FACILITY PERMIT TO OPERATE

BOWERMAN POWER LFG, LLC
11002 BEE CANYON ACCESS RD
IRVINE, CA 92602

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 SAFETY CODE 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.
EXECUTIVE OFFICER

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

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

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SECTION A: FACILITY INFORMATION

LEGAL OWNER &/OR OPERATOR:	BOWERMAN POWER LFG, LLC
LEGAL OPERATOR (if different than owner):	
EQUIPMENT LOCATION:	11002 BEE CANYON ACCESS RD IRVINE, CA 92602
MAILING ADDRESS:	680 ANDERSEN DR PITTSBURGH, PA 15220
RESPONSIBLE OFFICIAL:	MARTIN L. RYAN
TITLE:	VICE PRESIDENT & GENERAL COUNSEL
TELEPHONE NUMBER:	(412) 747-8718
CONTACT PERSON:	SHARON FRANK
TITLE:	MANAGER, ENVIRONMENTAL COMPLIANCE
TELEPHONE NUMBER:	(412) 747-8722
INITIAL TITLE V PERMIT ISSUED:	March 12, 2010
TITLE V PERMIT EXPIRATION DATE:	March 11, 2015

TITLE V	RECLAIM	
YES	NOx:	NO
	SOx:	NO
	CYCLE:	0
	ZONE:	COASTAL

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SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

NOT APPLICABLE

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SECTION C: FACILITY PLOT PLAN

(TO BE DEVELOPED)

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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

NONE

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SECTION E: ADMINISTRATIVE CONDITIONS

The operating conditions in this section shall apply to all permitted equipment at this facility unless superseded by condition(s) listed elsewhere in this permit.

1. The permit shall remain effective unless this permit is suspended, revoked, modified, reissued, denied, or it is expired for nonpayment of permit processing or annual operating fees. [201, 203, 209, 301]
   a. The permit must be renewed annually by paying annual operating fees, and the permit shall expire if annual operating fees are not paid pursuant to requirements of Rule 301(d). [301(d)]
   b. The Permit to Construct listed in Section H shall expire one year from the Permit to Construct issuance date, unless a Permit to Construct extension has been granted by the Executive Officer or unless the equipment has been constructed and the operator has notified the Executive Officer prior to the operation of the equipment, in which case the Permit to Construct serves as a temporary Permit to Operate. [202, 205]
   c. The Title V permit shall expire as specified under Section K of the Title V permit. The permit expiration date of the Title V facility permit does not supercede the requirements of Rule 205. [205, 3004]
2. The operator shall maintain all equipment in such a manner that ensures proper operation of the equipment. [204]
3. This permit does not authorize the emissions of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the Rules and Regulations of the AQMD. This permit cannot be considered as permission to violate existing laws, ordinances, regulations, or statutes of other governmental agencies. [204]
4. The operator shall not use equipment identified in this facility permit as being connected to air pollution control equipment unless they are so vented to the identified air pollution control equipment which is in full use and which has been included in this permit. [204]

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SECTION E: ADMINISTRATIVE CONDITIONS

5. The operator shall not use any equipment having air pollution control device(s) incorporated within the equipment unless the air pollution control device is in full operation. [204]

6. The operator shall maintain records to demonstrate compliance with rules or permit conditions that limit equipment operating parameters, or the type or quantity of material processed. These records shall be made available to AQMD personnel upon request and be maintained for at least five years. [204]

7. The operator shall maintain and operate all equipment to ensure compliance with all emission limits as specified in this facility permit. Compliance with emission limits shall be determined according to the following specifications, unless otherwise specified by AQMD rules or permit conditions: [204]

   a. For internal combustion engines and gas turbines, measured concentrations shall be corrected to 15 percent stack-gas oxygen content on a dry basis and be averaged over a period of 15 consecutive minutes; [1110.2, 1134]

   b. For other combustion devices, measured concentrations shall be corrected to 3 percent stack-gas oxygen content on a dry basis and be averaged over a period of 15 consecutive minutes; [1146, 1146.1, 204]

   c. For non-combustion sources, compliance with emission limits shall be determined and averaged over a period of 60 minutes; [204]

   d. For the purpose of determining compliance with Rule 407, carbon monoxide (CO) shall be measured on a dry basis and be averaged over 15 consecutive minutes, and sulfur compounds which would exist as liquid or gas at standard conditions shall be calculated as sulfur dioxide (SO2) and be averaged over 15 consecutive minutes; [407]

   e. For the purpose of determining compliance with Rule 409, combustion contaminant emission measurements shall be corrected to 12 percent of carbon dioxide (CO2) at standard conditions and averaged over a minimum of 15 consecutive minutes. [409]

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SECTION E: ADMINISTRATIVE CONDITIONS

f. For the purpose of determining compliance with Rule 475, combustion contaminant emission measurements shall be corrected to 3 percent of oxygen (O2) at standard conditions and averaged over 15 consecutive minutes or any other averaging time specified by the Executive Officer. [475]

8. The operator shall, when a source test is required by AQMD, provide a source test protocol to AQMD no later than 60 days before the proposed test date. The test shall not commence until the protocol is approved by AQMD. The test protocol shall contain the following information: [204, 304]

a. Brief description of the equipment tested.

b. Brief process description, including maximum and normal operating temperatures, pressures, throughput, etc.

c. Operating conditions under which the test will be performed.

d. Method of measuring operating parameters, such as fuel rate and process weight. Process schematic diagram showing the ports and sampling locations, including the dimensions of the ducts and stacks at the sampling locations, and distances of flow disturbances, (e.g. elbows, tees, fans, dampers) from the sampling locations (upstream and downstream).

e. Brief description of sampling and analytical methods used to measure each pollutant, temperature, flow rates, and moisture.

f. Description of calibration and quality assurance procedures.

g. Determination that the testing laboratory qualifies as an "independent testing laboratory" under Rule 304 (conflict of interest).

9. The operator shall submit a report no later than 60 days after conducting a source test, unless otherwise required by AQMD rules or equipment-specific conditions. The report shall contain the following information: [204]

a. The results of the source test.

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SECTION E: ADMINISTRATIVE CONDITIONS

b. Brief description of the equipment tested.

c. Operating conditions under which the test was performed.

d. Method of measuring operating parameters, such as fuel rate and process weight. Process schematic diagram showing the ports and sampling locations, including the dimensions of the ducts and stacks at the sampling locations, and distances of flow disturbances, (e.g. elbows, tees, fans, dampers) from the sampling locations (upstream and downstream).

e. Field and laboratory data forms, strip charts and analyses.

f. Calculations for volumetric flow rates, emission rates, control efficiency, and overall control efficiency.

10. The operator shall, when a source test is required, provide and maintain facilities for sampling and testing. These facilities shall comply with the requirements of AQMD Source Test Method 1.1 and 1.2. [217]

11. Whenever required to submit a written report, notification or other submittal to the Executive Officer, AQMD, or the District, the operator shall mail or deliver the material to: Deputy Executive Officer, Engineering and Compliance, AQMD, 21865 E. Copley Drive, Diamond Bar, CA 91765-4182. [204]

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SECTION F: RECLAIM MONITORING AND SOURCE TESTING REQUIREMENTS

NOT APPLICABLE

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SECTION G: RECORDKEEPING AND REPORTING REQUIREMENTS FOR RECLAIM SOURCES

NOT APPLICABLE

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

This section consists of a table listing all equipment with Permits to Construct and copies of all individual Permits to Construct issued to various equipment at the facility, and Rule 219-exempt equipment subject to source-specific requirements. Each permit 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
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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 Number
554156		LANDFILL GAS TO ENERGY SYSTEM, INTERNAL COMBUSTION ENGINE, ≤ 50 MW	5
554157		LANDFILL GAS TO ENERGY SYSTEM, INTERNAL COMBUSTION ENGINE, ≤ 50 MW	11
554158		LANDFILL GAS TO ENERGY SYSTEM, INTERNAL COMBUSTION ENGINE, ≤ 50 MW	17
554159		LANDFILL GAS TO ENERGY SYSTEM, INTERNAL COMBUSTION ENGINE, ≤ 50 MW	23
554160		LANDFILL GAS TO ENERGY SYSTEM, INTERNAL COMBUSTION ENGINE, ≤ 50 MW	29
554161		LANDFILL GAS TO ENERGY SYSTEM, INTERNAL COMBUSTION ENGINE, ≤ 50 MW	35
554162		LANDFILL GAS TO ENERGY SYSTEM, INTERNAL COMBUSTION ENGINE, ≤ 50 MW	41
554180		SELECTIVE CATALYTIC REDUCTION UNIT	47
554181		SELECTIVE CATALYTIC REDUCTION UNIT	50
554182		SELECTIVE CATALYTIC REDUCTION UNIT	53
554183		SELECTIVE CATALYTIC REDUCTION UNIT	56
554184		SELECTIVE CATALYTIC REDUCTION UNIT	59
554185		SELECTIVE CATALYTIC REDUCTION UNIT	62
554186		SELECTIVE CATALYTIC REDUCTION UNIT	65
564386		LANDFILL GAS TREATMENT SYSTEM AND SULFUR CONTROL SYSTEM	68
558566		LANDFILL GAS FLARE	72
554171		STORAGE TANK, AQUEOUS UREA SOLUTION	78

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.

