SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive. Diamond Bar. CA 91765

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| Title Page | |
| Facility ID | 113518 |
| Revision #: | 1 |
| Date: | January 22, 2010 |

# FACILITY PERMIT TO OPERATE

**RIDGEWOOD POWER MANAGEMENT,LLC**
**1942 VALENCIA AVE**
**BREA, CA 92821**

## NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETYCODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein,D. Env.
EXECUTIVEOFFICER

By
for Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering & Compliance

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT,LLC

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## Facility Equipment and Requirements
**(Section D)**

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, all individual Permits to Construct and Permits to Operate issued to various equipment at the facility, and Rule 219-exempt equipment subject to source-specific requirements. Each permit and Rule 219-exempt equipment will list operating conditions including periodic monitoring requirements, and applicable emission limits and requirements that the equipment is subject to. Also included is the rule origin and authority of each emission limit and permit condition.

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMITTED EQUIPMENT LIST

THE FOLLOWING IS A LIST OF ALL PERMITS TO CONSTRUCT AND PERMITS TO OPERATE AT THIS FACILITY:

| Application number | Permit to Operate number | Equipment description | Page |
|---|---|---|---|
| 331717 | F10180 | I C E (>500 HP) LANDFILL GAS | 4 |
| 331718 | F10179 | I C E (>500 HP) LANDFILL GAS | 6 |
| 331719 | F10181 | I C E (>500 HP) LANDFILL GAS | 8 |
| 468740 | F92618 | FLARE, LANDFILL GAS | 10 |
| 468743 | F92619 | LANDFILL GAS TREATMENT | 12 |
| 468742 | F92620 | BOILER, <2 MMBTU/HR,FUEL OIL | 16 |

**NOTE:** EQUIPMENT LISTED ABOVE THAT HAVE NO CORRESPONDING PERMITS TO OPERATE NUMBER ARE ISSUED PERMITS TO CONSTRUCT. THE ISSUANCE OR DENIAL OF THEIR PERMITS TO OPERATE IS SUBJECT TO ENGINEERING FINAL REVIEW. ANY OTHER APPLICATIONS THAT ARE STILL BEING PROCESSED AND HAVE NOT BEEN ISSUED PERMITS TO CONSTRUCT OR PERMITS TO OPERATE WILL NOT BE FOUND IN THIS TITLE V PERMIT.

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## FACILITY WIDE CONDITION(S)

**Condition(s):**

1. EXCEPT FOR OPEN ABRASIVE BLASTING OPERATIONS, THE OPERATOR SHALL NOT DISCHARGE INTO THE ATMOSPHERE FROM ANY SINGLE SOURCE OF EMISSIONS WHATSOEVER ANY AIR CONTAMINANT FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR WHICH IS:

   A. AS DARK OR DARKER IN SHADE AS THAT DESIGNATED NO. 1 ON THE RINGLEMANN CHART, AS PUBLISHED BY THE UNITED STATES BUREAU OF MINES; OR
   B. OF SUCH OPACITY AS TO OBSCURE AN OBSERVER'S VIEW TO A DEGREE EQUAL TO OR GREATER THAN DOES SMOKE DESCRIBED IN SUBPARAGRAPH (A) OF THIS CONDITION. [RULE 401]

2. THE OPERATOR SHALL NOT USE LANDFILL GAS CONTAINING SULFUR COMPOUNDS IN EXCESS OF 150 PPMV CALCULATED AS HYDROGEN SULFIDE AVERAGED DAILY. [RULE 431.1]

3. THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 431.1, UNLESS DETERMINED TO BE EXEMPT BY THE EXECUTIVE OFFICER PER RULE 431.1. [RULE 431.1(g)(9)]

4. THE OPERATOR SHALL INSTALL AND OPERATE AT APPROVED LOCATIONS, CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS), CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SULFUR MONITORING METHOD AS APPROVED BY THE AQMD [RULE 431.1]

5. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDERS WITH RESPECT TO THE TIME OF DAY. [RULE 204]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO OPERATE

**Permit No. F10180**
**A/N 331717**

**Equipment Description:**

INTERNAL COMBUSTION ENGINE "B", COOPER ENERGY SERVICES/SUPERIOR, MODEL NO. 16 SGTA, LANDFILL GAS-FIRED, TURBOCHARGED, INTERCOOLED, 4-STROKE, RECIPROCATING, SPARK IGNITION, V-16 TYPE, 2650 H.P. DRIVING AN 1875 K.W. ELECTRICAL GENERATOR, LEAN BURN.

**Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. A FLOW INDICATING AND RECORDING DEVICE SHALL BE MAINTAINED TO INDICATE THE VOLUMETRIC FLOW RATE OF LANDFILL GAS USED PER DAY.
[RULE 1303(b)(2)-OFFSETS]

4. ALL RECORDS SHALL BE KEPT FOR FIVE YEARS AND MADE AVAILABLE TO THE EXECUTIVE OFFICER UPON REQUEST.
[RULE 3004(a)(4), 1303(b)(2)-OFFSETS]

5. TWO SAMPLING PORTS SHALL BE MAINTAINED IN THE INTERNAL COMBUSTION ENGINE EXHAUST DUCT 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE AT 90 DEGREES APART AND SHALL CONSIST OF TWO 2-INCH 1/2 WELD NIPPLES WITH PLUGS. AN EQUIVALENT METHOD FOR EMISSIONS SAMPLING MAY BE USED UPON APPROVAL OF THE SCAQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE PROVIDED.
[RULE 217]

6. THIS INTERNAL COMBUSTION ENGINE SHALL BE OPERATED ON LANDFILL GAS ONLY. THE VOLUME OF LANDFILL GAS BURNED SHALL NOT EXCEED 60,000 STANDARD CUBIC FEET PER HOUR.
[RULE 1303(b)(2)-OFFSETS]

7. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
[RULE 1150.1, 40 CFR 60 SUBPART WWW, RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

8. RECORDS SHOWING TOTAL VOLUME OF GAS BEING USED PER DAY SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER UPON REQUEST.
[RULE 1303(b)(2) - OFFSETS]

9. EMISSIONS FROM INTERNAL COMBUSTION ENGINES A, B AND C (A/N'S 331717, 331718 AND 331719) SHALL NOT EXCEED EITHER ONE OF THE LIMITS SET BELOW:

| POLLUTANTS | EMISSIONS PER ENGINE (LB/DAY) | EMISSIONS (LB/DAY) TOTAL OF (3) ENGINES |
|---|---|---|
| RHC | 32 | |
| NOX | 274 | |
| SOX | 12 | |
| CO | 167 | 550 |
| PM | 1 | |

[RULE 1303(b)(2)-OFFSETS]

10. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE ABILITY OF THE LANDFILL OWNER/OPERATOR, BREA POWER PARTNERS, L.P., TO COMPLY WITH DISTRICT RULE 1150.1 OR ANY OTHER DISTRICT RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

11. ON AND AFTER 12/31/2004, THE OPERATOR SHALL COMPLY WITH THE MONITORING AND RECORDKEEPING REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]

**Emissions And Requirements:**

12. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NMOC: 20 PPMV, @3% O2, DRY BASIS, AS HEXANE, RULE 1150.1
NMOC: 20 PPMV, @3% O2, DRY BASIS, AS HEXANE, 40CFR60 SUBPART WWW
CO: 2000 PPMV, @15% O2, 15 MINUTE AVERAGE, RULE 407
NOX: 36 PPMV @15% O2, DRY BASIS, 15 MINUTE AVERAGE, , RULE 1110.2
ROG: 250 PPMV @15% O2, AS CARBON, RULE 1110.2
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO OPERATE

**Permit No. F10179**
**A/N 331718**

**Equipment Description:**

INTERNAL COMBUSTION ENGINE "A", COOPER ENERGY SERVICES/SUPERIOR, MODEL NO. 16 SGTA, LANDFILL GAS-FIRED, TURBOCHARGED, INTERCOOLED, 4-STROKE, RECIPROCATING, SPARK IGNITION, V-16 TYPE, 2650 H.P. DRIVING AN 1875 K.W. ELECTRICAL GENERATOR, LEAN BURN.

**Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. A FLOW INDICATING AND RECORDING DEVICE SHALL BE MAINTAINED TO INDICATE THE VOLUMETRIC FLOW RATE OF LANDFILL GAS USED PER DAY.
[RULE 1303(b)(2)–OFFSET]

4. ALL RECORDS SHALL BE KEPT FOR FIVE YEARS AND MADE AVAILABLE TO THE EXECUTIVE OFFICER UPON REQUEST.
[RULE 1303(b)(2)–OFFSET, 3004(a)(4)]

5. TWO SAMPLING PORTS SHALL BE MAINTAINED IN THE INTERNAL COMBUSTION ENGINE EXHAUST DUCT 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE AT 90 DEGREES APART AND SHALL CONSIST OF TWO 2-INCH 1/2 WELD NIPPLES WITH PLUGS. AN EQUIVALENT METHOD FOR EMISSIONS SAMPLING MAY BE USED UPON APPROVAL OF THE SCAQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE PROVIDED.
[RULE 217]

6. THIS INTERNAL COMBUSTION ENGINE SHALL BE OPERATED ON LANDFILL GAS ONLY. THE VOLUME OF LANDFILL GAS BURNED SHALL NOT EXCEED 60,000 STANDARD CUBIC FEET PER HOUR.
[RULE 1303(b)(2)–OFFSET]

7. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
[RULE 1150.1, 40 CFR 60 SUBPART WWW, RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

8. RECORDS SHOWING TOTAL VOLUME OF GAS BEING USED PER DAY SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER UPON REQUEST.
[RULE 1303(b)(2)–OFFSET]

9. EMISSIONS FROM INTERNAL COMBUSTION ENGINES A, B AND C (A/N'S 331717, 331718 AND 331719) SHALL NOT EXCEED EITHER ONE OF THE LIMITS SET BELOW:

| POLLUTANTS | EMISSIONS PER ENGINE (LB/DAY) | EMISSIONS (LB/DAY) TOTAL OF (3) ENGINES |
|---|---|---|
| RHC | 32 | |
| NOX | 274 | |
| SOX | 12 | |
| CO | 167 | 550 |
| PM | 1 | |

[RULE 1303(b)(2)–OFFSET]

10. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE ABILITY OF THE LANDFILL OWNER/OPERATOR, BREA POWER PARTNERS, L.P., TO COMPLY WITH DISTRICT RULE 1150.1 OR ANY OTHER DISTRICT RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

11. ON AND AFTER 12/31/2004, THE OPERATOR SHALL COMPLY WITH THE MONITORING AND RECORDKEEPING REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]

**Emissions And Requirements:**

12. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NMOC: 20 PPMV, @3% O2, DRY BASIS, AS HEXANE, RULE 1150.1
NMOC: 20 PPMV, @3% O2, DRY BASIS, AS HEXANE, 40CFR60 SUBPART WWW
CO: 2000 PPMV, @15% O2, 15 MINUTE AVERAGE, RULE 407
NOX: 36 PPMV @15% O2, DRY BASIS, 15 MINUTE AVERAGE, , RULE 1110.2
ROG: 250 PPMV @15% O2, AS CARBON, RULE 1110.2
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO OPERATE

**Permit No. F10181**
**A/N 331719**

**Equipment Description:**

INTERNAL COMBUSTION ENGINE "C", COOPER ENERGY SERVICES/SUPERIOR, MODEL NO. 16 SGTA, LANDFILL GAS-FIRED, TURBOCHARGED, INTERCOOLED, 4-STROKE, RECIPROCATING, SPARK IGNITION, V-16 TYPE, 2650 H.P. DRIVING AN 1875 K.W. ELECTRICAL GENERATOR, LEAN BURN.

**Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. A FLOW INDICATING AND RECORDING DEVICE SHALL BE MAINTAINED TO INDICATE THE VOLUMETRIC FLOW RATE OF LANDFILL GAS USED PER DAY.
[RULE 1303(b)(2)– OFFSET]

4. ALL RECORDS SHALL BE KEPT FOR FIVE YEARS AND MADE AVAILABLE TO THE EXECUTIVE OFFICER UPON REQUEST.
[RULE 1303(b)(2)–OFFSET, 3004(a)(4)]

5. TWO SAMPLING PORTS SHALL BE MAINTAINED IN THE INTERNAL COMBUSTION ENGINE EXHAUST DUCT 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE AT 90 DEGREES APART AND SHALL CONSIST OF TWO 2-INCH 1/2 WELD NIPPLES WITH PLUGS. AN EQUIVALENT METHOD FOR EMISSIONS SAMPLING MAY BE USED UPON APPROVAL OF THE SCAQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE PROVIDED.
[RULE 217]

6. THIS INTERNAL COMBUSTION ENGINE SHALL BE OPERATED ON LANDFILL GAS ONLY. THE VOLUME OF LANDFILL GAS BURNED SHALL NOT EXCEED 60,000 STANDARD CUBIC FEET PER HOUR.
[RULE 1303(b)(2)–OFFSET]

7. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
[RULE 1150.1, 40 CFR 60 SUBPART WWW, RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

8. RECORDS SHOWING TOTAL VOLUME OF GAS BEING USED PER DAY SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER UPON REQUEST.
[RULE 1303(b)(2)–OFFSET]

9. EMISSIONS FROM INTERNAL COMBUSTION ENGINES A, B AND C (A/N'S 331717, 331718 AND 331719) SHALL NOT EXCEED EITHER ONE OF THE LIMITS SET BELOW:

| POLLUTANTS | EMISSIONS PER ENGINE (LB/DAY) | EMISSIONS (LB/DAY) TOTAL OF (3) ENGINES |
|---|---|---|
| RHC | 32 | |
| NOX | 274 | |
| SOX | 12 | |
| CO | 167 | 550 |
| PM | 1 | |

[RULE 1303(b)(2)–OFFSET]

10. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE ABILITY OF THE LANDFILL OWNER/OPERATOR, BREA POWER PARTNERS, L.P., TO COMPLY WITH DISTRICT RULE 1150.1 OR ANY OTHER DISTRICT RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

11. ON AND AFTER 12/31/2004, THE OPERATOR SHALL COMPLY WITH THE MONITORING AND RECORDKEEPING REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]

**Emissions And Requirements:**

12. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NMOC: 20 PPMV, @3% O2, DRY BASIS, AS HEXANE, RULE 1150.1
NMOC: 20 PPMV, @3% O2, DRY BASIS, AS HEXANE, 40CFR60 SUBPART WWW
CO: 2000 PPMV, @15% O2, 15 MINUTE AVERAGE, RULE 407
NOX: 36 PPMV @15% O2, DRY BASIS, 15 MINUTE AVERAGE, , RULE 1110.2
ROG: 250 PPMV @15% O2, AS CARBON, RULE 1110.2
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO OPERATE

**Permit No.F92618**
**A/N 468740**

**Equipment Description:**

AIR POLLUTION CONTROL SYSTEM CONSISTING OF.

