MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
14306 Park AvenueVictorville,CA92392-2310
760.245.1661 -- 800.635.4617 -- FAX760.245.2022

INACTIVE

B002120

Inactive type Permit has no description information.

EXPIRES LAST DAY OF:DECEMBER 2016

OWNER OF OPERATOR (Co.#500)

ACE Cogeneration Company
12801 S Mariposa Street
Trona,CA93562

EQUIPMENT LOCATION (Fac.#1051)

ACE Cogeneration Company
12801 S Mariposa Street
Trona,CA93562

Description:
BOILER, STEAM GENERATING consisting of:Manufactured by Pyropower Corp, a circulating fluidized bed combustion boiler with two integral hot cyclones and a single convection pass, non-reheat, with nominal heat input of 1,052 MMBtu/hr and a steam output of 910,000 lb/hr at 1525 psig and 1005 deg F. The boiler has ammonia injection, limestone feed and the following equipment (note that horsepower has been converted to MMBtu assuming 2550 Btu/hp-hr):

EQUIPMENT

Capacity	Equipment Description
7.65	Fan, Primary Air - one 1800RPM/4000V/3Ph/60Hz (3000 hp)
2.29	Fan, Secondary Air - one 1800RPM/4000V/3Ph/60Hz (900 hp)
6.37	Fan, Induced Draft - one 900RPM/4000V/3Ph/60Hz (2500 hp)
1.02	Blowers, High Pressure - 2 @ 200 hp ea, 3550RPM/460V/3Ph/60Hz (400 hp)
0	Silos, Solid Fuel Storage - 2 @ 360 tons ea
0	Solid Fuel Feed System including the following:
0.01	Feeders, Solid Fuel Gravimetric - 4 @ 1.5 hp ea (6 hp)
0.0051	Feeders, Cleanout Drag Chain - 4 @ .5 hp ea (2 hp)
0.03	Conveyors, Inclined Drag Chain - 2 @ 7.5 hp ea (15 hp)
0.03	Conveyors, Horizontal Drag Chain - 2 @ 7.5 hp ea (15 hp)
0.01	Conveyors, Bi-directional Screw - 2 @ 3 hp ea (6 hp)
0.12	Fans, Feeder Pressurization - 2 @ 25 hp ea (50 hp)
0.25	Blower, Flyash Reinjection - one 1800RPM/460V/3 Ph/60Hz (100 hp)
0	Silo, Limestone Storage - one 360 tons

Fee Schedule:8 (f) Rating:1088070000Btu SIC:4911 SCC:10100217 Location/UTM(Km):465E/3958N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

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By: **COPY**
Brad Poiriez
Air Pollution Control Officer

Capacity	Equipment Description
0	Limestone Feed System for SOx control, includes the following:
0.0051	Feeders, Gravimetric - DC, 2 @ 1 hp ea (2 hp)
0.38	Blowers, High Pressure - 2 @ 75 hp ea, 460V/3Ph/60Hz (150 hp)
0.0051	Feeders, Rotary - 2 @ 1 hp ea, 10RPM/460V/3Ph/60Hz (2 hp)
0	Ammonia Injection System for NOx control, includes the following:
0	Tank, Ammonia Storage - one 12,100 gallon w/two 100% vaporizers and injection system
0	Pumps, Boiler Feed - 2200 GPM & 5054' head and manufactured by Sulzer Bingham
17.85	Westinghouse motors - 2 @ 3,500 hp ea (7000 hp)
1052	Pyropower Fluidized Bed Boiler (1052 MMBtu/hr)

CONDITIONS:

1.The circulating fluidized bed combustion boiler shall be authorized to burn solid fuel (coal, petroleum coke and/or coal with binder Covol 298-1 (not more than 2% Covol 298-1 by weight) and/or natural gas as fuel. The following emissions limits shall not be exceeded at any firing rate, except for CO, NOx and SOx during period of startup, shutdown and stabilization (see Condition 2):
a) Opacity - 20% Opacity (6-minute average, except for one 6-minute average of no more than 27% opacity) (verified by COMS) [40 CFR 60.42 Da(b)]
b) Ammonia - 310 lb/day (verified by CEMS on a three-hour rolling average, computed every 15 minutes)
c) CO - 280 lb/hr and 316 ppmvd at 3% oxygen (verified by CEMS on a three-hour rolling average, computed every 15 minutes)
d) NOx (as NO2) - 104 lb/hr (verified by CEMS on a three hour rolling average, computed every 15 minutes)
e) NOx - 210 ng/J (0.5 lb/MMBtu heat input) (verified by CEMS on a thirty day rolling average) [40 CFR 60.44Da(a)]
f) SOx (as SO2) - 83 lb/hr (verified by CEMS on a three hour rolling average, computed every 15 minutes)
g) SOx - 520 ng/J (1.20 lb/MMBtu heat input) and 10 percent of the potential exhaust concentration or 30 percent of the potential combustion concentration when emissions are less than 260 ng/J (0.60 lb/MMBtu heat input) (verified by annual compliance test) [40 CFR 60.43Da(a)]
h) ROG - 5 lb/hr (verified by annual compliance test)
i) PM - 14.6 lb/hr and 13 ng/J (0.03 lb/MMBtu heat input) (verified by annual compliance test) [40 CFR 60.42Da(a)(1)]
j) PM10 - 14.6 lb/hr (verified by annual compliance test)
k) Sulfates - 3.7 lb/hr (verified by annual compliance test) [40 CFR 60.42Da(b), Rule 1302(C)(2)(a)]

2.Emissions of CO, NOx and SOx may exceed the limits contained in Condition 1 during startup, shutdown, and stabilization periods within the limits of this condition.
a. The startup, shutdown and stabilization periods for NOx and SOx are defined as follows:
(1). Startup is when the boiler is being fired, in whole or in part, with natural gas for the purpose of introducing solid fuel.
(2). A shutdown is when natural gas is introduced to the boiler to bring the unit off line in a controlled fashion.
(3). Stabilization is:
A) During start-up, the period from when the natural gas is taken out of service and power output on solid fuel is increasing until the boiler is up to a stable operating range and generating more than 40 MW(e) net;
B) During shutdown the period starting when the natural gas is placed in service to bring the unit off line in a controlled fashion.
a. The startup, shutdown and stabilization periods for CO are defined as those periods when the boiler is being fired, in whole or in part, with natural gas.
b. During periods of startup, shutdown and stabilization the emissions of CO, NOx and SOx shall not exceed the following based on a 3 hour rolling average:
(1). CO - 2,000 lb/hr but not for any period longer than 12 hours.
(2). NOx and SOx - 200 lb/hr of each but not for any period longer than 4 hours. [Rule 1302(C)(2)(a)]

3.The total annual emissions, including the excess emissions allowed in Condition 2, for CO, NOx and SOx when calculated on a 52 week rolling annual average shall not exceed the following:
CO - 1226 tons/year
NOx - 456 tons/year
SOx - 364 tons/year
Compliance with this emission limit shall be determined by using the CEMS data and a week is defined as beginning at 0001 hours Monday and ending at 2400 hours Sunday. [Rule 1302(C)(2)(a)]

4.When the emission limits of Condition 2 are to be applied, the District is to be informed by phone prior to or as soon as practicable after the subject period occurs. ACE Cogeneration Co (o/o) shall report to the District in the quarterly report (Condition No. 10) when a

startup, shutdown or stabilization period occurred and the actual emissions recorded during that period. [Rule 204]

5.The daily emission of the following pollutants CO, NOx (as NO2), SOx (as SO2) and Ammonia as well as O2 (a diluent gas) shall be monitored using a Continuous Emissions Monitoring System (CEMS). The stack gas flow rate shall be monitored using a Continuous Emission Rated Monitoring System (CERMS). The stack gas opacity shall be monitored using a Continuous Opacity Monitoring System (COMS). These systems shall be operating at all times in accordance with the District approved monitoring plan. [Rule 204]

6.The following are the acceptability testing requirements for the CEMS, CERMS and COMS:
a. For COMS (Opacity) - Performance Specification 1 of 40 CFR 60 Appendix B.
b. For SO2 and NOx CEMS - Performance Specification 2 of 40 CFR 60 Appendix B.
c. For O2 CEMS - Performance Specification 3 of 40 CFR 60 Appendix B.
d. For CO CEMS - Performance Specification 4 of 40 CFR 60 Appendix B.
e. For Ammonia CEMS - Acceptability testing to be performed per a District approved procedure that is to be submitted by the o/o. [40 CFR 60 Appendix B]

7.All of the following baghouses shall be functional and operating under all conditions (start-ups, stabilization periods and shutdowns) and firing rates:
a. C002121 - Steam Generation Baghouse
b. C002127 - Solid Fuel Silos Baghouse
c. C002387 - Bottom Ash Handling System Baghouse
d. C002641 - Limestone Storage Silo Baghouse (Bin Vent)
e. C003370 - Fly Ash Handling System Baghouse [Rule 1302(C)(2)(a)]