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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 BURN IN EQUIPMENT REQUIRING A PERMIT TO OPERATE, PURCHASE, TRANSFER, SELL OR OFFER FOR SALE FOR USE LANDFILL GAS CONTAINING SULFUR COMPOUNDS IN EXCESS OF 150 PPMV, CALCULATED AS HYDROGEN SULFIDE, AVERAGED DAILY.
   [RULE 431.1]

3. ACCIDENTAL RELEASE PREVENTION REQUIREMENTS OF SECTION 112 (R)(7):

   IF APPLICABLE, THE OPERATOR SHALL COMPLY WITH THE ACCIDENTAL RELEASE PREVENTION REQUIREMENTS PURSUANT TO 40 CFR PART 68 AND SHALL SUBMIT TO THE EXECUTIVE OFFICER, AS PART OF ANNUAL COMPLIANCE CERTIFICATION, A STATEMENT THAT CERTIFIES COMPLIANCE WITH ALL THE REQUIREMENTS OF 40 CFR PART 68, INCLUDING THE REGISTRATION AND SUBMISSION OF A RISK MANAGEMENT PLAN (RMP).

   THE OPERATOR SHALL SUBMIT ANY ADDITIONAL RELEVANT INFORMATION REQUESTED BY THE EXECUTIVE OFFICER OR DESIGNATED AGENCY.
   [40 CFR 68 – ACCIDENTAL RELEASE PREVENTION]

4. UNLESS THE LFG TO ENERGY FACILITY HAS OBTAINED APPROVAL OF THE EPA FOR MEETING THE LFG TREATMENT DEFINITION AND EXEMPTION CRITERIA LISTED UNDER 40 CFR §60.751 AND AIR EMISSIONS STANDARDS UNDER 40 CFR §60.752(b)(2)(iii)(C), THE OWNER OR OPERATOR OF THE MUNICIPAL SOLID WASTE LANDFILL GAS (LFG) COLLECTION, CONTROL OR TREATMENT SYSTEM SHALL OPERATE ALL STATIONARY EQUIPMENT IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF 40 CFR PART 60, SUBPART WWW, AND 40 CFR PART 63 SUBPART AAAA.
   [40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA]

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5. ELECTRONIC RECORDING DEVICE SHALL ARCHIVE DATA IN A SECURE ENCRYPTED FORMAT TO NONVOLATILE DATA STORAGE. INSTANTANEOUS READINGS SHALL BE RECORDED AT A FREQUENCY OF NOT LESS THAN ONCE PER MINUTE. THE RECORDER/SOFTWARE SHALL BE CAPABLE OF DISPLAYING AND PRINTING OUT PLOTS OF DATA WITHIN THREE HOURS OF A REQUEST. WHERE EXTERNAL STORAGE MEDIA IS USED, IT SHALL BE REPLACED AT A SUFFICIENT FREQUENCY TO ENSURE THAT THE AMOUNT OF STORED DATA IS AT NO MORE THAN 90% OF THE STORAGE CAPACITY OF THE MEDIA.
[RULE 204, 3004 (a)(4)]

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PERMIT TO CONSTRUCT

A/N 554156

Equipment Description:

LANDFILL GAS CONTROL AND GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.

2. INTERNAL COMBUSTION ENGINE, NO. 1, CATERPILLAR, MODEL NO. CG260, LANDFILL GAS FUELED, FOUR CYCLES, SIXTEEN CYLINDERS, LEAN BURN, TURBOCHARGED, RATED AT 4650 B.H.P., DRIVING AN ELECTRICAL GENERATOR WITH A GROSS ELECTRICAL OUTPUT OF 3.37 MW.

3. EXHAUST STACK, 2' - 6" DIA., CONVERGING INTO A COMMON EXHAUST STACK ENCLOSURE WITH SIX OTHER EXHAUST STACKS, 12' - 0" DIA. X 48' - 0" H.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1110.2 (AMENDED 9/7/2012) AND RULE 1150.1, WHETHER OR NOT EXPLICITLY STATED ON THIS PERMIT.
[RULE 204, 1110.2, 1150.1]

5) THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO AN AIR POLLUTION CONTROL SYSTEM WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED A PERMIT TO CONSTRUCT/OPERATE BY THE EXECUTIVE OFFICER, EXCEPT DURING ENGINE COLD START-UPS AND SHUT-DOWNS.
[RULE 204]

6) THIS ENGINE SHALL BE FIRED WITH LANDFILL GAS ONLY.
[RULE 204, 1303(b)(2)-OFFSET]

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7) THE OPERATOR SHALL COMBUST IN THIS ENGINE ONLY LANDFILL GAS THAT DOES NOT CONTAIN SULFUR COMPOUNDS, CALCULATED AS H2S, IN EXCESS OF 85 PPMV AVERAGED DAILY, AND 60 PPMV AVERAGED MONTHLY. COMPLIANCE WITH THIS SULFUR CONCENTRATION LIMIT SHALL BE DEMONSTRATED USING THE READINGS ON TOTAL REDUCED SULFUR (IN PPMV) OBTAINED FROM THE CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) THAT IS INSTALLED DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND THE LANDFILL GAS TREATMENT SYSTEM, AT THE INLET GAS SUPPLY LINE TO THE ENGINES. [RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET]

8) THE ENGINE EMISSIONS SHALL NOT EXCEED THE FOLLOWING LIMITS (EXCEPT DURING PERIODS OF START-UP AND SHUTDOWN WHICH SHALL NOT EXCEED 30 MINUTES PER INCIDENT):

POLLUTANT	PPMV @15%O2, DRY	LBS/HOUR
VOLATILE ORGANIC COMPOUNDS (VOC)	30	1.21
OXIDES OF NITROGEN (NOX)	11	1.28
CARBON MONOXIDE (CO)	250	17.71
SULFUR OXIDES (SOX)	60 PPM SULFUR AS H2S (INLET) AVERAGED MONTHLY	0.62
PM10		0.676

NOX AND CO SHALL BE AVERAGED OVER 15 MINUTES. VOC SHALL BE AVERAGED OVER THE SAMPLING TIME REQUIRED BY THE TEST METHOD.
[RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET, 1110.2, 40 CFR PART 63 SUBPART ZZZZ, 40 CFR PART 60 Subpart JJJJ]

9) THIS ENGINE SHALL NOT EMIT ANY SINGLE HAZARDOUS AIR POLLUTANT (HAP) IN EXCESS OF 10 TONS PER YEAR, OR, ANY COMBINATION OF HAPS IN EXCESS OF 25 TONS PER YEAR. THE OPERATOR SHALL DEMONSTRATE COMPLIANCE WITH THIS PERMIT CONDITION BY CONDUCTING SOURCE TESTS OF HAPS, AS LISTED IN SECTION 112(B) OF THE CLEAN AIR ACT OR IN RULE 1150.1, IN ACCORDANCE WITH THE SCHEDULE AND TEST PROCEDURES SPECIFIED IN PERMIT CONDITION NO. 21, AS FOUND IN THE POST-CONTROL ENGINE EXHAUST.
[40 CFR PART 63 SUBPART ZZZZ]

10) A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN STANDARD CUBIC FEET PER MINUTE) BEING SUPPLIED TO THE ENGINE. THE RECORDING DEVICE SHALL BE CAPABLE OF RECORDING GAS FLOW AT LEAST EVERY 15 MINUTES.
[RULE 1150.1, 1303(b)(2)-OFFSET, 40 CFR PART 60 SUBPART WWW]