WASTE GAS INCINERATOR, JOHN ZINK, 3'-0" DIAMETER BY 20'-0" HIGH, 2 MILLION BTU PER HOUR, LANDFILL GAS FIRED, VENTING EXHAUSTS FROM SELEXOL AND CONDENSATE STRIPPERS.

**Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THE INCINERATOR SHALL BE USED ONLY TO DISPOSE OF THE OVERHEAD STREAM FROM THE SELEXOL AIR STRIPPER AND THE CONDENSATE AIR STRIPPER.
[RULE 1303 (a)(1)-BACT]

4. A TEMPERATURE INDICATOR AND RECORDER SHALL BE INSTALLED AND MAINTAINED TO MEASURE THE INCINERATOR GAS TEMPERATURE.
[RULE 1303 (a)(1)– BACT]

5. WHEN THE INCINERATOR IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1500 DEGREES F. SHALL BE MAINTAINED, AS MEASURED BY THE TEMPERATURE INDICATOR.
[RULE 1303 (a)(1)– BACT]

6. AN AUTOMATIC CONTROL SYSTEM APPROVED BY THE EXECUTIVE OFFICER SHALL BE INSTALLED TO SHUT THE GAS TREATMENT PLANT DOWN IF THE INCINERATOR FAILS OR WHEN THE TEMPERATURE IN THE INCINERATOR DROPS BELOW 1500 DEGREES F/
[RULE 1303 (a)(1)– BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

7. EMISSIONS FROM THE INCINERATOR SHALL NOT EXCEED THE FOLLOWING LIMITS:

| POLLUTANTS | EMISSIONS (LB/HR) |
|---|---|
| NOX | 0.21 |
| CO | 0.042 |
| SOX | 0.42 |
| PM | 0.13 |
| ROG | 0.042 |

[RULE 1303 (b)(2)-OFFSETS]

**Emissions And Requirements:**

8. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NMOC: 20 PPMV, @3% O2, DRY BASIS, AS HEXANE, RULE 1150.1
NMOC: 20 PPMV, @3% O2, DRY BASIS, AS HEXANE, 40CFR60 SUBPART WWW
CO: 2000 PPMV @15%O2, 15 MINUTE AVERAGE, RULE 407
SOX: 150 PPMV AS H2S, RULE 431.1
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO OPERATE

**Permit No. F92620**
**A/N 468743**

**Equipment Description:**

LANDFILL GAS TREATMENT SYSTEM CONSISTING OF:

1. LANDFILL GAS CONDENSATE KNOCKOUT VESSEL (V-224), 10,000 GALLON, WITH 25 GPM PNEUMATIC PUMP.
2. PARTICULATE SEPARATOR (V-123), 3'-0" DIAMETER BY 7'-10" HIGH, WITH A 20 GPM PNEUMATIC PUMP.
3. INLET GAS-LIQUID SEPARATOR (V-101) 2'-0" HIGH, WITH TWO 5 HP CONDENSATE PUMPS (P-101 A&B).
4. INLET LANDFILL GAS BOOSTER BLOWER (F-102), 150 HP.
5. GAS COOLER (E-118), 0.25 MMBTU/HR.
6. AIR COOLER (E-102), WITH A 2 HP WATER PUMP (P-115).
7. EXPANSION TANK (V-126), 1'-0" DIAMETER BY 3'-0" HIGH.
8. BOOSTER SCRUBBER (V-127), 2'-6" DIAMETER BY 8'-0" HIGH, WITH A PNEUMATIC SCRUBBER PUMP(P-116).
9. TWO (2) INLET LANDFILL GAS COMPRESSORS (C101 A&B), EACH 400 HP.
10. HEAT EXCHANGER (E-115), GAS/GAS, 0.13 MMBTU/HR.
11. KNOCK-OUT DRUM (V109), COMPRESSOR DISCHARGE, 1-6" DIAMETER BY 7'-0" HIGH.
12. FEED GAS CHILLER (E-116), 0.24 MMBTU/HR.
13. REFRIGERATION SYSTEM (RS-101), 50 HP, WITH A CHILLED WATER RECIRCULATION PUMP, 3 HP (P-108).
14. ABSORPTION COLUMN (V-102), 2'-0" DIAMETER BY 40'-0" HIGH, SELEXOL.
15. TWO (2) GAS FILTER SEPARATORS (V108 A&B), 1'-6" DIAMETER BY 6'-0" HIGH.
16. TWO (2) RICH SELEXOL FILTERS (V-107 A&B), 1'-6" DIAMETER BY 6'-0" HIGH.
17. HEAT EXCHANGER, (E-103), LEAN/RICH SELEXOL.
18. RICH SELEXOL HEATER (E-114), 0.13 MMBTU/HR.
19. STRIPPER COLUMN (V-104 SELEXOL, 2'-0" DIAMETER BY 4'-0" HIGH, WITH TWO 5 HP SELEXOL PUMPS (P102 A&B), REMOVING HYDROCARBONS FROM SOLVENT (SELEXOL) STREAM VENTED TO AN INCINERATOR.
20. WASTE GAS FILTER SEPARATOR (V-121), 2'-0" DIAMETER BY 4'-0" HIGH.

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21. AIR BLOWER (F-101), TO SELEXOL STRIPPER (V-104) AND CONDENSATE STRIPPER (V-125), 15 HP, WITH AN INLET AIR FILTER (V-122).

22. FIRST STAGE SEPARATOR (V-118), 2'-7" DIAMETER BY 11'-6" HIGH, WITH A CONDENSATE TRANSFER UMP (P-112).

23. CONDENSATE HOLDING TANKS (V-124), 5000 GALLONS, WITH A 1.5 HP CONDENSATE PUMP.

24. CONDENSATE HEATER (E-117), 0.1 MMBTU/HR HOT WATER HEATED.

25. STRIPPER COLUMN (V-125), CONDENSATE, 1'-0" DIAMETER BY 17'-0" HIGH, WITH A ¾ HP WATER DISPOSAL PUMP.

26. CLEAN WATER STORAGE TANK.

27. SECOND STAGE SEPARATOR (V-120) 14'-10" LONG BY 5'-11 WIDE BY 8'-7" HIGH, WITH A DEWATERING PUMP (P-109).

28. HOT WATER EXPANSION TANK (V-106).

29. HOT WATER CIRCULATION PUMPS, 2 HP.

30. THREE (3) WASTE HEAT RECOVERY/SILENCER UNIT (E-105A, B & C), VAPOR PHASE MODEL NO. ECX, 3 MMBTU/HR.

**Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. ALL GASES COLLECTED FROM THE COLLECTION SYSTEM AND TREATED BY THE TREATMENT SYSTEM SHALL BE VENTED TO A COMBUSTION FACILITY WHICH CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT TO CONSTRUCT OR OPERATE BY THE DISTRICT.
[RULE 204]

5. THE TOTAL FLOW RATE OF THE LANDFILL GAS ENTERING THE TREATMENT SYSTEM SHALL BE CONTINUOUSLY MONITORED AND RECORDED.
[RULE 431.1, RULE 1150.1, AND RULE 1303(b)(2)-OFFSETS]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

6. THE METHANE CONCENTRATION (IN PERCENT METHANE) OF THE GAS ENTERING THE TREATMENT SYSTEM SHALL BE CONTINUOUSLY MONITORED AND RECORDED.
[RULE 1150.1]

7. THE VOLUMETRIC FLOW RATE OF GAS LEAVING THE GAS TREATMENT FACILITY SHALL BE RECORDED BY THE FLOW INDICATING AND RECORDING DEVICE. THE METHANE AND CARBON DIOXIDE CONCENTRATION (IN PERCENT VOLUME) OF THE SALES GAS SHALL BE DETERMINED AND RECORDED DAILY.
[RULE 1150.1, RULE 1303(b)(2)]

8. THE TOTAL SYSTEM VOLUME OF GAS FLOW SHALL NOT EXCEED 2935 STANDARD CUBIC FEET PER MINUTE. (SCFM)
[RULE 1303(b)(2)-OFFSETS]

9. THIS PLANT SHALL NOT BE OPERATED UNLESS THE SOLVENT STRIPPER (V-104) AND THE CONDENSATE STRIPPER (V-125) ARE VENTED ONLY TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED A VALID PERMIT TO CONSTRUCT OR OPERATE BY THE SCAQMD.
[RULE 1303(a)(1)-BACT]

10. THIS PLANT SHALL NOT BE OPERATED IF IT DIRECTLY CAUSES THE DETERIORATION OF THE EXISTING OR ANY FUTURE REQUIRED LANDFILL GAS MIGRATION CONTROL SYSTEM OR PREVENTS THE SUCCESSFUL OPERATION OF ANY FUTURE REQUIRED LANDFILL GAS MIGRATION CONTROL SYSTEM.
[RULE 1150.1]

11. CONDENSATE COLLECTED IN THE UNDERGROUND SECOND STAGE SEPARATOR (V-120) SHALL BE MANAGED AS HAZARDOUS WASTE IF IT MEETS THE CRITERIA PROMULGATED FOR THE DETERMINATION OF HAZARDOUS WASTES BY STATE AND FEDERAL PROVISIONS.
[RULE 204]

12. THE VAPOR BALANCE SYSTEM ON THE UNDERGROUND SECOND STAGE SEPARATOR (V-120) SHALL BE OPERATED AT ALL TIMES WHEN LIQUID IS TRANSFERRED FROM THE TANK.
[RULE 204, RULE 1150.1]

13 THE AUTOMATIC CONTROL SYSTEM INSTALLED TO SHUT THE PLANT DOWN SHALL BE ACTIVATED WHEN THE TEMPERATURE IN THE INCINERATOR DROPS BELOW 1500 DEGREES F.
[RULE 1150.1]

14. THE RATE OF SELEXOL SOLVENT RECIRCULATED THROUGH THE ABSORPTION COLUMN (V-102) SHALL NOT BE LESS THAN 2.9 GPM PER MILLION CUBIC FEET PER DAY OF FEED GAS TO THE PLANT.
[RULE 1150.1, RULE 1303(a)(1)-BACT]

15. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF ANY RAW LANDFILL GAS OR CONDENSATE INTO THE ATMOSPHERE.
[RULE 1150.1]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

16. ALL RECORDS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 1150.1, RULE 1303(a)(1)-BACT, RULE 1303(b)(2) OFFSET]

**Emissions And Requirements:**

17. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
SOX: 0.2% BY VOLUME @15% O2, DRY BASIS OR 0.8 % BY WEIGHT (8000 PPMW) H2S IN FUEL, NSPS, 40 CFR60, SUBART GG
TOTAL SULFUR AS H2S: 150 PPMV RULE 431.1

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO OPERATE

**Permit No. F92619**
**A/N 468742**

**Equipment Description:**

BOILER, KREIGER, CHAMPION AALANDIN CLEANING SYSTEMS, PORTABLE, STEAM CLEANING, MODEL NO. 1433, SERIAL NO. 00103, 455,000 BTU/HR, FUEL OIL.

**Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THE FUEL SUPPLIED AT THE BURNER SHALL HAVE A SULFUR CONTENT OF NOT MORE THAN 0.05 PERCENT BY WEIGHT.
[RULE 431.2]

**Emissions And Requirements:**

4. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

   CO: 2000 PPMV @15% O2, DRY, 15 MINUTE AVERAGE, RULE 407
   PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## RULE 219 EQUIPMENT

**Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS.

**Periodic Monitoring:**

1. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

   FOR ARCHITECTURAL APPLICATIONS WHERE NO THINNERS, REDUCERS, OR OTHER VOC CONTAINING MATERIALS ARE ADDED, MAINTAIN SEMI-ANNUAL RECORDS OF ALL COATINGS CONSISITING OF (a) COATING TYPE, (b) VOC CONTENT AS SUPPLIED IN GRAMS PER LITER (g/l) OF MATERIALS FOR LOW-SOLIDS COATINGS, (c) VOC CONTENT AS SUPPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT, FOR OTHER COATING.

