (3) ATC's authorize steam generators equipped with Selective Catalytic Reduction (SCR) system to achieve 5 ppm NOx @ 3% O2 to satisfy BACT and Rule 4320 requirements. Eight of the steam generators will be equipped with ultra-low NOx burner capable of achieving 5 ppmv NOx @ 3% O2. A total of eleven ATCs will be issued for this option."

District Response: The proposed change will be incorporated to clarify that a total of eleven ATCs will be issued for this option and only three ATCs will be equipped with SCR.

3. Page 5, Section VI (Emission Control Technology Evaluation): Aera commented on clarifying the low-NOx burner capability to achieve 5 ppm NOx.
(Current) "The proposed SCR system will meet NOx level equivalent to the most stringent technologically feasible option for NOx. Per applicant, steam generator and burner manufacturers indicate that 5 ppm NOx can also now be achieved with just a low-NOx burner in an oilfield setting."

(Proposed) "The proposed SCR system will meet NOx level equivalent to the most stringent technologically feasible option for NOx. The applicant is working with steam generator and burner manufacturers and initial results indicate that 5 ppm NOx will be achievable in the oilfield setting within the 2-yr life of the requested ATCs."

District Response: The proposed change will be incorporated in the project evaluation document.

4. Other Comments (District’s): Pages 15 & 16, Section VIII, B (Offsets): The District added the following paragraph in the Engineering Evaluation to address the increase in CO emissions:

"Per Section 4.6.1 of Rule2201, emissions offsets are not required for CO emissions increases in attainment areas if the project does not jeopardize Ambient Air Quality Standards (AAQS). The District performed criteria pollutant modeling and the results indicate that the emissions from this project will not cause or significantly contribute to a violation of a State or National AAQS if compliance with the proposed permit conditions is maintained."

5. Additional conditions to incorporate the mitigation measures within the Monitoring and Reporting Program as required by the California Environmental Quality Act were added to all the ATCs (Conditions #44 to 58 on ATC S-1547-1170 to '1172 and Conditions #42 to 56 to the rest of the ATCs).