11) THE HEAT INPUT RATE FOR THE LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 29.91 MILLION BTU'S PER HOUR. THE OPERATOR SHALL MAINTAIN AN ELECTRONIC DATA ACQUISITION SYSTEM OR OTHER ELECTRONIC LOG TO RECORD THE AVERAGE HOURLY LANDFILL GAS FLOW RATE BASED ON READINGS TAKEN EVERY 15-MINUTE INTERVALS. THE HIGH HEATING VALUE (HHV) AND PERCENT METHANE CONTENT OF THE LANDFILL GAS SHALL BE MEASURED AT LEAST ONCE PER WEEK. THE HOURLY AVERAGE HEAT INPUT RATE (MMBTU/HOUR) SHALL BE CALCULATED BASED ON THE AVERAGE HOURLY LFG FLOW RATE, HHV AND PERCENT METHANE.
[RULE 1303(b) (2)-OFFSET]

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12) GAS QUALITY PARAMETERS, INCLUDING BUT NOT LIMITED TO LFG HIGH HEATING VALUE AND METHANE PERCENT, SHALL BE MONITORED AND MEASURED USING AN INSTRUMENT APPROVED BY THE SCAQMD. THE MONITOR SHALL BE LOCATED AT THE INLET HEADER TO ALL LFG I.C. ENGINES. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b) (2)-OFFSET]

13) THIS EQUIPMENT SHALL EITHER REDUCE THE NON-METHANE ORGANIC COMPOUNDS (NMOC) BY AT LEAST 98 PERCENT BY WEIGHT OR REDUCE THE OUTLET NMOC CONCENTRATION TO LESS THAN 20 PPM BY VOLUME, DRY BASIS AS HEXANE AT 3 PERCENT OXYGEN. THE OPERATOR OF THIS FACILITY DOES NOT HAVE TO COMPLY WITH THE REQUIREMENTS OF 40 CFR PART 60 SUBPART WWW IF THE FACILITY HAS RECEIVED AN APPROVED TREATMENT EXEMPTION FROM THE USEPA.
[RULE 1150.1, 40 CFR PART 60 SUBPART WWW]

14) THIS EQUIPMENT SHALL REDUCE THE OUTLET METHANE CONCENTRATION TO LESS THAN 3000 PPMV, DRY BASIS, CORRECTED TO 15 PERCENT OXYGEN.
[RULE 1150.1]

15) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) CAPABLE OF MEASURING AND MONITORING NOX AND CO EMISSIONS SHALL BE INSTALLED, MAINTAINED AND OPERATED. THIS CEMS SHALL:

A. COMPLY WITH ALL APPLICABLE SPECIFICATIONS, CERTIFICATION, OPERATION, RECORDKEEPING, QUALITY ASSURANCE, REPORTING, PERFORMANCE AND TESTING REQUIREMENTS OF SCAQMD RULES 218 AND 218.1.

B. CONTINOUSLY MEASURE AND RECORD NOX, CO AND O2 EXHAUST GAS CONCENTRATIONS, UNCORRECTED AND CORRECTED TO 15 PERCENT OXYGEN ON A DRY BASIS.

C. HAVE DATA GATHERING AND RETRIEVAL CAPABILITY THAT HAS BEEN APPROVED BY THE DISTRICT. DATA SHALL BE RECORDED ON A STRIP CHART OR STORED ELECTRONICALLY. IF DATA IS ELECTRONICALLY STORED, THE OPERATOR SHALL PROVIDE FOR DATA STORAGE REDUNDANCY OF AT LEAST 15 DAYS AND SHALL DEMONSTRATE TO THE EXECUTIVE OFFICER THAT THE STORED ELECTRONIC DATA IS EQUIVALENT TO THE STRIP CHART DATA.

D. BE TESTED FOR RELATIVE ACCURACY AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST, IN ACCORDANCE WITH RULE 1110.2 (F)(1)(C)(I) – AMENDED 2/1/2008. THE MINIMUM SAMPLING TIME FOR EACH RELATIVE ACCURACY TEST SHALL BE 15 MINUTES.

E. PRIOR TO INSTALLATION OR MODIFICATION, THIS CEMS MONITORING SYSTEM SHALL BE CERTIFIED AND APPROVED IN WRITING BY THE EXECUTIVE OFFICER.

[RULE 1110.2, 218, 218.1, 3004 (a)(4)]

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16) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL THE MONITORING, TESTING, RECORDKEEPING AND REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1) – AMENDED 9/7/2012, AS OUTLINED BELOW:

A. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER ON THE ENGINE (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.

B. CONDUCT SOURCE TESTING FOR VOC REPORTED AS CARBON CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS, AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST.

THE SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE).

THE OPERATOR SHALL USE ONLY A SOURCE TEST CONTRACTOR THAT IS APPROVED BY THE EXECUTIVE OFFICER UNDER THE DISTRICT'S LABORATORY APPROVAL PROGRAM (LAP) FOR THE NECESSARY TEST METHODS. THE OPERATOR SHALL COMPLY WITH THE PROCEDURES STATED IN RULE 1110.2 (F)(1)(C)(IV) THROUGH (VII) – AMENDED 2/1/2008, REGARDING THE SUBMITTAL OF SOURCE TEST PROTOCOL, SOURCE TEST REPORTS AND UTILITIES FOR SAMPLING AND TESTING EQUIPMENT.

C. MAINTAIN A MONTHLY OPERATING ENGINE LOG (ELECTRONIC LOG IS ACCEPTABLE) THAT INCLUDES:

(i) TOTAL HOURS OF OPERATION,
(ii) TYPE OF GASEOUS FUEL,
(iii) FUEL CONSUMPTION (CUBIC FEET OF GAS), AND
(iv) CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (f)(1)(C) OF RULE 1110.2 - AMENDED 9/7/2012.

THE LOG SHALL BE MADE AVAILABLE FOR INSPECTION AT ANY TIME.

D. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1)(H)(I) THROUGH (III) – AMENDED 2/1/2008, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.

[RULE 1110.2]

17) 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, 431.1, 1150.1]

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18) TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE ENGINE EXHAUST 8 TO 10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AT 90 DEGREES APART, AND SHALL CONSIST OF TWO 2-1/2 INCH WELDED NIPPLES WITH CAPS. 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]

19) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF THE ENERGY AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]

20) THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE WITH THE ABILITY OF THE LANDFILL OPERATOR/OWNER TO COMPLY WITH SCAQMD RULE 1150.1 OR ANY OTHER DISTRICT, STATE OR FEDERAL RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

21) WITHIN 180 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 WITH WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD TEN (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 60 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)
E. TOTAL PARTICULATES (EXHAUST ONLY)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
H. CARBON DIOXIDE
I. ALDEHYDES (EXHAUST ONLY)
J. RULE 1150.1 TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1,1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, VINYL CHLORIDE, ACETALDEHYDE, FORMALDEHYDE, 1,4-DIOXANE AND XYLENE ISOMERS.
K. OXYGEN
L. NITROGEN
M. MOISTURE CONTENT
N. TEMPERATURE

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O. FLOW RATE
P. NMOC DESTRUCTION EFFICIENCY
Q. METHANE DESTRUCTION EFFICIENCY
R. BTU CONTENT (INLET ONLY)
[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET]

22) ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY. [RULE 1303(b) (2)-OFFSET]

23) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 3004 (a)(4), 1110.2, 40 CFR PART 60 SUBPART WWW]

24) PERTAINING TO THE OPERATION OF THIS EQUIPMENT, THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING CODE OF FEDERAL REGULATIONS: TITLE 40 PART 60 SUBPART WWW - STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART AAAA - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART ZZZZ - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES; AND TITLE 40 PART 60 SUBPART JJJJ - STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES.
[40 CFR PART 60 SUBPARTS WWW AND JJJJ, 40 CFR PART 63 SUBPARTS AAAA AND ZZZZ]

Emissions and Requirements:

25) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV @15% O_2, DRY, RULE 1110.2
CO: 250 PPMV @15% O_2, DRY, RULE 1303 (a)(1)-BACT
CO: 610 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NOx: 36 PPMV @15% O_2, DRY, RULE 1110.2, ECF = 1
NOx: 11 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
NOx: 150 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NMOC: 20 PPMV, AS HEXANE, @3% O_2, DRY, OR 98% BY WEIGHT REDUCTION, RULE 1150.1, 40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.066 GRAMS/BHP-HR, 1303 (a)(1)-BACT
ROG: 40 PPMV @15% O_2, DRY, RULE 1110.2
ROG: 30 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
ROG: 80 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
SOx: BASED ON 60 PPMV SULFUR AVERAGED MONTHLY, AS H_2S, CONCENTRATION IN LFG AT INLET, 1303(a)(1)-BACT

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554157

Equipment Description:

LANDFILL GAS CONTROL AND GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.