   FOR OTHER ARCHITECTURAL APPLICATIONS WHERE THINNERS, REDUCERS, OR OTHER VOC CONATINING MATERIALS ARE ADDED, MAINTAIN DAILY RECORDS FOR EACH COATING CONSITING OF (a) COATING TYPE, (b) VOC CONTENT AS APPLIED IN GRAMS PER LITER (g/l) OF MATERIALS USED FOR LOW-SOLIDS COATINGS, (c) VOC CONTENT AS APPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT, FOR OTHER COATING.

   [RULE 3004 (a)(4)]

**Emissions And Requirements:**

2. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

   VOC: RULE 1113, SEE APPENDIX B FOR EMISSION LIMITS
   VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## RULE 219 EQUIPMENT

**Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, HAND WIPING OPERATIONS.

**Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

   VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## RULE 219 EQUIPMENT

**Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, COOLING TOWER

**Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

   VOC : RULE 442

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## Permit to Construct and Temporary Permit to Operate
**(Section H)**

This section consists of a table listing all individual Permits to Construct issued to various equipment at the facility. Each permit will list operating conditions, including periodic monitoring requirements and applicable emission limits and requirements. Also included are the rule origin and authority of each emission limit and permit condition.

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMITTED EQUIPMENT LIST

THE FOLLOWING IS A LIST OF ALL PERMITS TO CONSTRUCT AT THIS FACILITY:

| Application number | Equipment Description | Page Number |
|---|---|---|
| 414941 | I C E (>500 HP) LANDFILL GAS | 3 |
| 414942 | I C E (>500 HP) LANDFILL GAS | 7 |
| 414943 | I C E (>500 HP) LANDFILL GAS | 11 |
| 474009 | Landfill Gas, Treatment (Siloxane Removal) | 15 |
| 475036 | Flare, Landfill/Digester Gas, Enclosed | 17 |
| 474001 | Gas Turbine, NO.1 | 21 |
| 474002 | Gas Turbine, NO.2 | 26 |
| 474003 | Gas Turbine, NO.3 | 31 |
| 474004 | Gas Turbine, NO.4 | 36 |
| 474005 | Air Pollution Control System (SCR), No.1 | 41 |
| 474006 | Air Pollution Control System (SCR), No.2 | 43 |
| 474007 | Air Pollution Control System (SCR), No.3 | 45 |
| 474008 | Air Pollution Control System (SCR), No.4 | 47 |
| 487106 | Storage Tank, Aqueous Ammonia | 49 |

**NOTE:** EQUIPMENT LISTED ABOVE ARE ISSUED PERMITS TO CONSTRUCT. THE ISSUANCE OR DENIAL OF THEIR PERMITS TO OPERATE IS SUBJECT TO ENGINEERING FINAL REVIEW. ANY OTHER APPLICATIONS THAT ARE STILL BEING PROCESSED AND HAVE NOT BEEN ISSUED PERMITS TO CONSTRUCT WILL NOT BE FOUND IN THIS TITLE V PERMIT.

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 414941**
**Granted: 01-06-2005**

**Equipment Description:**

ALTERATION OF AN EXISTING LANDFILL GAS COMBUSTION SYSTEM (PREVIOUSLY PERMITTED UNDER A/N 331718:P/O F10179) CONSISTING OF:

INTERNAL COMBUSTION ENGINE "A", COOPER ENERGY SERVICES/SUPERIOR, MODEL NO. 16 SGTA, LANDFILL GAS-FIRED, TURBOCHARGED, INTERCOOLED, 4-STROKE, RECIPROCATING, SPARK IGNITION, V-16 TYPE, 2650 H.P. DRIVING AN 1875 K.W. ELECTRICAL GENERATOR, LEAN BURN.

BY THE ADDITION/MODIFICATION OF:

1. SILOXANE REMOVAL SYSTEM, APPLIED FILTER TECHNOLOGY, MODEL SAG 842D, WITH TWO VESSELS IN SERIES, LOCATED PRIOR TO ENGINE, COMMON TO THREE INTERNAL COMBUSTION ENGINES (A/N, 414941, 414942, AND 414943)

2. COMBUSTION PRE-CHAMBER MODIFICATION FOR ENGINE, COOPER COMPRESSION MODEL 825

3. OXIDATION CATALYST, EAS INC., 4-ELEMENT, 1.8 INCHES W.C. MAXIMUM BACK-PRESSURE

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. A FLOW INDICATING AND RECORDING DEVICE SHALL BE MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO EACH ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN SCFH) BEING BURNED.
[RULE 1303(b)(2)–OFFSET]

4. THE TOTAL HEATING VALUE OF LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 28.8 MILLION BTU'S PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF GAS BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFH) AND THE LATEST WEEKLY BTU CONTENT READING.
[RULE 1303(b)(2)–OFFSET]

5. WEEKLY READINGS OF THE BTU CONTENT OF THE LANDFILL GAS AT THE INLET TO THE ENGINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b)(2)-OFFSETS]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

6. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY. [RULE 204]

7. A SAMPLING PORT SHALL BE INSTALLED AT THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE. [RULE 217]

8. TWO SAMPLING PORTS SHALL BE MAINTAINED IN THE INTERNAL COMBUSTION ENGINE EXHAUST DUCT 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE AT 90 DEGREES APART AND SHALL CONSIST OF TWO 2-INCH 1/2 WELD NIPPLES WITH PLUGS. AN EQUIVALENT METHOD FOR EMISSIONS SAMPLING MAY BE USED UPON APPROVAL OF THE SCAQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE PROVIDED. [RULE 217]

9. WITHIN 120 DAYS OF INITIAL START-UP, AND ANNUALLY THEREAFTER (PER RULE 1150.1 REQUIREMENTS), UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, THE APPLICANT SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD APPROVED TEST PROCEDURES AND FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TEST SHALL BE PROVIDED TO THE SCAQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE SCAQMD FOR APPROVAL AT LEAST 30 DAYS PRIOR TO START OF TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO. A TEST OF THE INLET FUEL GAS TO THE ENGINE AND THE ENGINE EXHAUST FOR:

   A. METHANE
   B. TOTAL NON-METHANE ORGANICS
   C. OXIDES OF NITROGEN (EXHAUST ONLY)
   D. CARBON MONOXIDE (EXHAUST ONLY – BEFORE AND AFTER CATALYST)
   E. CARBON DIOXIDE
   F. OXYGEN
   G. NITROGEN
   H. MOISTURE CONTENT
   I. TEMPERATURE
   J. FLOW RATE
   K. NMOC DESTRUCTION EFFICIENCY
   L. BTU CONTENT (INLET ONLY)

   [RULE 1150.1]

10. EMISSIONS FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

| POLLUTANTS | POUNDS PER HOUR |
|---|---|
| NMOC, AS METHANE | 7.3 |
| NOX, AS NO2 | 3.5 |
| SOX, AS SO2 | 0.5 |
| CO | 6.96 |
| PM10 | 0.042 |

[RULE 1303(b)(2)–OFFSET, 3004(a)(4)]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

11. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF TOXICS AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDER TAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 1150.1]

12. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE UNREASONABLY WITH THE ABILITY OF THE LANDFILL OWNER/OPERATOR, BREA POWER PARTNERS, L.P., TO COMPLY WITH DISTRICT RULE 1150.1 OR ANY OTHER DISTRICT RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

13. A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST STACK CONCENTRATION FOR NOX AND O2, ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O2 AND CONTINUOUSLY RECORD THE STACK NOX CONCENTRATION, STACK O2 CONCENTRATION AND CORRECTED NOX CONCENTRATION AT 15% O2. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF SCAQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE EXECUTIVE OFFICER.
[RULE 218]

14. THIS EQUIPMENT SHALL NOT BURN NATURAL GAS OR OTHER AUXILIARY FUEL.
[RULE 204]

15. A GAUGE SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN INCHES OF WATER, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE CATALYST. IN OPERATION, THE PRESSURE DIFFERENTIAL SHALL NOT EXCEED 1.8 INCHES OF WATER.
[RULE 1303(a)(1)-BACT]

16. THE CATALYST SHALL BE CHEMICALLY WASHED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF CHEMICAL WASHINGS SHALL BE MAINTAINED AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 1303(a)(1)-BACT]

17. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 3004(a)(4)]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

**Emissions and Requirements:**

18. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

    NMOC: 20 PPMV, RULE 1150.1
    NMOC: 20 PPMV, 40CFR60 SUBPART WWW
    CO: 2000 PPMV, RULE 407
    NOX: 36 PPMV, RULE 1110.2,
    ROG: 250 PPMV, RULE 1110.2,
    PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 414942**
**Granted: 01-06-2005**

**Equipment Description:**

ALTERATION OF AN EXISTING LANDFILL GAS COMBUSTION SYSTEM (PREVIOUSLY PERMITTED UNDER A/N 331717:P/O F10180) CONSISTING OF:

INTERNAL COMBUSTION ENGINE "B", COOPER ENERGY SERVICES/SUPERIOR, MODEL NO. 16 SGTA, LANDFILL GAS-FIRED, TURBOCHARGED, INTERCOOLED, 4-STROKE, RECIPROCATING, SPARK IGNITION, V-16 TYPE, 2650 H.P. DRIVING AN 1875 K.W. ELECTRICAL GENERATOR, LEAN BURN.

BY THE ADDITION/MODIFICATION OF:

1. SILOXANE REMOVAL SYSTEM, APPLIED FILTER TECHNOLOGY, MODEL SAG 842D, WITH TWO VESSELS IN SERIES, LOCATED PRIOR TO ENGINE, COMMON TO THREE INTERNAL COMBUSTION ENGINES (A/N, 414941, 414942, AND 414943)

2. COMBUSTION PRE-CHAMBER MODIFICATION FOR ENGINE, COOPER COMPRESSION MODEL 825

3. OXIDATION CATALYST, EAS INC., 4-ELEMENT, 1.8 INCHES W.C. MAXIMUM BACK-PRESSURE

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. A FLOW INDICATING AND RECORDING DEVICE SHALL BE MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO EACH ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN SCFH) BEING BURNED.
[RULE 1303(b)(2)–OFFSET]

4. THE TOTAL HEATING VALUE OF LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 28.8 MILLION BTU'S PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF GAS BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFH) AND THE LATEST WEEKLY BTU CONTENT READING.
[RULE 1303(b)(2)–OFFSET]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

5. WEEKLY READINGS OF THE BTU CONTENT OF THE LANDFILL GAS AT THE INLET TO THE ENGINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b)(2)-OFFSETS]

6. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

7. A SAMPLING PORT SHALL BE INSTALLED AT THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE.
[RULE 217]

8. TWO SAMPLING PORTS SHALL BE MAINTAINED IN THE INTERNAL COMBUSTION ENGINE EXHAUST DUCT 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE AT 90 DEGREES APART AND SHALL CONSIST OF TWO 2-INCH 1/2 WELD NIPPLES WITH PLUGS. AN EQUIVALENT METHOD FOR EMISSIONS SAMPLING MAY BE USED UPON APPROVAL OF THE SCAQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE PROVIDED.
[RULE 217]

9. WITHIN 120 DAYS OF INITIAL START-UP, AND ANNUALLY THEREAFTER (PER RULE 1150.1 REQUIREMENTS), UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, THE APPLICANT SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD APPROVED TEST PROCEDURES AND FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TEST SHALL BE PROVIDED TO THE SCAQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE SCAQMD FOR APPROVAL AT LEAST 30 DAYS PRIOR TO START OF TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO. A TEST OF THE INLET FUEL GAS TO THE ENGINE AND THE ENGINE EXHAUST FOR:

A. METHANE
B. TOTAL NON-METHANE ORGANICS
C. OXIDES OF NITROGEN (EXHAUST ONLY)
D. CARBON MONOXIDE (EXHAUST ONLY – BEFORE AND AFTER CATALYST)
E. CARBON DIOXIDE
F. OXYGEN
G. NITROGEN
H. MOISTURE CONTENT
I. TEMPERATURE
J. FLOW RATE
K. NMOC DESTRUCTION EFFICIENCY
L. BTU CONTENT (INLET ONLY)

[RULE 1150.1]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

10. EMISSIONS FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

| POLLUTANTS | POUNDS PER HOUR |
|---|---|
| NMOC, AS METHANE | 7.3 |
| NOX, AS NO2 | 3.5 |
| SOX, AS SO2 | 0.5 |
| CO | 6.96 |
| PM10 | 0.042 |

[RULE 1303(b)(2)–OFFSET, 3004(a)(4)]

11. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF TOXICS AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDER TAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 1150.1]

12. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE UNREASONABLY WITH THE ABILITY OF THE LANDFILL OWNER/OPERATOR, BREA POWER PARTNERS, L.P., TO COMPLY WITH DISTRICT RULE 1150.1 OR ANY OTHER DISTRICT RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

13. A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST STACK CONCENTRATION FOR NOX AND O2, ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O2 AND CONTINUOUSLY RECORD THE STACK NOX CONCENTRATION, STACK O2 CONCENTRATION AND CORRECTED NOX CONCENTRATION AT 15% O2. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF SCAQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE EXECUTIVE OFFICER.
[RULE 218]

14. THIS EQUIPMENT SHALL NOT BURN NATURAL GAS OR OTHER AUXILIARY FUEL.
[RULE 204]

15. A GAUGE SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN INCHES OF WATER, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE CATALYST. IN OPERATION, THE PRESSURE DIFFERENTIAL SHALL NOT EXCEED 1.8 INCHES OF WATER.
[RULE 1303(a)(1)-BACT]

16. THE CATALYST SHALL BE CHEMICALLY WASHED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF CHEMICAL WASHINGS SHALL BE MAINTAINED AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 1303(a)(1)-BACT]

17. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 3004(a)(4)]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

**Emissions and Requirements:**

18. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NMOC: 20 PPMV, RULE 1150.1
NMOC: 20 PPMV, 40CFR60 SUBPART WWW
CO: 2000 PPMV, RULE 407
NOX: 36 PPMV, RULE 1110.2,
ROG: 250 PPMV, RULE 1110.2,
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 414943**
**Granted: 01-06-2005**

**Equipment Description:**

ALTERATION OF AN EXISTING LANDFILL GAS COMBUSTION SYSTEM (PREVIOUSLY PERMITTED UNDER A/N 331719:P/O F10181) CONSISTING OF:

INTERNAL COMBUSTION ENGINE "C", COOPER ENERGY SERVICES/SUPERIOR, MODEL NO. 16 SGTA, LANDFILL GAS-FIRED, TURBOCHARGED, INTERCOOLED, 4-STROKE, RECIPROCATING, SPARK IGNITION, V-16 TYPE, 2650 H.P. DRIVING AN 1875 K.W. ELECTRICAL GENERATOR, LEAN BURN.