8.Annual compliance tests must be performed on this boiler and the baghouse covered by District permit C002121 in accordance with the District Compliance Test Procedural Manual. The test report shall be submitted to the District within 60 days following completion of testing but not later than six weeks prior to the expiration date of this permit. The following compliance tests are required:
a. Oxides of nitrogen (NOx as NO2 in ppmv at 3% O2, dry basis and lb/hr)
b. Reactive Organic Gases (ROG) (in ppmv at 3% O2, dry basis and lb/hr)
c. Oxides of sulfur (SOx as SO2 in ppmv at 3% O2, dry basis and lb/hr)
d. Carbon monoxide (in ppmv at 3% O2, dry basis and lb/hr)
e. PM, PM10 and sulfates (as milligram/cubic meter at 3% O2, dry basis and lb/hr)
f. Flue gas flow rate (SCFM, dry basis)
g. Ammonia (in ppmv at 3% O2, dry basis and lb/day) [Rule 204]

9.The o/o shall record monthly the sulfur content of the solid fuel. The solid fuel samples can either be composited "on delivery" or "as fired." To satisfy the "as delivered" condition the o/o may use vendor analyses. Such records shall be maintained for a period of at least five (5) years and made available to District personnel on request. This boiler shall be fired only with solid fuel where the percentage of sulfur by weight does not exceed 4.0%. Natural gas may be fired during startup, shutdown and for stabilization and as an alternative fuel source at any time. [Rule 204]

10.Until a digital acquisition system that is telemetrically compatible with District software is installed, quarterly reports shall be provided to the District Compliance Supervisor in accordance with the District approved monitoring plan and shall present, but not be limited to, the following data:
a. CEMS data (24-hour block averages, daily average, of NOx (lbs/hr), SOx (lbs/hr as SO2), CO (lbs/hr) and CO (ppmvd at 3% oxygen)
b. CERMS data (24-hour block average, daily average, of stack exhaust flow (lbs/hr)
c. COMS data (24-hour block average, daily average, of opacity (%). All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. [Rule 204]

11.The o/o may use coal and natural gas as primary fuels but petroleum coke shall not be used as a solid fuel until the storage facility, conveyors and baghouse covered by District permits B005120 and C005121 are constructed and operational. [Rule 1303(A) BACT]

12.The District shall be notified in writing:
a. When the construction of the petroleum coke storage facility with conveyors and baghouse is started.
b. When the construction of the petroleum coke storage facility with conveyors and baghouse is completed. [Rule 204]

13.This unit is subject to Clean Air Mercury Rule (CAMR) - 40 CFR 60 Subpart HHHH. Beginning in 2009, this equipment is subject to mercury emission monitoring and reporting requirements (in the form of annual mercury testing per 40 CFR 75.81, and reporting per 40 CFR 60.4170 through 4176).

14.THIS FACILITY IS SUBJECT TO 40 CFR 63 SUBPART UUUUU WHICH WILL BECOME EFFECTIVE APRIL 16, 2015. TO PREPARE FOR THE APPLICABLE REQUIREMENTS, CONDITIONS 15 THROUGH 29 HAVE BEEN ADDED TO THIS PERMIT. IF EQUIPMENT CHANGES ARE REQUIRED, THE O/O SHALL SUBMIT ALL REQUIRED APPLICATIONS INCLUDING TITLE V REVISION FORMS ALLOWING AMPLE TIME FOR THE DISTRICT TO PROCESS ANY REQUIRED CHANGES IN ANTICIPATION OF THE APRIL 16, 2015 EFFECTIVE DATE.

15.At all times the Owner/Operator (O/O) must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to District, State, and/or Federal Personnel, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [Origin: 40 CFR 63.10000(b), 40 CFR 63 Subpart UUUUU]

16.Regarding Subpart UUUUU Monitoring Requirements; Records required for this permit condition will serve as monitoring. [40 CFR 63 Subpart UUUUU]

17.Regarding Subpart UUUUU Recordkeeping requirements: The O/O shall keep the records described in 40 CFR 63.10032(a) through (j), as applicable. The owner/operator shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with 40 CFR 63.10033 and applicable conditions of this permit.