2. INTERNAL COMBUSTION ENGINE, NO. 2, CATERPILLAR, MODEL NO. CG260, LANDFILL GAS FUELED, FOUR CYCLES, SIXTEEN CYLINDERS, LEAN BURN, TURBOCHARGED, RATED AT 4650 B.H.P., DRIVING AN ELECTRICAL GENERATOR WITH A GROSS ELECTRICAL OUTPUT OF 3.37 MW.

3. EXHAUST STACK, 2' - 6" DIA., CONVERGING INTO A COMMON EXHAUST STACK ENCLOSURE WITH SIX OTHER EXHAUST STACKS, 12' - 0" DIA. X 48' - 0" H.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1110.2 (AMENDED 9/7/2012) AND RULE 1150.1, WHETHER OR NOT EXPLICITLY STATED ON THIS PERMIT.
[RULE 204, 1110.2, 1150.1]

5) THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO AN AIR POLLUTION CONTROL SYSTEM WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED A PERMIT TO CONSTRUCT/OPERATE BY THE EXECUTIVE OFFICER, EXCEPT DURING ENGINE COLD START-UPS AND SHUT-DOWNS.
[RULE 204]

6) THIS ENGINE SHALL BE FIRED WITH LANDFILL GAS ONLY.
[RULE 204, 1303(b)(2)-OFFSET]

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7) THE OPERATOR SHALL COMBUST IN THIS ENGINE ONLY LANDFILL GAS THAT DOES NOT CONTAIN SULFUR COMPOUNDS, CALCULATED AS H2S, IN EXCESS OF 85 PPMV AVERAGED DAILY, AND 60 PPMV AVERAGED MONTHLY. COMPLIANCE WITH THIS SULFUR CONCENTRATION LIMIT SHALL BE DEMONSTRATED USING THE READINGS ON TOTAL REDUCED SULFUR (IN PPMV) OBTAINED FROM THE CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) THAT IS INSTALLED DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND THE LANDFILL GAS TREATMENT SYSTEM, AT THE INLET GAS SUPPLY LINE TO THE ENGINES. [RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET]

8) THE ENGINE EMISSIONS SHALL NOT EXCEED THE FOLLOWING LIMITS (EXCEPT DURING PERIODS OF START-UP AND SHUTDOWN WHICH SHALL NOT EXCEED 30 MINUTES PER INCIDENT):

POLLUTANT	PPMV @15%O2, DRY	LBS/HOUR
VOLATILE ORGANIC COMPOUNDS (VOC)	30	1.21
OXIDES OF NITROGEN (NOX)	11	1.28
CARBON MONOXIDE (CO)	250	17.71
SULFUR OXIDES (SOX)	60 PPM SULFUR AS H2S (INLET) AVERAGED MONTHLY	0.62
PM10		0.676

NOX AND CO SHALL BE AVERAGED OVER 15 MINUTES. VOC SHALL BE AVERAGED OVER THE SAMPLING TIME REQUIRED BY THE TEST METHOD.
[RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET, 1110.2, 40 CFR PART 63 SUBPART ZZZZ, 40 CFR PART 60 Subpart JJJJ]

9) THIS ENGINE SHALL NOT EMIT ANY SINGLE HAZARDOUS AIR POLLUTANT (HAP) IN EXCESS OF 10 TONS PER YEAR, OR, ANY COMBINATION OF HAPS IN EXCESS OF 25 TONS PER YEAR. THE OPERATOR SHALL DEMONSTRATE COMPLIANCE WITH THIS PERMIT CONDITION BY CONDUCTING SOURCE TESTS OF HAPS, AS LISTED IN SECTION 112(B) OF THE CLEAN AIR ACT OR IN RULE 1150.1, IN ACCORDANCE WITH THE SCHEDULE AND TEST PROCEDURES SPECIFIED IN PERMIT CONDITION NO. 21, AS FOUND IN THE POST-CONTROL ENGINE EXHAUST.
[40 CFR PART 63 SUBPART ZZZZ]

10) A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN STANDARD CUBIC FEET PER MINUTE) BEING SUPPLIED TO THE ENGINE. THE RECORDING DEVICE SHALL BE CAPABLE OF RECORDING GAS FLOW AT LEAST EVERY 15 MINUTES.
[RULE 1150.1, 1303(b)(2)-OFFSET, 40 CFR PART 60 SUBPART WWW]

11) THE HEAT INPUT RATE FOR THE LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 29.91 MILLION BTU'S PER HOUR. THE OPERATOR SHALL MAINTAIN AN ELECTRONIC DATA ACQUISITION SYSTEM OR OTHER ELECTRONIC LOG TO RECORD THE AVERAGE HOURLY LANDFILL GAS FLOW RATE BASED ON READINGS TAKEN EVERY 15-MINUTE INTERVALS. THE HIGH HEATING VALUE (HHV) AND PERCENT METHANE CONTENT OF THE LANDFILL GAS SHALL BE MEASURED AT LEAST ONCE PER WEEK. THE HOURLY AVERAGE HEAT INPUT RATE (MMBTU/HOUR) SHALL BE CALCULATED BASED ON THE AVERAGE HOURLY LFG FLOW RATE, HHV AND PERCENT METHANE.
[RULE 1303(b) (2)-OFFSET]

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12) GAS QUALITY PARAMETERS, INCLUDING BUT NOT LIMITED TO LFG HIGH HEATING VALUE AND METHANE PERCENT, SHALL BE MONITORED AND MEASURED USING AN INSTRUMENT APPROVED BY THE SCAQMD. THE MONITOR SHALL BE LOCATED AT THE INLET HEADER TO ALL LFG I.C. ENGINES. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b) (2)-OFFSET]

13) THIS EQUIPMENT SHALL EITHER REDUCE THE NON-METHANE ORGANIC COMPOUNDS (NMOC) BY AT LEAST 98 PERCENT BY WEIGHT OR REDUCE THE OUTLET NMOC CONCENTRATION TO LESS THAN 20 PPM BY VOLUME, DRY BASIS AS HEXANE AT 3 PERCENT OXYGEN. THE OPERATOR OF THIS FACILITY DOES NOT HAVE TO COMPLY WITH THE REQUIREMENTS OF 40 CFR PART 60 SUBPART WWW IF THE FACILITY HAS RECEIVED AN APPROVED TREATMENT EXEMPTION FROM THE USEPA.
[RULE 1150.1, 40 CFR PART 60 SUBPART WWW]

14) THIS EQUIPMENT SHALL REDUCE THE OUTLET METHANE CONCENTRATION TO LESS THAN 3000 PPMV, DRY BASIS, CORRECTED TO 15 PERCENT OXYGEN.
[RULE 1150.1]

15) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) CAPABLE OF MEASURING AND MONITORING NOX AND CO EMISSIONS SHALL BE INSTALLED, MAINTAINED AND OPERATED. THIS CEMS SHALL:

A. COMPLY WITH ALL APPLICABLE SPECIFICATIONS, CERTIFICATION, OPERATION, RECORDKEEPING, QUALITY ASSURANCE, REPORTING, PERFORMANCE AND TESTING REQUIREMENTS OF SCAQMD RULES 218 AND 218.1.

B. CONTINOUSLY MEASURE AND RECORD NOX, CO AND O2 EXHAUST GAS CONCENTRATIONS, UNCORRECTED AND CORRECTED TO 15 PERCENT OXYGEN ON A DRY BASIS.

C. HAVE DATA GATHERING AND RETRIEVAL CAPABILITY THAT HAS BEEN APPROVED BY THE DISTRICT. DATA SHALL BE RECORDED ON A STRIP CHART OR STORED ELECTRONICALLY. IF DATA IS ELECTRONICALLY STORED, THE OPERATOR SHALL PROVIDE FOR DATA STORAGE REDUNDANCY OF AT LEAST 15 DAYS AND SHALL DEMONSTRATE TO THE EXECUTIVE OFFICER THAT THE STORED ELECTRONIC DATA IS EQUIVALENT TO THE STRIP CHART DATA.

D. BE TESTED FOR RELATIVE ACCURACY AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST, IN ACCORDANCE WITH RULE 1110.2 (F)(1)(C)(I) – AMENDED 2/1/2008. THE MINIMUM SAMPLING TIME FOR EACH RELATIVE ACCURACY TEST SHALL BE 15 MINUTES.