BY THE ADDITION/MODIFICATION OF:

1. SILOXANE REMOVAL SYSTEM, APPLIED FILTER TECHNOLOGY, MODEL SAG 842D, WITH TWO VESSELS IN SERIES, LOCATED PRIOR TO ENGINE, COMMON TO THREE INTERNAL COMBUSTION ENGINES (A/N, 414941, 414942, AND 414943)

2. COMBUSTION PRE-CHAMBER MODIFICATION FOR ENGINE, COOPER COMPRESSION MODEL 825

3. OXIDATION CATALYST, EAS INC., 4-ELEMENT, 1.8 INCHES W.C. MAXIMUM BACK-PRESSURE

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. A FLOW INDICATING AND RECORDING DEVICE SHALL BE MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO EACH ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN SCFH) BEING BURNED.
[RULE 1303(b)(2)–OFFSET]

4. THE TOTAL HEATING VALUE OF LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 28.8 MILLION BTU'S PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF GAS BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFH) AND THE LATEST WEEKLY BTU CONTENT READING.
[RULE 1303(b)(2)–OFFSET]

# FACILITY PERMIT TO OPERATE
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5. WEEKLY READINGS OF THE BTU CONTENT OF THE LANDFILL GAS AT THE INLET TO THE ENGINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b)(2)-OFFSETS]

6. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

7. A SAMPLING PORT SHALL BE INSTALLED AT THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE.
[RULE 217]

8. TWO SAMPLING PORTS SHALL BE MAINTAINED IN THE INTERNAL COMBUSTION ENGINE EXHAUST DUCT 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE AT 90 DEGREES APART AND SHALL CONSIST OF TWO 2-INCH 1/2 WELD NIPPLES WITH PLUGS. AN EQUIVALENT METHOD FOR EMISSIONS SAMPLING MAY BE USED UPON APPROVAL OF THE SCAQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE PROVIDED.
[RULE 217]

9. WITHIN 120 DAYS OF INITIAL START-UP, AND ANNUALLY THEREAFTER (PER RULE 1150.1 REQUIREMENTS), UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, THE APPLICANT SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD APPROVED TEST PROCEDURES AND FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TEST SHALL BE PROVIDED TO THE SCAQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE SCAQMD FOR APPROVAL AT LEAST 30 DAYS PRIOR TO START OF TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO. A TEST OF THE INLET FUEL GAS TO THE ENGINE AND THE ENGINE EXHAUST FOR:

   A. METHANE
   B. TOTAL NON-METHANE ORGANICS
   C. OXIDES OF NITROGEN (EXHAUST ONLY)
   D. CARBON MONOXIDE (EXHAUST ONLY – BEFORE AND AFTER CATALYST)
   E. CARBON DIOXIDE
   F. OXYGEN
   G. NITROGEN
   H. MOISTURE CONTENT
   I. TEMPERATURE
   J. FLOW RATE
   K. NMOC DESTRUCTION EFFICIENCY
   L. BTU CONTENT (INLET ONLY)

   [RULE 1150.1]

# FACILITY PERMIT TO OPERATE
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10. EMISSIONS FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

| POLLUTANTS | POUNDS PER HOUR |
|---|---|
| NMOC, AS METHANE | 7.3 |
| NOX, AS NO2 | 3.5 |
| SOX, AS SO2 | 0.5 |
| CO | 6.96 |
| PM10 | 0.042 |

[RULE 1303(b)(2)-OFFSET, 3004(a)(4)]

11. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF TOXICS AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDER TAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 1150.1]

12. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE UNREASONABLY WITH THE ABILITY OF THE LANDFILL OWNER/OPERATOR, BREA POWER PARTNERS, L.P., TO COMPLY WITH DISTRICT RULE 1150.1 OR ANY OTHER DISTRICT RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

13. A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST STACK CONCENTRATION FOR NOX AND O2, ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O2 AND CONTINUOUSLY RECORD THE STACK NOX CONCENTRATION, STACK O2 CONCENTRATION AND CORRECTED NOX CONCENTRATION AT 15% O2. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF SCAQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE EXECUTIVE OFFICER.
[RULE 218]

14. THIS EQUIPMENT SHALL NOT BURN NATURAL GAS OR OTHER AUXILIARY FUEL.
[RULE 204]

15. A GAUGE SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN INCHES OF WATER, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE CATALYST. IN OPERATION, THE PRESSURE DIFFERENTIAL SHALL NOT EXCEED 1.8 INCHES OF WATER.
[RULE 1303(a)(1)-BACT]

16. THE CATALYST SHALL BE CHEMICALLY WASHED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF CHEMICAL WASHINGS SHALL BE MAINTAINED AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204, RULE 1303(a)(1)-BACT]

17. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.
[RULE 3004(a)(4)]

# FACILITY PERMIT TO OPERATE
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**Emissions and Requirements:**

18. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NMOC: 20 PPMV, RULE 1150.1
NMOC: 20 PPMV, 40CFR60 SUBPART WWW
CO: 2000 PPMV, RULE 407
NOX: 36 PPMV, RULE 1110.2,
ROG: 250 PPMV, RULE 1110.2,
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 474009**
**Granted: 01-06-2005**

**Equipment Description:**

LANDFILL GAS (LFG) PRE-TREATMENT SYSTEM, 12,000 SCFM MAXIMUM CAPACITY, CONSISTING OF EQUIPMENT EQUIVALENT TO THE FOLLOWING:

1. INLET KNOCKOUT DRUM,
2. FOUR BOOSTER BLOWERS,
3. TWO LFG COOLERS,
4. THREE LFG CHILLERS,
5. MOISTURE SEPARATOR,
6. FIVE COMPRESSORS, FIRST STAGE,
7. GAS COOLER MOISTURE SEPARATOR,
8. PRIMARY SILOXANE ADSORPTION SYSTEM, DOMNICK HUNTER WITH PRE-FILTER, EIGHT VESSELS, TWO ELECTRIC HEATERS, TWO PURGE AIR BLOWERS, AND AFTER-FILTER,
9. THREE COMPRESSORS, SECOND STAGE,
10. TWO GAS COOLERS AND TWO MOISTURE SEPARATORS,
11. SECONDARY SILOXANE ADSORPTION SYSTEM, DOMNICK HUNTER WITH PRE-FILTER, FOUR VESSELS, ONE ELECTRIC HEATER, ONE PURGE AIR BLOWER, AND AFTER-FILTER.

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLE SHOULD HAVE KNOW OF THE OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, AND 430]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

4. THIS EQUIPMENT SHALL BE VENTED ONLY TO AN AIR POLLUTION CONTROL DEVICE WITH A VALID PERMIT TO CONSTRUCT OR OPERATE ISSUED BY THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT.
[RULE 204, RULE 1303(a)(1) BACT]

5. PRIOR TO INSTALLATION, THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO AND OBTAIN APPROVAL FROM THE SCAQMD, THE LANDFILL GAS TREATMENT SYSTEM DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ), AND OTHER VENDOR DATA. ADDITIONAL CONDITIONS MAY BE IMPOSED AS PART OF THE APPROVAL.
[RULE 204]

6. THE SPENT MEDIA REMOVED FROM THIS SYSTEM SHALL BE MAINTAINED OR STORED IN CLOSED CONTAINERS PRIOR TO REMOVAL FROM THE FACILITY
[RULE 402]

7. THE OPERATOR SHALL QUANTIFY AND RECORD THE TOTAL QUANTITY OF GAS TREATED.
[RULE 1303 (b)(2)-OFFSETS]

8. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS, IN THE INLET GAS LINE TO THE LANDFILL GAS TREATMENT SYSTEM, AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.
[RULE 217]

9. ALL LANDFILL GAS ACCEPTED FROM THE LANDFILL FOR COMBUSTION IN THE GAS TURBINES, SHALL BE PROCESSED BY LANDFILL GAS PRE-TREATMENT SYSTEM
[RULE 1150.1, 1303(a)(1)-BACT]

**EMISSION AND REQUIREMENTS**

10. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
TOTAL SULFUR AS H2S: 150 PPMV RULE 431.1

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 475036**
**Granted: 01-22-2010**

**Equipment Description:**

LANDFILL GAS FLARING SYSTEM CONSISTING OF EQUIPMENT EQUIVALENT TO THE FOLLOWING:
1. FLAME ARRESTOR,
2. EXHAUST SYSTEM VENTING LANDFILL GAS (LFG) PRE-TREATMENT SYSTEM,
3. FLARE, JOHN ZINK, 13.5 MMBTU/HR.

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. PRIOR TO INSTALLATION, THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO AND OBTAIN APPROVAL FROM THE SCAQMD, THE LANDFILL GAS FLARING SYSTEM DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ), AND OTHER VENDOR DATA. ADDITIONAL CONDITIONS MAY BE IMPOSED AS PART OF THE APPROVAL.
[RULE 204]

5. FOUR (4) SAMPLING PORTS SHALL BE PROVIDED IN THE FLARE STACK AT LEAST ONE HALF DUCT DIAMETERS UPSTREAM OF THE FLARE OUTLET, 90 DEGREES APART. EACH SAMPLING PORT SHALL CONSIST OF A FOUR-INCH COUPLING WITH A PLUG. ALL PORTS SHALL BE PROPERLY CENTERED. AN EQUIVALENT METHOD OF EMISSION SAMPLING MAY BE USED UPON APPROVAL BY THE EXECUTIVE OFFICER. ADEQUATE AND SAFE ACCESS TO ALL SOURCE TEST PORTS SHALL BE PROVIDED WITHIN 48 HOURS NOTICE BY SCAQMD.
[RULE 217]

6. A SAMPLING PORT SHALL BE INSTALLED AT THE INLET GAS LINE TO THE FLARE TO ALLOW THE COLLECTION OF AN INLET GAS SAMPLE.
[RULE 217]

7. THE FLARE SHALL BE EQUIPPED WITH AT LEAST ONE TEMPERATURE INDICATOR AND A RECORDING DEVICE WHICH MEASURES AND RECORDS THE GAS TEMPERATURE IN THE FLARE STACK. THE TEMPERATURE INDICATOR AND RECORDING DEVICE SHALL OPERATE

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WHENEVER THE FLARE IS IN OPERATION. THE TEMPERATURE SHALL BE MEASURED AT A LOCATION ABOVE THE FLAME ZONE AT LEAST 0.6 SECOND DOWNSTREAM OF THE BURNER AND NOT LESS THAN ONE STACK DIAMETER FROM THE TOP OF THE STACK.
[RULE 217]

8. WHENEVER THE FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400 DEGREES FAHRENHEIT AS MEASURED BY AN APPROVED TEMPERATURE INDICATOR SHALL BE MAINTAINED IN THE FLARE STACK.
[RULE 1303(a)(1)-BACT, RULE 1401]

9. THE FLARE SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-DOWN SYSTEM WITH A FAILURE ALARM, WHICH HAS BEEN APPROVED BY THE SCAQMD, TO AUTOMATICALLY ISOLATE THE FLARE FROM THE LANDFILL GAS SUPPLY LINE, SHUT OFF THE BLOWER AND IMMEDIATELY NOTIFY A RESPONSIBLE PARTY OF THE SHUT-DOWN.
[RULE 1303(a)(1)-BACT, RULE 1401]

10. THE AUTOMATIC SHUT DOWN SAFETY SYSTEM SHALL BE TESTED ANNUALLY FOR PROPER OPERATION AND RESULT RECORDED.
[RULE 204]

11. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE FLARE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS (IN SCFM) BEING BURNED IN THE FLARE.
[RULE 1303(b)(2)-OFFSET, RULE 1401]

12. THE HEAT INPUT TO THE FLARE SHALL NOT EXCEED 13.65 MILLION BTU PER HOUR
[RULE 1303(b)(2)-OFFSETS]

13. EMISSIONS FROM THE FLARE SHALL NOT EXCEED THE FOLLOWING:

| POLLUTANT | LB/DAY |
|---|---|
| PM10 | 6 |
| NMHC | 1 |
| NOX | 8 |
| SOX | 6 |

[RULE 1303(b)(2)-OFFSETS]

14. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLE SHOULD HAVE KNOW OF THE OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, AND 430]

15. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

16. THE FLARE SHALL BE EQUIPPED WITH A SUFFICIENT NUMBER OF VIEW PORTS TO ALLOW VISUAL INSPECTION OF THE FLAME HEIGHT WITH THE FLARE AT ALL TIMES. THE VIEW PORTS SHALL BE LOCATED AT THE ELEVATION OF THE TEMPERATURE SENSOR LOCATION. SAFE AND ADEQUATE ACCESS SHALL BE PROVIDED FOR ALL VIEW PORTS UPON REQUEST BY SCAQMD PERSONNEL.
[RULE 217]

17. THE FLARE SHALL BE DESIGNED AND OPERATED SO THAT THE FLAME IN THE FLARE REMAINS BELOW THE HEIGHT OF THE FLARES OPERATING THERMOCOUPLE AT ALL TIMES.
[RULE 1303(a)(1)-BACT]

18. THE MAXIMUM FLARE SKIN TEMPERATURE AT ANY LOCATION SHALL NOT EXCEED 250 DEGREES FAHRENHEIT.
[RULE 204]

19. WITHIN 180 DAYS AFTER INITIAL START-UP AND ANNUALLY (WITHIN 45 DAYS OF THE ANNIVERSARY OF THE INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD FOR APPROVAL AT LEAST 30 DAYS PRIOR TO START OF THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO A TEST OF THE INLET AND OUTLET OF THE AIR POLLUTION CONTROL SYSTEM (APCS) FOR:
    A. METHANE AND TOTAL NON-METHANE HYDROCARBONS
    B. CARBON MONOXIDE (OUTLET OF THE APCS)
    C. CARBON DIOXIDE (INLET AND OUTLET OF THE APCS)
    D. OXIDES OF NITROGEN, EXPRESSED AS NITROGEN DIOXIDE (OUTLET OF THE APCS)
    E. TOTAL PARTICULATES (OUTLET OF THE APCS)
    F. TOXIC AIR CONTAMINANTS (INLET AND OUTLET OF THE APCS) INCLUDING BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1, 1 DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1,1,1,-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
    G. ALDEHYDES (OUTLET OF THE APCS)
    H. OXYGEN
    I. MOISTURE CONTENT
    J. TEMPERATURE.
    K. EXHAUST FLOW RATE.

    THE REPORT SHALL PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR) POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 3% O2 ( CO, NOX, AND TNMHC).
    [RULE 1303(a)(1)BACT), RULE 1303(b)(1)-MODELING, RULE 1303(b)(2)-OFFSET, RULE 1401, RULE 3004(A)(4) ]

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20. IF THE SOURCE TEST INDICATES THAT ADDITIONAL TOXIC AIR CONTAMINANT COMPOUNDS ARE EMITTED FROM THIS EQUIPMENT WHICH WERE NOT COVERED IN THE APPROVED TIER IV MODEL, OR THAT THE TAC EMISSION RATES ARE SIGNIFICANTLY DIFFERENT FROM THE PREVIOUSLY EVALUATED TAC EMISSIONS, THE APPLICANT SHALL RESUBMIT A TIER IV MODEL WHICH INCLUDES THE ADDITIONAL TOXIC AIR CONTAMINANTS, AND REFLECTS THE ACTUAL TAC EMISSION RATES.
[RULE 1401]

21. THE FLARE SHALL NOT COMBUST MORE THAN 27,000 CUBIC FEET PER HOUR OF LANDFILL GAS.
[RULE 1303(b)(2)-OFFSETS]

22. AT LEAST ONCE PER WEEK, THE OPERATOR SHALL QUANTIFY AND RECORD THE BTU OR METHANE CONTENT OF THE LANDFILL GAS USED TO FIRE THE FLARE.
[RULE 204, RULE 1303(b)(2)-OFFSETS]

**EMISSIONS AND REQUIREMENTS**

23. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NOX: 0.025 LB/MMBTU, RULE 1303-BACT
CO: 0.060 LB/MMBTU, RULE 1701(b)(1)-BACT
NMOC: 20 PPMV @ 3% O2, DRY BASIS, AS HEXANE, OR 98% (BY WT) RULE 1150.1
NMOC: 20 PPMV @ 3% O2, DRY BASIS, AS HEXANE, OR 98% (BY WT) 40CFR60 SUBPART WWW
CO: 2000 PPMV @ 15% O2, DRY, 15 MIN. AVERAGE, RULE 407
SOX: 150 PPMV AS H2S, DAILY AVERAGE, RULE 431.1
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 474001**
**Granted: 01-22-2010**

**Equipment Description:**

RESOURCE RECOVERY/LANDFILL GAS TO ENERGY SYSTEM NO.1 CONSISTING OF:

1. GAS TURBINE, NO.1, SOLAR, MODEL TAURUS 60 7900 SERIES, LANDFILL GAS FIRED, DRIVING A 5.6 MW GENERATOR,
2. HEAT RECOVERY STEAM GENERATOR,
3. STEAM TURBINE/GENERATOR [COMMON TO SYSTEMS NO.2, 3, AND 4],

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE EXHAUST GAS IS VENTED TO AIR POLLUTION CONTROL SYSTEM NO.1 WHICH IS IN FULL OPERATION AND WHICH HAS A VALID PERMIT FROM THE AQMD.
[RULE 1303(a)(1)-BACT, RULE 1701(b)(1)-BACT, RULE 1401]

4. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO THE SCAQMD FOR PRE-INSTALLATION APPROVAL, THE GAS TURBINE FINAL DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ) AT LEAST 60 DAYS PRIOR TO INSTALLATION OF THIS EQUIPMENT
[RULE 204]

5. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE GAS TURBINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS AND NATURAL GAS (IN SCFM) SUPPLIED.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4)]

6. THE OPERATOR SHALL MEASURE AND RECORD, THE BTU CONTENT OF THE LANDFILL GAS AT THE INLET TO EACH GAS TURBINE AT LEAST ONCE PER WEEK USING AN INSTRUMENT APPROVED BY THE SCAQMD.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4)]

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7. THE TOTAL HEAT INPUT OF LANDFILL GAS BURNED IN THE GAS TURBINE SHALL NOT EXCEED 72 MMBTU/HR, BASED ON A 24 HOURS AVERAGE. THE OPERATOR SHALL DETERMINE THE TOTAL HEAT INPUT OF THE LANDFILL GAS AT LEAST ONCE EVERY EIGHT HOURS OF OPERATION, AND MAINTAIN A LOG INDICATING THE TOTAL HIGHER HEATING VALUE OF THE LANDFILL GAS BURNED IN THE GAS TURBINE BASED ON THE RECORDED FLOW RATE AND THE LATEST BTU CONTENT READING.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4), RULE 1401]

8. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

9. THE OPERATOR SHALL DIRECT ALL LANDFILL GAS WHICH IS NOT BURNED IN THIS EQUIPMENT TO ANOTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, AND CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT BY THE SCAQMD.
[RULE 1303(a)(1)-BACT]

10. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLE SHOULD HAVE KNOW OF THE OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, AND 430]

11. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.
[RULE 217]

12. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICE, TO MEASURE THE EXHAUST CONCENTRATION FOR NOX, AND O2 ON A DRY BASIS
[RULE 218, 1303(b)(1) MODELING, 1303(B)(2)-OFFSET, 3004(a)(4) ]

13. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICE, TO MEASURE THE EXHAUST CONCENTRATION FOR CO, AND O2 ON A DRY BASIS
[RULE 218, 1303(b)(1) MODELING, 1303(b)(2)-OFFSET, 3004(a)(4) ]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

14. WITHIN 180 DAYS AFTER INITIAL START-UP AND ANNUALLY (WITHIN 45 DAYS OF THE ANNIVERSARY OF THE INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD FOR APPROVAL AT LEAST 30 DAYS PRIOR TO START OF THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO A TEST OF THE INLET AND OUTLET OF THE LANDFILL GAS TURBINE EXHAUST AIR POLLUTION CONTROL SYSTEM (APCS) AND THE INLET AND OUTLET TO THE LANDFILL GAS TREATMENT SYSTEM (LGTS) FOR:

A. METHANE AND TOTAL NON-METHANE HYDROCARBONS (INLET AND OUTLET OF THE APCS).
B. CARBON MONOXIDE (INLET AND OUTLET OF THE APCS).
C. CARBON DIOXIDE (OUTLET OF THE APCS).
D. OXIDES OF NITROGEN (INLET AND OUTLET OF THE APCS).
E. TOTAL PARTICULATES (OUTLET OF THE APCS).
F. AMMONIA (OUTLET OF THE APCS).
G. TOTAL REDUCED SULFUR, AS H2S (OUTLET OF THE LGTS).
H. FORMALDEHYDE, AND ALDEHYDES (OUTLET OF THE APCS).
I. TOXIC AIR CONTAMINANTS (INLET AND OUTLET OF THE APCS) INCLUDING BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1, 1 DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1,1,1,-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
J. OXYGEN
K. MOISTURE CONTENT
L. TEMPERATURE.
M. EXHAUST FLOW RATE.

THE REPORT SHALL PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR) POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 15% O2 ( CO, NOX, AND TNMHC). THE REPORT SHALL ALSO PROVIDE THE DEMONSTRATED EFFICIENCY OF THE GAS TURBINE, AT FULL LOAD, IN BTU/KW-HR, CORRECTED TO THE HIGHER HEATING VALUE (HHV) OF THE FUEL, THE AQUEOUS AMMONIA INJECTION RATE, NOX CONTROL EFFICIENCY, AND CO CONTROL EFFICIENCY OF THE APCS.
[RULE 1303(a)(1) BACT), RULE 1303(b)(1)-MODELING, RULE 1303(b)(2)-OFFSET, RULE 1401, RULE 3004(A)(4) ]

15. THE EMISSIONS FROM THE GAS TURBINE EXHAUST STACK SHALL NOT EXCEED THE FOLLOWING:

| POLLUTANT | LB/DAY |
|---|---|
| NOX (AS NO2) | 170 |
| PM10 | 36 |
| TGNMOC (AS CH4) | 12 |
| SOX (AS SO2) | 33 |

[RULE 1303(b)(2)-OFFSET]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

16. EMISSIONS OF CARBON MONOXIDE SHALL NOT EXCEED 130 PPMV, CALCULATED AT 15% OXYGEN, DRY BASIS, MEASURED AT THE STACK, EXCEPT DURING PERIOD OF STARTUP AND SHUTDOWN NOT TO EXCEED 60 MINUTES PER INCIDENT.
[RULE 1701(b)(1)-BACT]

17. EMISSIONS OF NOx SHALL NOT EXCEED 25 PPMV, CALCULATED AT 15% OXYGEN, DRY BASIS, MEASURED AT THE STACK, EXCEPT DURING PERIOD OF STARTUP AND SHUTDOWN NOT TO EXCEED 60 MINUTES PER INCIDENT.
[RULE 1303(a)(1)-BACT, 1303 (b)(1)-MODELING, 1303(b)(2)-OFFSET]

18. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS, EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING A START-UP.
[RULE 204]

19. IF THE SOURCE TEST INDICATES THAT ADDITIONAL TOXIC AIR CONTAMINANT (TAC) COMPOUNDS ARE EMITTED FROM THIS EQUIPMENT WHICH WERE NOT COVERED IN THE APPROVED TIER IV MODEL, OR THAT THE TAC EMISSION RATES ARE SIGNIFICANTLY DIFFERENT FROM THE PREVIOUSLY EVALUATED TAC EMISSIONS, THE APPLICANT SHALL RESUBMIT A TIER IV MODEL AND CALCULATE THE MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA), AND CHRONIC HAZARD INDEX (HIC) BASED ON THE SOURCE TEST RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 AND 212" (VERSION 7.0) TO DETERMINE COMPLIANCE WITH RULE 1401. THE RESULTS SHALL BE SUBMITTED TO AQMD WITHIN 90 DAYS AFTER THE INITIAL TESTING IS COMPLETED.
[RULE 1401]

20. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[ RULE 3004(a)(4) ]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

**EMISSIONS AND REQUIREMENTS**

21. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
    CO: 2000 PPMV, DRY, 15 MIN. AVG. RULE 407
    CO: 130 PPMV, DRY, 60 MIN. AVG. RULE 1701(b)(1) BACT
    NOX: 25 PPMV, @15% O2, DRY, 60 MIN. AVG., RULE 1303 BACT.
    PM: 0.1 GRAINS/DSCF, AT 12% CO2, RULE 409
    NMOC: 20PPMV, AS HEXANE@ 3%O2, OR 98% (BY WT) DESTRUCTION EFFICIENCY, RULE 1150.1, 40 CFR 60 SUBPART WWW, 40 CFR 63 SUBPART AAAA.
    SOX: 0.2% RULE 53
    SOX: 0.9 lb/MWh, OR 0.06 lb/MMBtu, 40 CFR 60 SUBPART KKKK
    NOX: 96 PPM @ 15% O2, OR 5.5 lb/MWh, 40 CFR 60 SUBPART KKKK

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 474002**
**Granted: 01-22-2010**

**Equipment Description:**

RESOURCE RECOVERY/LANDFILL GAS TO ENERGY SYSTEM NO.2 CONSISTING OF:

1. GAS TURBINE, NO.2, SOLAR, MODEL TAURUS 60 7900 SERIES, LANDFILL GAS FIRED, DRIVING A 5.6 MW GENERATOR
2. HEAT RECOVERY STEAM GENERATOR.
3. STEAM TURBINE/GENERATOR [COMMON TO SYSTEMS NO.1, 3, AND 4]

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE EXHAUST GAS IS VENTED TO AIR POLLUTION CONTROL SYSTEM NO.2 WHICH IS IN FULL OPERATION AND WHICH HAS A VALID PERMIT FROM THE AQMD.
[RULE 1303(a)(1)-BACT, RULE 1701(b)(1)-BACT, RULE 1401]

4. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO THE SCAQMD FOR PRE-INSTALLATION APPROVAL, THE GAS TURBINE FINAL DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ) AT LEAST 60 DAYS PRIOR TO INSTALLATION OF THIS EQUIPMENT
[RULE 204]

5. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE GAS TURBINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS AND NATURAL GAS (IN SCFM) SUPPLIED.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4)]

6. THE OPERATOR SHALL MEASURE AND RECORD, THE BTU CONTENT OF THE LANDFILL GAS AT THE INLET TO EACH GAS TURBINE AT LEAST ONCE PER WEEK USING AN INSTRUMENT APPROVED BY THE SCAQMD.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4)]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

7. THE TOTAL HEAT INPUT OF LANDFILL GAS BURNED IN THE GAS TURBINE SHALL NOT EXCEED 72 MMBTU/HR, BASED ON A 24 HOURS AVERAGE. THE OPERATOR SHALL DETERMINE THE TOTAL HEAT INPUT OF THE LANDFILL GAS AT LEAST ONCE EVERY EIGHT HOURS OF OPERATION, AND MAINTAIN A LOG INDICATING THE TOTAL HIGHER HEATING VALUE OF THE LANDFILL GAS BURNED IN THE GAS TURBINE BASED ON THE RECORDED FLOW RATE AND THE LATEST BTU CONTENT READING.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4), RULE 1401]

8. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

9. THE OPERATOR SHALL DIRECT ALL LANDFILL GAS WHICH IS NOT BURNED IN THIS EQUIPMENT TO ANOTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, AND CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT BY THE SCAQMD.
[RULE 1303(a)(1)-BACT]

10. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLE SHOULD HAVE KNOW OF THE OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, AND 430]

11. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.
[RULE 217]

12. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICE, TO MEASURE THE EXHAUST CONCENTRATION FOR NOX, AND O2 ON A DRY BASIS
[RULE 218, 1303(b)(1) MODELING, 1303(B)(2)-OFFSET, 3004(a)(4) ]

13. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICE, TO MEASURE THE EXHAUST CONCENTRATION FOR CO, AND O2 ON A DRY BASIS
[RULE 218, 1303(b)(1) MODELING, 1303(b)(2)-OFFSET, 3004(a)(4) ]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

14. WITHIN 180 DAYS AFTER INITIAL START-UP AND ANNUALLY (WITHIN 45 DAYS OF THE ANNIVERSARY OF THE INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD FOR APPROVAL AT LEAST 30 DAYS PRIOR TO START OF THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO A TEST OF THE INLET AND OUTLET OF THE LANDFILL GAS TURBINE EXHAUST AIR POLLUTION CONTROL SYSTEM (APCS) AND THE INLET AND OUTLET TO THE LANDFILL GAS TREATMENT SYSTEM (LGTS) FOR:

A. METHANE AND TOTAL NON-METHANE HYDROCARBONS (INLET AND OUTLET OF THE APCS).
B. CARBON MONOXIDE (INLET AND OUTLET OF THE APCS).
C. CARBON DIOXIDE (OUTLET OF THE APCS).
D. OXIDES OF NITROGEN (INLET AND OUTLET OF THE APCS).
E. TOTAL PARTICULATES (OUTLET OF THE APCS).
F. AMMONIA (OUTLET OF THE APCS).
G. TOTAL REDUCED SULFUR, AS H2S (OUTLET OF THE LGTS).
H. FORMALDEHYDE, AND ALDEHYDES (OUTLET OF THE APCS).
I. TOXIC AIR CONTAMINANTS (INLET AND OUTLET OF THE APCS) INCLUDING BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1, 1 DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1,1,1,-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
J. OXYGEN
K. MOISTURE CONTENT
L. TEMPERATURE.
M. EXHAUST FLOW RATE.

THE REPORT SHALL PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR) POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 15% O2 ( CO, NOX, AND TNMHC). THE REPORT SHALL ALSO PROVIDE THE DEMONSTRATED EFFICIENCY OF THE GAS TURBINE, AT FULL LOAD, IN BTU/KW-HR, CORRECTED TO THE HIGHER HEATING VALUE (HHV) OF THE FUEL, THE AQUEOUS AMMONIA INJECTION RATE, NOX CONTROL EFFICIENCY, AND CO CONTROL EFFICIENCY OF THE APCS.
[RULE 1303(a)(1) BACT), RULE 1303(b)(1)-MODELING, RULE 1303(b)(2)-OFFSET, RULE 1401, RULE 3004(A)(4) ]

15. THE EMISSIONS FROM THE GAS TURBINE EXHAUST STACK SHALL NOT EXCEED THE FOLLOWING:

| POLLUTANT | LB/DAY |
|---|---|
| NOX (AS NO2) | 170 |
| PM10 | 36 |
| TGNMOC (AS CH4) | 12 |
| SOX (AS SO2) | 33 |

[RULE 1303(b)(2)-OFFSET]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

16. EMISSIONS OF CARBON MONOXIDE SHALL NOT EXCEED 130 PPMV, CALCULATED AT 15% OXYGEN, DRY BASIS, MEASURED AT THE STACK, EXCEPT DURING PERIOD OF STARTUP AND SHUTDOWN NOT TO EXCEED 60 MINUTES PER INCIDENT.
[RULE 1701(b)(1)-BACT]

17. EMISSIONS OF NOx SHALL NOT EXCEED 25 PPMV, CALCULATED AT 15% OXYGEN, DRY BASIS, MEASURED AT THE STACK, EXCEPT DURING PERIOD OF STARTUP AND SHUTDOWN NOT TO EXCEED 60 MINUTES PER INCIDENT.
[RULE 1303(a)(1)-BACT, 1303 (b)(1)-MODELING, 1303(b)(2)-OFFSET]

18. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS, EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING A START-UP.
[RULE 204]

19. IF THE SOURCE TEST INDICATES THAT ADDITIONAL TOXIC AIR CONTAMINANT (TAC) COMPOUNDS ARE EMITTED FROM THIS EQUIPMENT WHICH WERE NOT COVERED IN THE APPROVED TIER IV MODEL, OR THAT THE TAC EMISSION RATES ARE SIGNIFICANTLY DIFFERENT FROM THE PREVIOUSLY EVALUATED TAC EMISSIONS, THE APPLICANT SHALL RESUBMIT A TIER IV MODEL AND CALCULATE THE MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA), AND CHRONIC HAZARD INDEX (HIC) BASED ON THE SOURCE TEST RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 AND 212" (VERSION 7.0) TO DETERMINE COMPLIANCE WITH RULE 1401. THE RESULTS SHALL BE SUBMITTED TO AQMD WITHIN 90 DAYS AFTER THE INITIAL TESTING IS COMPLETED.
[RULE 1401]

20. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[ RULE 3004(a)(4) ]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

**EMISSIONS AND REQUIREMENTS**

21. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
    CO: 2000 PPMV, DRY, 15 MIN. AVG. RULE 407
    CO: 130 PPMV, DRY, 60 MIN. AVG. RULE 1701(b)(1) BACT
    NOX: 25 PPMV, @15% O2, DRY, 60 MIN. AVG., RULE 1303 BACT.
    PM: 0.1 GRAINS/DSCF, AT 12% CO2, RULE 409
    NMOC: 20PPMV, AS HEXANE@ 3%O2, OR 98% (BY WT) DESTRUCTION EFFICIENCY, RULE 1150.1, 40 CFR 60 SUBPART WWW, 40 CFR 63 SUBPART AAAA.
    SOX: 0.2% RULE 53
    SOX: 0.9 lb/MWh, OR 0.06 lb/MMBtu, 40 CFR 60 SUBPART KKKK
    NOX: 96 PPM @ 15% O2, OR 5.5 lb/MWh, 40 CFR 60 SUBPART KKKK

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 474003**
**Granted: 01-22-2010**

**Equipment Description:**

RESOURCE RECOVERY/LANDFILL GAS TO ENERGY SYSTEM NO.3 CONSISTING OF:

1. GAS TURBINE, NO.3, SOLAR, MODEL TAURUS 60 7900 SERIES, LANDFILL GAS FIRED, DRIVING A 5.6 MW GENERATOR
2. HEAT RECOVERY STEAM GENERATOR.
3. STEAM TURBINE/GENERATOR [COMMON TO SYSTEMS NO.1, 2, AND 4]

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE EXHAUST GAS IS VENTED TO AIR POLLUTION CONTROL SYSTEM NO.3 WHICH IS IN FULL OPERATION AND WHICH HAS A VALID PERMIT FROM THE AQMD.
[RULE 1303(a)(1)-BACT, RULE 1701(b)(1)-BACT, RULE 1401]

4. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO THE SCAQMD FOR PRE-INSTALLATION APPROVAL, THE GAS TURBINE FINAL DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ) AT LEAST 60 DAYS PRIOR TO INSTALLATION OF THIS EQUIPMENT
[RULE 204]

5. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE GAS TURBINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS AND NATURAL GAS (IN SCFM) SUPPLIED.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4)]

6. THE OPERATOR SHALL MEASURE AND RECORD, THE BTU CONTENT OF THE LANDFILL GAS AT THE INLET TO EACH GAS TURBINE AT LEAST ONCE PER WEEK USING AN INSTRUMENT APPROVED BY THE SCAQMD.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4)]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

7. THE TOTAL HEAT INPUT OF LANDFILL GAS BURNED IN THE GAS TURBINE SHALL NOT EXCEED 72 MMBTU/HR, BASED ON A 24 HOURS AVERAGE. THE OPERATOR SHALL DETERMINE THE TOTAL HEAT INPUT OF THE LANDFILL GAS AT LEAST ONCE EVERY EIGHT HOURS OF OPERATION, AND MAINTAIN A LOG INDICATING THE TOTAL HIGHER HEATING VALUE OF THE LANDFILL GAS BURNED IN THE GAS TURBINE BASED ON THE RECORDED FLOW RATE AND THE LATEST BTU CONTENT READING.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4), RULE 1401]

8. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

9. THE OPERATOR SHALL DIRECT ALL LANDFILL GAS WHICH IS NOT BURNED IN THIS EQUIPMENT TO ANOTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, AND CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT BY THE SCAQMD.
[RULE 1303(a)(1)-BACT]

10. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLE SHOULD HAVE KNOW OF THE OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, AND 430]

11. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.
[RULE 217]

12. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICE, TO MEASURE THE EXHAUST CONCENTRATION FOR NOX, AND O2 ON A DRY BASIS
[RULE 218, 1303(b)(1) MODELING, 1303(B)(2)-OFFSET, 3004(a)(4) ]

13. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICE, TO MEASURE THE EXHAUST CONCENTRATION FOR CO, AND O2 ON A DRY BASIS
[RULE 218, 1303(b)(1) MODELING, 1303(b)(2)-OFFSET, 3004(a)(4) ]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

14. WITHIN 180 DAYS AFTER INITIAL START-UP AND ANNUALLY (WITHIN 45 DAYS OF THE ANNIVERSARY OF THE INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD FOR APPROVAL AT LEAST 30 DAYS PRIOR TO START OF THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO A TEST OF THE INLET AND OUTLET OF THE LANDFILL GAS TURBINE EXHAUST AIR POLLUTION CONTROL SYSTEM (APCS) AND THE INLET AND OUTLET TO THE LANDFILL GAS TREATMENT SYSTEM (LGTS) FOR:

A. METHANE AND TOTAL NON-METHANE HYDROCARBONS (INLET AND OUTLET OF THE APCS).
B. CARBON MONOXIDE (INLET AND OUTLET OF THE APCS).
C. CARBON DIOXIDE (OUTLET OF THE APCS).
D. OXIDES OF NITROGEN (INLET AND OUTLET OF THE APCS).
E. TOTAL PARTICULATES (OUTLET OF THE APCS).
F. AMMONIA (OUTLET OF THE APCS).
G. TOTAL REDUCED SULFUR, AS H2S (OUTLET OF THE LGTS).
H. FORMALDEHYDE, AND ALDEHYDES (OUTLET OF THE APCS).
I. TOXIC AIR CONTAMINANTS (INLET AND OUTLET OF THE APCS) INCLUDING BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1, 1 DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1,1,1,-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
J. OXYGEN
K. MOISTURE CONTENT
L. TEMPERATURE.
M. EXHAUST FLOW RATE.