18.The O/O shall comply with the following requirements for each affected emission unit:

a. The O/O shall comply with each emission limit and work practice standard in 40 CFR 63 Subpart UUUUU Tables 2 and 3 of 40 CFR 63 Subpart UUUUU for each EGU at the source;

b. The O/O shall comply with each operating limit in Table 4 of 40 CFR 63 Subpart UUUUU for each affected EGU at the source;

c. The O/O shall comply with the emission and operating limits at all times except during periods of startup and shutdown. The O/O shall meet the work practice in Table 3 of 40 CFR 63 Subpart UUUUU during periods of startup, or shutdown;

d. The O/O may use emissions averaging as described in 40 CFR 63.10009 as an alternative to meeting the requirements in (1)(a) of this section for filterable PM, SO2, HF, HCl, non-Hg HAP metals, or Hg on an EGU-specific basis.

19.As provided in 40 CFR 63.6(g), the Administrator may approve use of an alternative to the work practice standards in this section;

20.The o/o may use the alternate SO2 limit in Table 2 of 40 CFR 63 Subpart UUUUU only if the affected coal-fired EGU:

a. Has a system using wet or dry flue gas desulfurization technology and SO2 CEM installed on the unit;
and,

b. At all times, the o/o operates the wet and dry flue gas desulfurization technology installed on the
unit consistent with 40 CFR 63.10000(b) [Origin: 40 CFR 63.9991, 63.10000(a), 63.10009, tables 2, 3, and 4; 40 CFR 63 Subpart UUUUU]

21.Monitoring; General Compliance Requirement:

a. The o/o shall conduct the initial performance testing for all pollutions in accordance with 40 CFR 63.10000(c)(1)(i) through (vi), as applicable, to demonstrate compliance with the applicable emission limits.

b. If a continuous monitoring system (CMS) is used to demonstrate compliance with any applicable emission limit, the o/o shall develop a site-specific monitoring plan for the CMS in accordance to 40 CFR 63.10000(d)(1) through (5) and submit this site-specific monitoring

plan, if requested, at least 60 days before the initial performance evaluation (where applicable) of CMS. The o/o shall operate and maintain the CMS according to the site-specific monitoring plan.

c. The o/o shall perform periodic tune-up of EGU in accordance with 40 CFR 63.10021(e).

22.Testing Requirements: Compliance Performance test shall be conducted according to the procedures described in 40 CFR 63.10005 for the initial compliance and according to the procedures described in 43 CFR 63.10006 for continuous compliance. The o/o shall conduct all required performance tests according to 40 CFR 63.10007.

23.Continuous Compliance: The o/o shall monitor and collect data according to 43 CFR 63.10020(b) through (d) and the site-specific monitoring plan required by 40 CFR 63.10000(d).

a. The o/o shall monitor and collect data according 43 CFR 63.10020(b) through (d) and the site-specific monitoring plan required by 40 CFR 63.10000(d).

b. The o/o shall demonstrate continuous compliance with each emissions limit, operating
limit, and work practice standards applicable in Tables 2 through 4 to the subpart UUUUU of 40 CFR 63 that, according the monitoring specified in Tables 6 and 7 to subpart UUUUU of 40
CFR 63, and paragraphs 40 CFR 63.10021 (b) through (g).

c. The o/o shall comply with the applicable general provisions in 40 CFR 63.1-15 as identified in Table 9 of 40 CFR 63 Subpart UUUUU. [40 CFR 63.10040]

24.Recordkeeping: The o/o shall keep the records described in 40 CFR 63.10032(a) through (j), as applicable. [40 CFR 63.10032] The o/o shall comply with the applicable general provisions in 40 CFR 63.1-15 as identified in Table 9 of 40 CFR 63 Subpart UUUUU. [40 CFR 63.10040]. Records shall be maintained in accordance with 40 CFR 63.10033 and applicable conditions of this permit.

25.Reporting: The o/o shall submit an Initial Notification described in 40 CFR 63.10030 (b) and (c), as applicable.

a. The o/o shall submit a Notification of Compliance Status summarizing the results of the initial compliance demonstration according to 40 CFR 63.9(h)(2)(ii). The Notification of Compliance Status report must contain all the information specified in 40 CFR 63.10030(e)(1) through (7), as applicable.

b. The o/o shall submit the compliance report as required in 40 CFR 63.10031.

c. The compliance report shall contain the requirements as described in 40 CFR 63.10031(c)(1) through (4) and Table 8 of 40 CFR 63 Subpart UUUUU semiannually according to the requirements in 40 CFR 63.10031(b).

d. The o/o shall comply with the applicable general provisions in 40 CFR 63.1-15 as
identified in Table 9 of 40 CFR 63 Subpart UUUUU. [40 CFR 63.10040]