E. PRIOR TO INSTALLATION OR MODIFICATION, THIS CEMS MONITORING SYSTEM SHALL BE CERTIFIED AND APPROVED IN WRITING BY THE EXECUTIVE OFFICER.
[RULE 1110.2, 218, 218.1, 3004 (a)(4)]

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16) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL THE MONITORING, TESTING, RECORDKEEPING AND REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1) – AMENDED 9/7/2012, AS OUTLINED BELOW:

A. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER ON THE ENGINE (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.

B. CONDUCT SOURCE TESTING FOR VOC REPORTED AS CARBON CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS, AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST.

THE SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE).

THE OPERATOR SHALL USE ONLY A SOURCE TEST CONTRACTOR THAT IS APPROVED BY THE EXECUTIVE OFFICER UNDER THE DISTRICT'S LABORATORY APPROVAL PROGRAM (LAP) FOR THE NECESSARY TEST METHODS. THE OPERATOR SHALL COMPLY WITH THE PROCEDURES STATED IN RULE 1110.2 (F)(1)(C)(IV) THROUGH (VII) – AMENDED 2/1/2008, REGARDING THE SUBMITTAL OF SOURCE TEST PROTOCOL, SOURCE TEST REPORTS AND UTILITIES FOR SAMPLING AND TESTING EQUIPMENT.

C. MAINTAIN A MONTHLY OPERATING ENGINE LOG (ELECTRONIC LOG IS ACCEPTABLE) THAT INCLUDES:

(i) TOTAL HOURS OF OPERATION,
(ii) TYPE OF GASEOUS FUEL,
(iii) FUEL CONSUMPTION (CUBIC FEET OF GAS), AND
(iv) CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (f)(1)(C) OF RULE 1110.2 - AMENDED 9/7/2012.

THE LOG SHALL BE MADE AVAILABLE FOR INSPECTION AT ANY TIME.

D. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1)(H)(I) THROUGH (III) – AMENDED 2/1/2008, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.

[RULE 1110.2]

17) 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, 431.1, 1150.1]

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18) TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE ENGINE EXHAUST 8 TO 10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AT 90 DEGREES APART, AND SHALL CONSIST OF TWO 2-1/2 INCH WELDED NIPPLES WITH CAPS. 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]

19) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF THE ENERGY AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]

20) THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE WITH THE ABILITY OF THE LANDFILL OPERATOR/OWNER TO COMPLY WITH SCAQMD RULE 1150.1 OR ANY OTHER DISTRICT, STATE OR FEDERAL RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

21) WITHIN 180 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 WITH WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD TEN (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 60 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)
E. TOTAL PARTICULATES (EXHAUST ONLY)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
H. CARBON DIOXIDE
I. ALDEHYDES (EXHAUST ONLY)
J. RULE 1150.1 TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1,1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, VINYL CHLORIDE, ACETALDEHYDE, FORMALDEHYDE, 1,4-DIOXANE AND XYLENE ISOMERS.
K. OXYGEN
L. NITROGEN
M. MOISTURE CONTENT
N. TEMPERATURE

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

O. FLOW RATE
P. NMOC DESTRUCTION EFFICIENCY
Q. METHANE DESTRUCTION EFFICIENCY
R. BTU CONTENT (INLET ONLY)
[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET]

22) ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY. [RULE 1303(b) (2)-OFFSET]

23) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 3004 (a)(4), 1110.2, 40 CFR PART 60 SUBPART WWW]

24) PERTAINING TO THE OPERATION OF THIS EQUIPMENT, THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING CODE OF FEDERAL REGULATIONS: TITLE 40 PART 60 SUBPART WWW - STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART AAAA - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART ZZZZ - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES; AND TITLE 40 PART 60 SUBPART JJJ - STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES.
[40 CFR PART 60 SUBPARTS WWW AND JJJJ, 40 CFR PART 63 SUBPARTS AAAA AND ZZZZ]

Emissions and Requirements:

25) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV @15% O_2, DRY, RULE 1110.2
CO: 250 PPMV @15% O_2, DRY, RULE 1303 (a)(1)-BACT
CO: 610 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NOx: 36 PPMV @15% O_2, DRY, RULE 1110.2, ECF = 1
NOx: 11 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
NOx: 150 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NMOC: 20 PPMV, AS HEXANE, @3% O_2, DRY, OR 98% BY WEIGHT REDUCTION, RULE 1150.1, 40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.066 GRAMS/BHP-HR, 1303 (a)(1)-BACT
ROG: 40 PPMV @15% O_2, DRY, RULE 1110.2
ROG: 30 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
ROG: 80 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
SOx: BASED ON 60 PPMV SULFUR AVERAGED MONTHLY, AS H_2S, CONCENTRATION IN LFG AT INLET, 1303(a)(1)-BACT

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554158

Equipment Description:

LANDFILL GAS CONTROL AND GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.

2. INTERNAL COMBUSTION ENGINE, NO. 3, CATERPILLAR, MODEL NO. CG260, LANDFILL GAS FUELED, FOUR CYCLES, SIXTEEN CYLINDERS, LEAN BURN, TURBOCHARGED, RATED AT 4650 B.H.P., DRIVING AN ELECTRICAL GENERATOR WITH A GROSS ELECTRICAL OUTPUT OF 3.37 MW.

3. EXHAUST STACK, 2' - 6" DIA., CONVERGING INTO A COMMON EXHAUST STACK ENCLOSURE WITH SIX OTHER EXHAUST STACKS, 12' - 0" DIA. X 48' - 0" H.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1110.2 (AMENDED 9/7/2012) AND RULE 1150.1, WHETHER OR NOT EXPLICITLY STATED ON THIS PERMIT.
[RULE 204, 1110.2, 1150.1]

5) THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO AN AIR POLLUTION CONTROL SYSTEM WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED A PERMIT TO CONSTRUCT/OPERATE BY THE EXECUTIVE OFFICER, EXCEPT DURING ENGINE COLD START-UPS AND SHUT-DOWNS.
[RULE 204]

6) THIS ENGINE SHALL BE FIRED WITH LANDFILL GAS ONLY.
[RULE 204, 1303(b)(2)-OFFSET]

FACILITY PERMIT TO OPERATE
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7) THE OPERATOR SHALL COMBUST IN THIS ENGINE ONLY LANDFILL GAS THAT DOES NOT CONTAIN SULFUR COMPOUNDS, CALCULATED AS H2S, IN EXCESS OF 85 PPMV AVERAGED DAILY, AND 60 PPMV AVERAGED MONTHLY. COMPLIANCE WITH THIS SULFUR CONCENTRATION LIMIT SHALL BE DEMONSTRATED USING THE READINGS ON TOTAL REDUCED SULFUR (IN PPMV) OBTAINED FROM THE CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) THAT IS INSTALLED DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND THE LANDFILL GAS TREATMENT SYSTEM, AT THE INLET GAS SUPPLY LINE TO THE ENGINES. [RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET]

8) THE ENGINE EMISSIONS SHALL NOT EXCEED THE FOLLOWING LIMITS (EXCEPT DURING PERIODS OF START-UP AND SHUTDOWN WHICH SHALL NOT EXCEED 30 MINUTES PER INCIDENT):

POLLUTANT	PPMV @15%O2, DRY	LBS/HOUR
VOLATILE ORGANIC COMPOUNDS (VOC)	30	1.21
OXIDES OF NITROGEN (NOX)	11	1.28
CARBON MONOXIDE (CO)	250	17.71
SULFUR OXIDES (SOX)	60 PPM SULFUR AS H2S (INLET) AVERAGED MONTHLY	0.62
PM10		0.676

NOX AND CO SHALL BE AVERAGED OVER 15 MINUTES. VOC SHALL BE AVERAGED OVER THE SAMPLING TIME REQUIRED BY THE TEST METHOD.
[RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET, 1110.2, 40 CFR PART 63 SUBPART ZZZZ, 40 CFR PART 60 Subpart JJJJ]

9) THIS ENGINE SHALL NOT EMIT ANY SINGLE HAZARDOUS AIR POLLUTANT (HAP) IN EXCESS OF 10 TONS PER YEAR, OR, ANY COMBINATION OF HAPS IN EXCESS OF 25 TONS PER YEAR. THE OPERATOR SHALL DEMONSTRATE COMPLIANCE WITH THIS PERMIT CONDITION BY CONDUCTING SOURCE TESTS OF HAPS, AS LISTED IN SECTION 112(B) OF THE CLEAN AIR ACT OR IN RULE 1150.1, IN ACCORDANCE WITH THE SCHEDULE AND TEST PROCEDURES SPECIFIED IN PERMIT CONDITION NO. 21, AS FOUND IN THE POST-CONTROL ENGINE EXHAUST.
[40 CFR PART 63 SUBPART ZZZZ]