THE REPORT SHALL PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR) POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 15% O2 ( CO, NOX, AND TNMHC). THE REPORT SHALL ALSO PROVIDE THE DEMONSTRATED EFFICIENCY OF THE GAS TURBINE, AT FULL LOAD, IN BTU/KW-HR, CORRECTED TO THE HIGHER HEATING VALUE (HHV) OF THE FUEL, THE AQUEOUS AMMONIA INJECTION RATE, NOX CONTROL EFFICIENCY, AND CO CONTROL EFFICIENCY OF THE APCS.
[RULE 1303(a)(1) BACT), RULE 1303(b)(1)-MODELING, RULE 1303(b)(2)-OFFSET, RULE 1401, RULE 3004(A)(4) ]

15. THE EMISSIONS FROM THE GAS TURBINE EXHAUST STACK SHALL NOT EXCEED THE FOLLOWING:

| POLLUTANT | LB/DAY |
|---|---|
| NOX (AS NO2) | 170 |
| PM10 | 36 |
| TGNMOC (AS CH4) | 12 |
| SOX (AS SO2) | 33 |

[RULE 1303(b)(2)-OFFSET]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

16. EMISSIONS OF CARBON MONOXIDE SHALL NOT EXCEED 130 PPMV, CALCULATED AT 15% OXYGEN, DRY BASIS, MEASURED AT THE STACK, EXCEPT DURING PERIOD OF STARTUP AND SHUTDOWN NOT TO EXCEED 60 MINUTES PER INCIDENT.
[RULE 1701(b)(1)-BACT]

17. EMISSIONS OF NOx SHALL NOT EXCEED 25 PPMV, CALCULATED AT 15% OXYGEN, DRY BASIS, MEASURED AT THE STACK, EXCEPT DURING PERIOD OF STARTUP AND SHUTDOWN NOT TO EXCEED 60 MINUTES PER INCIDENT.
[RULE 1303(a)(1)-BACT, 1303 (b)(1)-MODELING, 1303(b)(2)-OFFSET]

18. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS, EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING A START-UP.
[RULE 204]

19. IF THE SOURCE TEST INDICATES THAT ADDITIONAL TOXIC AIR CONTAMINANT (TAC) COMPOUNDS ARE EMITTED FROM THIS EQUIPMENT WHICH WERE NOT COVERED IN THE APPROVED TIER IV MODEL, OR THAT THE TAC EMISSION RATES ARE SIGNIFICANTLY DIFFERENT FROM THE PREVIOUSLY EVALUATED TAC EMISSIONS, THE APPLICANT SHALL RESUBMIT A TIER IV MODEL AND CALCULATE THE MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA), AND CHRONIC HAZARD INDEX (HIC) BASED ON THE SOURCE TEST RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 AND 212" (VERSION 7.0) TO DETERMINE COMPLIANCE WITH RULE 1401. THE RESULTS SHALL BE SUBMITTED TO AQMD WITHIN 90 DAYS AFTER THE INITIAL TESTING IS COMPLETED.
[RULE 1401]

20. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[ RULE 3004(a)(4) ]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

**EMISSIONS AND REQUIREMENTS**

21. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
    CO: 2000 PPMV, DRY, 15 MIN. AVG. RULE 407
    CO: 130 PPMV, DRY, 60 MIN. AVG. RULE 1701(b)(1) BACT
    NOX: 25 PPMV, @15% O2, DRY, 60 MIN. AVG., RULE 1303 BACT.
    PM: 0.1 GRAINS/DSCF, AT 12% CO2, RULE 409
    NMOC: 20PPMV, AS HEXANE@ 3%O2, OR 98% (BY WT) DESTRUCTION EFFICIENCY, RULE 1150.1, 40 CFR 60 SUBPART WWW, 40 CFR 63 SUBPART AAAA.
    SOX: 0.2% RULE 53
    SOX: 0.9 lb/MWh, OR 0.06 lb/MMBtu, 40 CFR 60 SUBPART KKKK
    NOX: 96 PPM @ 15% O2, OR 5.5 lb/MWh, 40 CFR 60 SUBPART KKKK

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 474004**
**Granted: 01-22-2010**

**Equipment Description:**

RESOURCE RECOVERY/LANDFILL GAS TO ENERGY SYSTEM NO.4 CONSISTING OF:

1. GAS TURBINE, NO.4, SOLAR, MODEL TAURUS 60 7900 SERIES, LANDFILL GAS FIRED, DRIVING A 5.6 MW GENERATOR
2. HEAT RECOVERY STEAM GENERATOR.
3. STEAM TURBINE/GENERATOR [COMMON TO SYSTEMS NO.1, 2, AND 3]

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE EXHAUST GAS IS VENTED TO AIR POLLUTION CONTROL SYSTEM NO.4 WHICH IS IN FULL OPERATION AND WHICH HAS A VALID PERMIT FROM THE AQMD.
[RULE 1303(a)(1)-BACT, RULE 1701(b)(1)-BACT, RULE 1401]

4. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO THE SCAQMD FOR PRE-INSTALLATION APPROVAL, THE GAS TURBINE FINAL DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ) AT LEAST 60 DAYS PRIOR TO INSTALLATION OF THIS EQUIPMENT
[RULE 204]

5. A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED AND MAINTAINED IN THE LANDFILL GAS SUPPLY LINE TO THE GAS TURBINE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS AND NATURAL GAS (IN SCFM) SUPPLIED.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4)]

6. THE OPERATOR SHALL MEASURE AND RECORD, THE BTU CONTENT OF THE LANDFILL GAS AT THE INLET TO EACH GAS TURBINE AT LEAST ONCE PER WEEK USING AN INSTRUMENT APPROVED BY THE SCAQMD.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4)]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

7. THE TOTAL HEAT INPUT OF LANDFILL GAS BURNED IN THE GAS TURBINE SHALL NOT EXCEED 72 MMBTU/HR, BASED ON A 24 HOURS AVERAGE. THE OPERATOR SHALL DETERMINE THE TOTAL HEAT INPUT OF THE LANDFILL GAS AT LEAST ONCE EVERY EIGHT HOURS OF OPERATION, AND MAINTAIN A LOG INDICATING THE TOTAL HIGHER HEATING VALUE OF THE LANDFILL GAS BURNED IN THE GAS TURBINE BASED ON THE RECORDED FLOW RATE AND THE LATEST BTU CONTENT READING.
[RULE 1303(b)(1)-MODELING, 1303(b) (2)-OFFSET, 3004(a)(4), RULE 1401]

8. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

9. THE OPERATOR SHALL DIRECT ALL LANDFILL GAS WHICH IS NOT BURNED IN THIS EQUIPMENT TO ANOTHER COMBUSTION OR PROCESSING FACILITY WHICH IS IN FULL USE, AND CAN ADEQUATELY PROCESS THE VOLUME OF GAS COLLECTED AND WHICH HAS BEEN ISSUED A VALID PERMIT BY THE SCAQMD.
[RULE 1303(a)(1)-BACT]

10. THE OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD WITHIN ONE HOUR AFTER OCCURRENCE OR WITHIN ONE HOUR OF THE TIME THE OPERATING PERSONNEL KNEW OR REASONABLE SHOULD HAVE KNOW OF THE OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, AND 430]

11. THE OPERATOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF SAMPLING PORTS AND WELDED NIPPLES WITH CAPS, IN THE EXHAUST STACK AND PROVIDE SAFE ACCESS TO THESE SAMPLING PORTS IN ACCORDANCE WITH RULE 217 AND SCAQMD APPROVAL.
[RULE 217]

12. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICE, TO MEASURE THE EXHAUST CONCENTRATION FOR NOX, AND O2 ON A DRY BASIS
[RULE 218, 1303(b)(1) MODELING, 1303(B)(2)-OFFSET, 3004(a)(4) ]

13. THE OPERATOR SHALL INSTALL, MAINTAIN AND OPERATE A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), WHICH IS APPROVED BY THE EXECUTIVE OFFICE, TO MEASURE THE EXHAUST CONCENTRATION FOR CO, AND O2 ON A DRY BASIS
[RULE 218, 1303(b)(1) MODELING, 1303(b)(2)-OFFSET, 3004(a)(4) ]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

14. WITHIN 180 DAYS AFTER INITIAL START-UP AND ANNUALLY (WITHIN 45 DAYS OF THE ANNIVERSARY OF THE INITIAL TEST) THEREAFTER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD FOR APPROVAL AT LEAST 30 DAYS PRIOR TO START OF THE TESTS. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO A TEST OF THE INLET AND OUTLET OF THE LANDFILL GAS TURBINE EXHAUST AIR POLLUTION CONTROL SYSTEM (APCS) AND THE INLET AND OUTLET TO THE LANDFILL GAS TREATMENT SYSTEM (LGTS) FOR:

A. METHANE AND TOTAL NON-METHANE HYDROCARBONS (INLET AND OUTLET OF THE APCS).
B. CARBON MONOXIDE (INLET AND OUTLET OF THE APCS).
C. CARBON DIOXIDE (OUTLET OF THE APCS).
D. OXIDES OF NITROGEN (INLET AND OUTLET OF THE APCS).
E. TOTAL PARTICULATES (OUTLET OF THE APCS).
F. AMMONIA (OUTLET OF THE APCS).
G. TOTAL REDUCED SULFUR, AS H2S (OUTLET OF THE LGTS).
H. FORMALDEHYDE, AND ALDEHYDES (OUTLET OF THE APCS).
I. TOXIC AIR CONTAMINANTS (INLET AND OUTLET OF THE APCS) INCLUDING BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1, 1 DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1,1,1,-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE, AND XYLENE ISOMERS.
J. OXYGEN
K. MOISTURE CONTENT
L. TEMPERATURE.
M. EXHAUST FLOW RATE.

THE REPORT SHALL PRESENT THE EMISSIONS DATA IN UNITS OF POUNDS PER HOUR (LB/HR) POUNDS PER MILLION BTU (LB/MMBTU), AND PARTS PER MILLION (PPMV) ON A DRY BASIS AT 15% O2 ( CO, NOX, AND TNMHC). THE REPORT SHALL ALSO PROVIDE THE DEMONSTRATED EFFICIENCY OF THE GAS TURBINE, AT FULL LOAD, IN BTU/KW-HR, CORRECTED TO THE HIGHER HEATING VALUE (HHV) OF THE FUEL, THE AQUEOUS AMMONIA INJECTION RATE, NOX CONTROL EFFICIENCY, AND CO CONTROL EFFICIENCY OF THE APCS.
[RULE 1303(a)(1) BACT), RULE 1303(b)(1)-MODELING, RULE 1303(b)(2)-OFFSET, RULE 1401, RULE 3004(A)(4) ]

15. THE EMISSIONS FROM THE GAS TURBINE EXHAUST STACK SHALL NOT EXCEED THE FOLLOWING:

| POLLUTANT | LB/DAY |
|---|---|
| NOX (AS NO2) | 170 |
| PM10 | 36 |
| TGNMOC (AS CH4) | 12 |
| SOX (AS SO2) | 33 |

[RULE 1303(b)(2)-OFFSET]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

16. EMISSIONS OF CARBON MONOXIDE SHALL NOT EXCEED 130 PPMV, CALCULATED AT 15% OXYGEN, DRY BASIS, MEASURED AT THE STACK, EXCEPT DURING PERIOD OF STARTUP AND SHUTDOWN NOT TO EXCEED 60 MINUTES PER INCIDENT.
[RULE 1701(b)(1)-BACT]

17. EMISSIONS OF NOx SHALL NOT EXCEED 25 PPMV, CALCULATED AT 15% OXYGEN, DRY BASIS, MEASURED AT THE STACK, EXCEPT DURING PERIOD OF STARTUP AND SHUTDOWN NOT TO EXCEED 60 MINUTES PER INCIDENT.
[RULE 1303(a)(1)-BACT, 1303 (b)(1)-MODELING, 1303(b)(2)-OFFSET]

18. THIS EQUIPMENT SHALL BE FIRED ONLY WITH LANDFILL GAS, EXCEPT WHEN PROPANE IS USED TO IGNITE THE TURBINE DURING A START-UP.
[RULE 204]

19. IF THE SOURCE TEST INDICATES THAT ADDITIONAL TOXIC AIR CONTAMINANT (TAC) COMPOUNDS ARE EMITTED FROM THIS EQUIPMENT WHICH WERE NOT COVERED IN THE APPROVED TIER IV MODEL, OR THAT THE TAC EMISSION RATES ARE SIGNIFICANTLY DIFFERENT FROM THE PREVIOUSLY EVALUATED TAC EMISSIONS, THE APPLICANT SHALL RESUBMIT A TIER IV MODEL AND CALCULATE THE MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA), AND CHRONIC HAZARD INDEX (HIC) BASED ON THE SOURCE TEST RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 AND 212" (VERSION 7.0) TO DETERMINE COMPLIANCE WITH RULE 1401. THE RESULTS SHALL BE SUBMITTED TO AQMD WITHIN 90 DAYS AFTER THE INITIAL TESTING IS COMPLETED.
[RULE 1401]

20. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[ RULE 3004(a)(4) ]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

**EMISSIONS AND REQUIREMENTS**

21. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
    CO: 2000 PPMV, DRY, 15 MIN. AVG. RULE 407
    CO: 130 PPMV, DRY, 60 MIN. AVG. RULE 1701(b)(1) BACT
    NOX: 25 PPMV, @15% O2, DRY, 60 MIN. AVG., RULE 1303 BACT.
    PM: 0.1 GRAINS/DSCF, AT 12% CO2, RULE 409
    NMOC: 20PPMV, AS HEXANE@ 3%O2, OR 98% (BY WT) DESTRUCTION EFFICIENCY, RULE 1150.1, 40 CFR 60 SUBPART WWW, 40 CFR 63 SUBPART AAAA.
    SOX: 0.2% RULE 53
    SOX: 0.9 lb/MWh, OR 0.06 lb/MMBtu, 40 CFR 60 SUBPART KKKK
    NOX: 96 PPM @ 15% O2, OR 5.5 lb/MWh, 40 CFR 60 SUBPART KKKK