10) A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN STANDARD CUBIC FEET PER MINUTE) BEING SUPPLIED TO THE ENGINE. THE RECORDING DEVICE SHALL BE CAPABLE OF RECORDING GAS FLOW AT LEAST EVERY 15 MINUTES.
[RULE 1150.1, 1303(b)(2)-OFFSET, 40 CFR PART 60 SUBPART WWW]

11) THE HEAT INPUT RATE FOR THE LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 29.91 MILLION BTU'S PER HOUR. THE OPERATOR SHALL MAINTAIN AN ELECTRONIC DATA ACQUISITION SYSTEM OR OTHER ELECTRONIC LOG TO RECORD THE AVERAGE HOURLY LANDFILL GAS FLOW RATE BASED ON READINGS TAKEN EVERY 15-MINUTE INTERVALS. THE HIGH HEATING VALUE (HHV) AND PERCENT METHANE CONTENT OF THE LANDFILL GAS SHALL BE MEASURED AT LEAST ONCE PER WEEK. THE HOURLY AVERAGE HEAT INPUT RATE (MMBTU/HOUR) SHALL BE CALCULATED BASED ON THE AVERAGE HOURLY LFG FLOW RATE, HHV AND PERCENT METHANE.
[RULE 1303(b) (2)-OFFSET]

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12) GAS QUALITY PARAMETERS, INCLUDING BUT NOT LIMITED TO LFG HIGH HEATING VALUE AND METHANE PERCENT, SHALL BE MONITORED AND MEASURED USING AN INSTRUMENT APPROVED BY THE SCAQMD. THE MONITOR SHALL BE LOCATED AT THE INLET HEADER TO ALL LFG I.C. ENGINES. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b) (2)-OFFSET]

13) THIS EQUIPMENT SHALL EITHER REDUCE THE NON-METHANE ORGANIC COMPOUNDS (NMOC) BY AT LEAST 98 PERCENT BY WEIGHT OR REDUCE THE OUTLET NMOC CONCENTRATION TO LESS THAN 20 PPM BY VOLUME, DRY BASIS AS HEXANE AT 3 PERCENT OXYGEN. THE OPERATOR OF THIS FACILITY DOES NOT HAVE TO COMPLY WITH THE REQUIREMENTS OF 40 CFR PART 60 SUBPART WWW IF THE FACILITY HAS RECEIVED AN APPROVED TREATMENT EXEMPTION FROM THE USEPA.
[RULE 1150.1, 40 CFR PART 60 SUBPART WWW]

14) THIS EQUIPMENT SHALL REDUCE THE OUTLET METHANE CONCENTRATION TO LESS THAN 3000 PPMV, DRY BASIS, CORRECTED TO 15 PERCENT OXYGEN.
[RULE 1150.1]

15) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) CAPABLE OF MEASURING AND MONITORING NOX AND CO EMISSIONS SHALL BE INSTALLED, MAINTAINED AND OPERATED. THIS CEMS SHALL:

A. COMPLY WITH ALL APPLICABLE SPECIFICATIONS, CERTIFICATION, OPERATION, RECORDKEEPING, QUALITY ASSURANCE, REPORTING, PERFORMANCE AND TESTING REQUIREMENTS OF SCAQMD RULES 218 AND 218.1.

B. CONTINOUSLY MEASURE AND RECORD NOX, CO AND O2 EXHAUST GAS CONCENTRATIONS, UNCORRECTED AND CORRECTED TO 15 PERCENT OXYGEN ON A DRY BASIS.

C. HAVE DATA GATHERING AND RETRIEVAL CAPABILITY THAT HAS BEEN APPROVED BY THE DISTRICT. DATA SHALL BE RECORDED ON A STRIP CHART OR STORED ELECTRONICALLY. IF DATA IS ELECTRONICALLY STORED, THE OPERATOR SHALL PROVIDE FOR DATA STORAGE REDUNDANCY OF AT LEAST 15 DAYS AND SHALL DEMONSTRATE TO THE EXECUTIVE OFFICER THAT THE STORED ELECTRONIC DATA IS EQUIVALENT TO THE STRIP CHART DATA.

D. BE TESTED FOR RELATIVE ACCURACY AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST, IN ACCORDANCE WITH RULE 1110.2 (F)(1)(C)(I) – AMENDED 2/1/2008. THE MINIMUM SAMPLING TIME FOR EACH RELATIVE ACCURACY TEST SHALL BE 15 MINUTES.

E. PRIOR TO INSTALLATION OR MODIFICATION, THIS CEMS MONITORING SYSTEM SHALL BE CERTIFIED AND APPROVED IN WRITING BY THE EXECUTIVE OFFICER.
[RULE 1110.2, 218, 218.1, 3004 (a)(4)]

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16) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL THE MONITORING, TESTING, RECORDKEEPING AND REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1) – AMENDED 9/7/2012, AS OUTLINED BELOW:

A. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER ON THE ENGINE (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.

B. CONDUCT SOURCE TESTING FOR VOC REPORTED AS CARBON CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS, AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST.

THE SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE).

THE OPERATOR SHALL USE ONLY A SOURCE TEST CONTRACTOR THAT IS APPROVED BY THE EXECUTIVE OFFICER UNDER THE DISTRICT'S LABORATORY APPROVAL PROGRAM (LAP) FOR THE NECESSARY TEST METHODS. THE OPERATOR SHALL COMPLY WITH THE PROCEDURES STATED IN RULE 1110.2 (F)(1)(C)(IV) THROUGH (VII) – AMENDED 2/1/2008, REGARDING THE SUBMITTAL OF SOURCE TEST PROTOCOL, SOURCE TEST REPORTS AND UTILITIES FOR SAMPLING AND TESTING EQUIPMENT.

C. MAINTAIN A MONTHLY OPERATING ENGINE LOG (ELECTRONIC LOG IS ACCEPTABLE) THAT INCLUDES:

(i) TOTAL HOURS OF OPERATION,
(ii) TYPE OF GASEOUS FUEL,
(iii) FUEL CONSUMPTION (CUBIC FEET OF GAS), AND
(iv) CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (f)(1)(C) OF RULE 1110.2 - AMENDED 9/7/2012.

THE LOG SHALL BE MADE AVAILABLE FOR INSPECTION AT ANY TIME.

D. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1)(H)(I) THROUGH (III) – AMENDED 2/1/2008, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.

[RULE 1110.2]

17) 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, 431.1, 1150.1]

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18) TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE ENGINE EXHAUST 8 TO 10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AT 90 DEGREES APART, AND SHALL CONSIST OF TWO 2-1/2 INCH WELDED NIPPLES WITH CAPS. 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]

19) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF THE ENERGY AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]

20) THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE WITH THE ABILITY OF THE LANDFILL OPERATOR/OWNER TO COMPLY WITH SCAQMD RULE 1150.1 OR ANY OTHER DISTRICT, STATE OR FEDERAL RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

21) WITHIN 180 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 WITH WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD TEN (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 60 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)
E. TOTAL PARTICULATES (EXHAUST ONLY)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
H. CARBON DIOXIDE
I. ALDEHYDES (EXHAUST ONLY)
J. RULE 1150.1 TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1,1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, VINYL CHLORIDE, ACETALDEHYDE, FORMALDEHYDE, 1,4-DIOXANE AND XYLENE ISOMERS.
K. OXYGEN
L. NITROGEN
M. MOISTURE CONTENT
N. TEMPERATURE

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O. FLOW RATE
P. NMOC DESTRUCTION EFFICIENCY
Q. METHANE DESTRUCTION EFFICIENCY
R. BTU CONTENT (INLET ONLY)
[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET]

22) ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY. [RULE 1303(b) (2)-OFFSET]

23) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 3004 (a)(4), 1110.2, 40 CFR PART 60 SUBPART WWW]

24) PERTAINING TO THE OPERATION OF THIS EQUIPMENT, THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING CODE OF FEDERAL REGULATIONS: TITLE 40 PART 60 SUBPART WWW - STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART AAAA - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART ZZZZ - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES; AND TITLE 40 PART 60 SUBPART JJJJ - STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES.
[40 CFR PART 60 SUBPARTS WWW AND JJJJ, 40 CFR PART 63 SUBPARTS AAAA AND ZZZZ]

Emissions and Requirements:

25) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV @15% O_2, DRY, RULE 1110.2
CO: 250 PPMV @15% O_2, DRY, RULE 1303 (a)(1)-BACT
CO: 610 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NOx: 36 PPMV @15% O_2, DRY, RULE 1110.2, ECF = 1
NOx: 11 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
NOx: 150 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NMOC: 20 PPMV, AS HEXANE, @3% O_2, DRY, OR 98% BY WEIGHT REDUCTION, RULE 1150.1, 40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.066 GRAMS/BHP-HR, 1303 (a)(1)-BACT
ROG: 40 PPMV @15% O_2, DRY, RULE 1110.2
ROG: 30 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
ROG: 80 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
SOx: BASED ON 60 PPMV SULFUR AVERAGED MONTHLY, AS H_2S, CONCENTRATION IN LFG AT INLET, 1303(a)(1)-BACT

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PERMIT TO CONSTRUCT

A/N 554159

Equipment Description:

LANDFILL GAS CONTROL AND GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.

2. INTERNAL COMBUSTION ENGINE, NO. 4, CATERPILLAR, MODEL NO. CG260, LANDFILL GAS FUELED, FOUR CYCLES, SIXTEEN CYLINDERS, LEAN BURN, TURBOCHARGED, RATED AT 4650 B.H.P., DRIVING AN ELECTRICAL GENERATOR WITH A GROSS ELECTRICAL OUTPUT OF 3.37 MW.

3. EXHAUST STACK, 2' - 6" DIA., CONVERGING INTO A COMMON EXHAUST STACK ENCLOSURE WITH SIX OTHER EXHAUST STACKS, 12' - 0" DIA. X 48' - 0" H.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1110.2 (AMENDED 9/7/2012) AND RULE 1150.1, WHETHER OR NOT EXPLICITLY STATED ON THIS PERMIT.
[RULE 204, 1110.2, 1150.1]

5) THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO AN AIR POLLUTION CONTROL SYSTEM WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED A PERMIT TO CONSTRUCT/OPERATE BY THE EXECUTIVE OFFICER, EXCEPT DURING ENGINE COLD START-UPS AND SHUT-DOWNS.
[RULE 204]

6) THIS ENGINE SHALL BE FIRED WITH LANDFILL GAS ONLY.
[RULE 204, 1303(b)(2)-OFFSET]

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7) THE OPERATOR SHALL COMBUST IN THIS ENGINE ONLY LANDFILL GAS THAT DOES NOT CONTAIN SULFUR COMPOUNDS, CALCULATED AS H2S, IN EXCESS OF 85 PPMV AVERAGED DAILY, AND 60 PPMV AVERAGED MONTHLY. COMPLIANCE WITH THIS SULFUR CONCENTRATION LIMIT SHALL BE DEMONSTRATED USING THE READINGS ON TOTAL REDUCED SULFUR (IN PPMV) OBTAINED FROM THE CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) THAT IS INSTALLED DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND THE LANDFILL GAS TREATMENT SYSTEM, AT THE INLET GAS SUPPLY LINE TO THE ENGINES. [RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET]

8) THE ENGINE EMISSIONS SHALL NOT EXCEED THE FOLLOWING LIMITS (EXCEPT DURING PERIODS OF START-UP AND SHUTDOWN WHICH SHALL NOT EXCEED 30 MINUTES PER INCIDENT):

POLLUTANT	PPMV @15%O2, DRY	LBS/HOUR
VOLATILE ORGANIC COMPOUNDS (VOC)	30	1.21
OXIDES OF NITROGEN (NOX)	11	1.28
CARBON MONOXIDE (CO)	250	17.71
SULFUR OXIDES (SOX)	60 PPM SULFUR AS H2S (INLET) AVERAGED MONTHLY	0.62
PM10		0.676

NOX AND CO SHALL BE AVERAGED OVER 15 MINUTES. VOC SHALL BE AVERAGED OVER THE SAMPLING TIME REQUIRED BY THE TEST METHOD.
[RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET, 1110.2, 40 CFR PART 63 SUBPART ZZZZ, 40 CFR PART 60 Subpart JJJJ]

9) THIS ENGINE SHALL NOT EMIT ANY SINGLE HAZARDOUS AIR POLLUTANT (HAP) IN EXCESS OF 10 TONS PER YEAR, OR, ANY COMBINATION OF HAPS IN EXCESS OF 25 TONS PER YEAR. THE OPERATOR SHALL DEMONSTRATE COMPLIANCE WITH THIS PERMIT CONDITION BY CONDUCTING SOURCE TESTS OF HAPS, AS LISTED IN SECTION 112(B) OF THE CLEAN AIR ACT OR IN RULE 1150.1, IN ACCORDANCE WITH THE SCHEDULE AND TEST PROCEDURES SPECIFIED IN PERMIT CONDITION NO. 21, AS FOUND IN THE POST-CONTROL ENGINE EXHAUST.
[40 CFR PART 63 SUBPART ZZZZ]

10) A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN STANDARD CUBIC FEET PER MINUTE) BEING SUPPLIED TO THE ENGINE. THE RECORDING DEVICE SHALL BE CAPABLE OF RECORDING GAS FLOW AT LEAST EVERY 15 MINUTES.
[RULE 1150.1, 1303(b)(2)-OFFSET, 40 CFR PART 60 SUBPART WWW]

11) THE HEAT INPUT RATE FOR THE LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 29.91 MILLION BTU'S PER HOUR. THE OPERATOR SHALL MAINTAIN AN ELECTRONIC DATA ACQUISITION SYSTEM OR OTHER ELECTRONIC LOG TO RECORD THE AVERAGE HOURLY LANDFILL GAS FLOW RATE BASED ON READINGS TAKEN EVERY 15-MINUTE INTERVALS. THE HIGH HEATING VALUE (HHV) AND PERCENT METHANE CONTENT OF THE LANDFILL GAS SHALL BE MEASURED AT LEAST ONCE PER WEEK. THE HOURLY AVERAGE HEAT INPUT RATE (MMBTU/HOUR) SHALL BE CALCULATED BASED ON THE AVERAGE HOURLY LFG FLOW RATE, HHV AND PERCENT METHANE.
[RULE 1303(b) (2)-OFFSET]

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12) GAS QUALITY PARAMETERS, INCLUDING BUT NOT LIMITED TO LFG HIGH HEATING VALUE AND METHANE PERCENT, SHALL BE MONITORED AND MEASURED USING AN INSTRUMENT APPROVED BY THE SCAQMD. THE MONITOR SHALL BE LOCATED AT THE INLET HEADER TO ALL LFG I.C. ENGINES. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b) (2)-OFFSET]

13) THIS EQUIPMENT SHALL EITHER REDUCE THE NON-METHANE ORGANIC COMPOUNDS (NMOC) BY AT LEAST 98 PERCENT BY WEIGHT OR REDUCE THE OUTLET NMOC CONCENTRATION TO LESS THAN 20 PPM BY VOLUME, DRY BASIS AS HEXANE AT 3 PERCENT OXYGEN. THE OPERATOR OF THIS FACILITY DOES NOT HAVE TO COMPLY WITH THE REQUIREMENTS OF 40 CFR PART 60 SUBPART WWW IF THE FACILITY HAS RECEIVED AN APPROVED TREATMENT EXEMPTION FROM THE USEPA.
[RULE 1150.1, 40 CFR PART 60 SUBPART WWW]

14) THIS EQUIPMENT SHALL REDUCE THE OUTLET METHANE CONCENTRATION TO LESS THAN 3000 PPMV, DRY BASIS, CORRECTED TO 15 PERCENT OXYGEN.
[RULE 1150.1]

15) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) CAPABLE OF MEASURING AND MONITORING NOX AND CO EMISSIONS SHALL BE INSTALLED, MAINTAINED AND OPERATED. THIS CEMS SHALL:

A. COMPLY WITH ALL APPLICABLE SPECIFICATIONS, CERTIFICATION, OPERATION, RECORDKEEPING, QUALITY ASSURANCE, REPORTING, PERFORMANCE AND TESTING REQUIREMENTS OF SCAQMD RULES 218 AND 218.1.

B. CONTINOUSLY MEASURE AND RECORD NOX, CO AND O2 EXHAUST GAS CONCENTRATIONS, UNCORRECTED AND CORRECTED TO 15 PERCENT OXYGEN ON A DRY BASIS.