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 474005**
**Granted: 01-22-2010**

**Equipment Description:**

AIR POLLUTION CONTROL SYSTEM, NO. 1, CONSISTING OF:

1. OXIDATION CATALYST,

2. AMMONIA INJECTION GRID,

3. SELECTIVE CATALYTIC REDUCTION (SCR) UNIT, PEERLESS, WITH A HONEYCOMB CERAMIC VANADIUM/TITANIUM TYPE CATALYST AND AMMONIA INJECTION,

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. PRIOR TO INSTALLATION, THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO AND OBTAIN APPROVAL FROM THE SCAQMD, THE AIR POLLUTION CONTROL SYSTEM DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ), AND OTHER VENDOR DATA. ADDITIONAL CONDITIONS MAY BE IMPOSED AS PART OF THE APPROVAL.
[RULE 204]

4. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS TEMPERATURE MEASUREMENT AND RECORDING DEVICE WITH AN ACCURACY OF PLUS OR MINUS 5 DEGREES FAHRENHEIT AT THE INLET OF SCR CATALYST BED.
[RULE 1303(a)(1)-BACT]

5. EXCEPT DURING STARTUP AND SHUTDOWN, THE OPERATOR SHALL MAINTAIN THE TEMPERATURE AT THE INLET TO THE SCR CATALYST BED BETWEEN 450 AND 800 DEG F.
[RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

6. ONCE EACH YEAR, THE OPERATOR SHALL SAMPLE AND ANALYZE THE CO OXIDATION AND NOx REDUCTION CATALYSTS TO DETERMINE THE ACTIVITY OF EACH CATALYST. THE RESULTS SHALL BE SUBMITTED TO THE AQMD (ATTENTION PERMITTING ENGINEER) WITHIN 60 DAYS AFTER EACH SAMPLING. THIS REQUIREMENT MAY BE TERMINATED OR MODIFIED AT THE TIME WHEN THE FINAL PERMIT TO OPERATE IS ISSUED OR EARLIER PROVIDED THAT A WRITTEN AUTHORIZATION IS ISSUED BY THE AQMD.
[RULE 1303(a)(1)-BACT]

7. THE OPERATOR SHALL CONTINUOUSLY ANALYZE THE AMMONIA INJECTION RATE, AND THE SCR INLET AND OUTLET NOX EMISSION RATE TO ESTIMATE THE AMMONIA CONCENTRATION IN THE SCR OUTLET, BASED ON A ONE HOUR AVERAGE.
[RULE 1303(a)(1)-BACT]

8. THE AMMONIA INJECTION SYSTEM SHALL BE EQUIPPED WITH A FULLY MODULATED AUTOMATED CONTROL SYSTEM TUNED TO MINIMIZE AMMONIA SLIP.
[RULE 1303(a)(1)-BACT]

9. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

10. THE CONCENTRATION OF AMMONIA EMISSIONS (AMMONIA SLIP) AT THE EXHAUST OUTLET SHALL NOT EXCEED 5 PPM @ 15%O2, 60 MINUTE AVERAGING TIME.
[RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 474006**
**Granted: 01-22-2010**

**Equipment Description:**

AIR POLLUTION CONTROL SYSTEM, NO. 2, CONSISTING OF:

1. OXIDATION CATALYST,

2. AMMONIA INJECTION GRID,

3. SELECTIVE CATALYTIC REDUCTION (SCR) UNIT, PEERLESS, WITH A HONEYCOMB CERAMIC VANADIUM/TITANIUM TYPE CATALYST AND AMMONIA INJECTION,

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. PRIOR TO INSTALLATION, THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO AND OBTAIN APPROVAL FROM THE SCAQMD, THE AIR POLLUTION CONTROL SYSTEM DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ), AND OTHER VENDOR DATA. ADDITIONAL CONDITIONS MAY BE IMPOSED AS PART OF THE APPROVAL.
[RULE 204]

4. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS TEMPERATURE MEASUREMENT AND RECORDING DEVICE WITH AN ACCURACY OF PLUS OR MINUS 5 DEGREES FAHRENHEIT AT THE INLET OF SCR CATALYST BED.
[RULE 1303(a)(1)-BACT]

5. EXCEPT DURING STARTUP AND SHUTDOWN, THE OPERATOR SHALL MAINTAIN THE TEMPERATURE AT THE INLET TO THE SCR CATALYST BED BETWEEN 450 AND 800 DEG F.
[RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

6. ONCE EACH YEAR, THE OPERATOR SHALL SAMPLE AND ANALYZE THE CO OXIDATION AND NOx REDUCTION CATALYSTS TO DETERMINE THE ACTIVITY OF EACH CATALYST. THE RESULTS SHALL BE SUBMITTED TO THE AQMD (ATTENTION PERMITTING ENGINEER) WITHIN 60 DAYS AFTER EACH SAMPLING. THIS REQUIREMENT MAY BE TERMINATED OR MODIFIED AT THE TIME WHEN THE FINAL PERMIT TO OPERATE IS ISSUED OR EARLIER PROVIDED THAT A WRITTEN AUTHORIZATION IS ISSUED BY THE AQMD.
[RULE 1303(a)(1)-BACT]

7. THE OPERATOR SHALL CONTINUOUSLY ANALYZE THE AMMONIA INJECTION RATE, AND THE SCR INLET AND OUTLET NOX EMISSION RATE TO ESTIMATE THE AMMONIA CONCENTRATION IN THE SCR OUTLET, BASED ON A ONE HOUR AVERAGE.
[RULE 1303(a)(1)-BACT]

8. THE AMMONIA INJECTION SYSTEM SHALL BE EQUIPPED WITH A FULLY MODULATED AUTOMATED CONTROL SYSTEM TUNED TO MINIMIZE AMMONIA SLIP.
[RULE 1303(a)(1)-BACT]

9. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

10. THE CONCENTRATION OF AMMONIA EMISSIONS (AMMONIA SLIP) AT THE EXHAUST OUTLET SHALL NOT EXCEED 5 PPM @ 15%O2, 60 MINUTE AVERAGING TIME.
[RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 474007**
**Granted: 01-22-2010**

**Equipment Description:**

AIR POLLUTION CONTROL SYSTEM, NO. 3, CONSISTING OF:

1. OXIDATION CATALYST,

2. AMMONIA INJECTION GRID,

3. SELECTIVE CATALYTIC REDUCTION (SCR) UNIT, PEERLESS, WITH A HONEYCOMB CERAMIC VANADIUM/TITANIUM TYPE CATALYST AND AMMONIA INJECTION,

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. PRIOR TO INSTALLATION, THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO AND OBTAIN APPROVAL FROM THE SCAQMD, THE AIR POLLUTION CONTROL SYSTEM DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ), AND OTHER VENDOR DATA. ADDITIONAL CONDITIONS MAY BE IMPOSED AS PART OF THE APPROVAL.
[RULE 204]

4. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS TEMPERATURE MEASUREMENT AND RECORDING DEVICE WITH AN ACCURACY OF PLUS OR MINUS 5 DEGREES FAHRENHEIT AT THE INLET OF SCR CATALYST BED.
[RULE 1303(a)(1)-BACT]

5. EXCEPT DURING STARTUP AND SHUTDOWN, THE OPERATOR SHALL MAINTAIN THE TEMPERATURE AT THE INLET TO THE SCR CATALYST BED BETWEEN 450 AND 800 DEG F.
[RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

6. ONCE EACH YEAR, THE OPERATOR SHALL SAMPLE AND ANALYZE THE CO OXIDATION AND NOx REDUCTION CATALYSTS TO DETERMINE THE ACTIVITY OF EACH CATALYST. THE RESULTS SHALL BE SUBMITTED TO THE AQMD (ATTENTION PERMITTING ENGINEER) WITHIN 60 DAYS AFTER EACH SAMPLING. THIS REQUIREMENT MAY BE TERMINATED OR MODIFIED AT THE TIME WHEN THE FINAL PERMIT TO OPERATE IS ISSUED OR EARLIER PROVIDED THAT A WRITTEN AUTHORIZATION IS ISSUED BY THE AQMD.
[RULE 1303(a)(1)-BACT]

7. THE OPERATOR SHALL CONTINUOUSLY ANALYZE THE AMMONIA INJECTION RATE, AND THE SCR INLET AND OUTLET NOX EMISSION RATE TO ESTIMATE THE AMMONIA CONCENTRATION IN THE SCR OUTLET, BASED ON A ONE HOUR AVERAGE.
[RULE 1303(a)(1)-BACT]

8. THE AMMONIA INJECTION SYSTEM SHALL BE EQUIPPED WITH A FULLY MODULATED AUTOMATED CONTROL SYSTEM TUNED TO MINIMIZE AMMONIA SLIP.
[RULE 1303(a)(1)-BACT]

9. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

10. THE CONCENTRATION OF AMMONIA EMISSIONS (AMMONIA SLIP) AT THE EXHAUST OUTLET SHALL NOT EXCEED 5 PPM @ 15%O2, 60 MINUTE AVERAGING TIME.
[RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 474008**
**Granted: 01-22-2010**

**Equipment Description:**

AIR POLLUTION CONTROL SYSTEM, NO. 4, CONSISTING OF:

1. OXIDATION CATALYST,

2. AMMONIA INJECTION GRID,

3. SELECTIVE CATALYTIC REDUCTION (SCR) UNIT, PEERLESS, WITH A HONEYCOMB CERAMIC VANADIUM/TITANIUM TYPE CATALYST AND AMMONIA INJECTION,

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. PRIOR TO INSTALLATION, THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO AND OBTAIN APPROVAL FROM THE SCAQMD, THE AIR POLLUTION CONTROL SYSTEM DESIGN DRAWINGS, P&I DIAGRAMS, CONTROL DIAGRAMS, EQUIPMENT SPECIFICATIONS (MAKE , MODEL DIMENSIONS, SIZE AND MAXIMUM CAPACITY ), AND OTHER VENDOR DATA. ADDITIONAL CONDITIONS MAY BE IMPOSED AS PART OF THE APPROVAL.
[RULE 204]

4. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS TEMPERATURE MEASUREMENT AND RECORDING DEVICE WITH AN ACCURACY OF PLUS OR MINUS 5 DEGREES FAHRENHEIT AT THE INLET OF SCR CATALYST BED.
[RULE 1303(a)(1)-BACT]

5. EXCEPT DURING STARTUP AND SHUTDOWN, THE OPERATOR SHALL MAINTAIN THE TEMPERATURE AT THE INLET TO THE SCR CATALYST BED BETWEEN 450 AND 800 DEG F.
[RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

6. ONCE EACH YEAR, THE OPERATOR SHALL SAMPLE AND ANALYZE THE CO OXIDATION AND NOx REDUCTION CATALYSTS TO DETERMINE THE ACTIVITY OF EACH CATALYST. THE RESULTS SHALL BE SUBMITTED TO THE AQMD (ATTENTION PERMITTING ENGINEER) WITHIN 60 DAYS AFTER EACH SAMPLING. THIS REQUIREMENT MAY BE TERMINATED OR MODIFIED AT THE TIME WHEN THE FINAL PERMIT TO OPERATE IS ISSUED OR EARLIER PROVIDED THAT A WRITTEN AUTHORIZATION IS ISSUED BY THE AQMD.
[RULE 1303(a)(1)-BACT]

7. THE OPERATOR SHALL CONTINUOUSLY ANALYZE THE AMMONIA INJECTION RATE, AND THE SCR INLET AND OUTLET NOX EMISSION RATE TO ESTIMATE THE AMMONIA CONCENTRATION IN THE SCR OUTLET, BASED ON A ONE HOUR AVERAGE.
[RULE 1303(a)(1)-BACT]

8. THE AMMONIA INJECTION SYSTEM SHALL BE EQUIPPED WITH A FULLY MODULATED AUTOMATED CONTROL SYSTEM TUNED TO MINIMIZE AMMONIA SLIP.
[RULE 1303(a)(1)-BACT]

9. THE OPERATOR SHALL SYNCHRONIZE ALL RECORDING DEVICES WITH RESPECT TO THE TIME OF DAY.
[RULE 204]

10. THE CONCENTRATION OF AMMONIA EMISSIONS (AMMONIA SLIP) AT THE EXHAUST OUTLET SHALL NOT EXCEED 5 PPM @ 15%O2, 60 MINUTE AVERAGING TIME.
[RULE 1303(a)(1)-BACT]

# FACILITY PERMIT TO OPERATE
# RIDGEWOOD POWER MANAGEMENT, LLC

## PERMIT TO CONSTRUCT

**A/N 487106**
**Granted: 01-22-2010**

**Equipment Description:**

STORAGE TANK, AQUEOUS AMMONIA, 12'-6" DIA. X 15'-0" H., 12,000 GALLONS CAPACITY.

**Conditions:**

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. THE MAXIMUM CONCENTRATION OF AMMONIA STORED IN THE TANK SHALL NOT EXCEED 19 PERCENT BY WEIGHT
[RULE 204]

5. THIS STORAGE TANK SHALL NOT BE FILLED UNLESS IT IS VENTED TO A VAPOR BALANCE SYSTEM WHICH TRANSFERS AMMONIA VAPORS DISPLACED FROM THE STORAGE TANK, TO THE DELIVERY TANK TRUCK.
[RULE 1303(a)(1)-BACT, RULE 1401]

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