C. HAVE DATA GATHERING AND RETRIEVAL CAPABILITY THAT HAS BEEN APPROVED BY THE DISTRICT. DATA SHALL BE RECORDED ON A STRIP CHART OR STORED ELECTRONICALLY. IF DATA IS ELECTRONICALLY STORED, THE OPERATOR SHALL PROVIDE FOR DATA STORAGE REDUNDANCY OF AT LEAST 15 DAYS AND SHALL DEMONSTRATE TO THE EXECUTIVE OFFICER THAT THE STORED ELECTRONIC DATA IS EQUIVALENT TO THE STRIP CHART DATA.

D. BE TESTED FOR RELATIVE ACCURACY AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST, IN ACCORDANCE WITH RULE 1110.2 (F)(1)(C)(I) – AMENDED 2/1/2008. THE MINIMUM SAMPLING TIME FOR EACH RELATIVE ACCURACY TEST SHALL BE 15 MINUTES.

E. PRIOR TO INSTALLATION OR MODIFICATION, THIS CEMS MONITORING SYSTEM SHALL BE CERTIFIED AND APPROVED IN WRITING BY THE EXECUTIVE OFFICER.

[RULE 1110.2, 218, 218.1, 3004 (a)(4)]

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16) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL THE MONITORING, TESTING, RECORDKEEPING AND REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1) – AMENDED 9/7/2012, AS OUTLINED BELOW:

A. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER ON THE ENGINE (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.

B. CONDUCT SOURCE TESTING FOR VOC REPORTED AS CARBON CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS, AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST.

THE SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE).

THE OPERATOR SHALL USE ONLY A SOURCE TEST CONTRACTOR THAT IS APPROVED BY THE EXECUTIVE OFFICER UNDER THE DISTRICT'S LABORATORY APPROVAL PROGRAM (LAP) FOR THE NECESSARY TEST METHODS. THE OPERATOR SHALL COMPLY WITH THE PROCEDURES STATED IN RULE 1110.2 (F)(1)(C)(IV) THROUGH (VII) – AMENDED 2/1/2008, REGARDING THE SUBMITTAL OF SOURCE TEST PROTOCOL, SOURCE TEST REPORTS AND UTILITIES FOR SAMPLING AND TESTING EQUIPMENT.

C. MAINTAIN A MONTHLY OPERATING ENGINE LOG (ELECTRONIC LOG IS ACCEPTABLE) THAT INCLUDES:

(i) TOTAL HOURS OF OPERATION,
(ii) TYPE OF GASEOUS FUEL,
(iii) FUEL CONSUMPTION (CUBIC FEET OF GAS), AND
(iv) CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (f)(1)(C) OF RULE 1110.2 - AMENDED 9/7/2012.

THE LOG SHALL BE MADE AVAILABLE FOR INSPECTION AT ANY TIME.

D. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1)(H)(I) THROUGH (III) – AMENDED 2/1/2008, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.

[RULE 1110.2]

17) 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, 431.1, 1150.1]

FACILITY PERMIT TO OPERATE
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18) TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE ENGINE EXHAUST 8 TO 10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AT 90 DEGREES APART, AND SHALL CONSIST OF TWO 2-1/2 INCH WELDED NIPPLES WITH CAPS. 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]

19) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF THE ENERGY AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]

20) THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE WITH THE ABILITY OF THE LANDFILL OPERATOR/OWNER TO COMPLY WITH SCAQMD RULE 1150.1 OR ANY OTHER DISTRICT, STATE OR FEDERAL RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

21) WITHIN 180 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 WITH WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD TEN (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 60 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)
E. TOTAL PARTICULATES (EXHAUST ONLY)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
H. CARBON DIOXIDE
I. ALDEHYDES (EXHAUST ONLY)
J. RULE 1150.1 TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1,1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, VINYL CHLORIDE, ACETALDEHYDE, FORMALDEHYDE, 1,4-DIOXANE AND XYLENE ISOMERS.
K. OXYGEN
L. NITROGEN
M. MOISTURE CONTENT
N. TEMPERATURE

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O. FLOW RATE
P. NMOC DESTRUCTION EFFICIENCY
Q. METHANE DESTRUCTION EFFICIENCY
R. BTU CONTENT (INLET ONLY)
[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET]

22) ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY. [RULE 1303(b) (2)-OFFSET]

23) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 3004 (a)(4), 1110.2, 40 CFR PART 60 SUBPART WWW]

24) PERTAINING TO THE OPERATION OF THIS EQUIPMENT, THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING CODE OF FEDERAL REGULATIONS: TITLE 40 PART 60 SUBPART WWW - STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART AAAA - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART ZZZZ - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES; AND TITLE 40 PART 60 SUBPART JJJJ - STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES.
[40 CFR PART 60 SUBPARTS WWW AND JJJJ, 40 CFR PART 63 SUBPARTS AAAA AND ZZZZ]

Emissions and Requirements:

25) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV @15% O_2, DRY, RULE 1110.2
CO: 250 PPMV @15% O_2, DRY, RULE 1303 (a)(1)-BACT
CO: 610 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NOx: 36 PPMV @15% O_2, DRY, RULE 1110.2, ECF = 1
NOx: 11 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
NOx: 150 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NMOC: 20 PPMV, AS HEXANE, @3% O_2, DRY, OR 98% BY WEIGHT REDUCTION, RULE 1150.1, 40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.066 GRAMS/BHP-HR, 1303 (a)(1)-BACT
ROG: 40 PPMV @15% O_2, DRY, RULE 1110.2
ROG: 30 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
ROG: 80 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
SOx: BASED ON 60 PPMV SULFUR AVERAGED MONTHLY, AS H_2S, CONCENTRATION IN LFG AT INLET, 1303(a)(1)-BACT

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554160

Equipment Description:

LANDFILL GAS CONTROL AND GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.

2. INTERNAL COMBUSTION ENGINE, NO. 5, CATERPILLAR, MODEL NO. CG260, LANDFILL GAS FUELED, FOUR CYCLES, SIXTEEN CYLINDERS, LEAN BURN, TURBOCHARGED, RATED AT 4650 B.H.P., DRIVING AN ELECTRICAL GENERATOR WITH A GROSS ELECTRICAL OUTPUT OF 3.37 MW.

3. EXHAUST STACK, 2' - 6" DIA., CONVERGING INTO A COMMON EXHAUST STACK ENCLOSURE WITH SIX OTHER EXHAUST STACKS, 12' - 0" DIA. X 48' - 0" H.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1110.2 (AMENDED 9/7/2012) AND RULE 1150.1, WHETHER OR NOT EXPLICITLY STATED ON THIS PERMIT.
[RULE 204, 1110.2, 1150.1]

5) THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO AN AIR POLLUTION CONTROL SYSTEM WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED A PERMIT TO CONSTRUCT/OPERATE BY THE EXECUTIVE OFFICER, EXCEPT DURING ENGINE COLD START-UPS AND SHUT-DOWNS.
[RULE 204]

6) THIS ENGINE SHALL BE FIRED WITH LANDFILL GAS ONLY.
[RULE 204, 1303(b)(2)-OFFSET]

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7) THE OPERATOR SHALL COMBUST IN THIS ENGINE ONLY LANDFILL GAS THAT DOES NOT CONTAIN SULFUR COMPOUNDS, CALCULATED AS H2S, IN EXCESS OF 85 PPMV AVERAGED DAILY, AND 60 PPMV AVERAGED MONTHLY. COMPLIANCE WITH THIS SULFUR CONCENTRATION LIMIT SHALL BE DEMONSTRATED USING THE READINGS ON TOTAL REDUCED SULFUR (IN PPMV) OBTAINED FROM THE CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) THAT IS INSTALLED DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND THE LANDFILL GAS TREATMENT SYSTEM, AT THE INLET GAS SUPPLY LINE TO THE ENGINES. [RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET]

8) THE ENGINE EMISSIONS SHALL NOT EXCEED THE FOLLOWING LIMITS (EXCEPT DURING PERIODS OF START-UP AND SHUTDOWN WHICH SHALL NOT EXCEED 30 MINUTES PER INCIDENT):

POLLUTANT	PPMV @15%O2, DRY	LBS/HOUR
VOLATILE ORGANIC COMPOUNDS (VOC)	30	1.21
OXIDES OF NITROGEN (NOX)	11	1.28
CARBON MONOXIDE (CO)	250	17.71
SULFUR OXIDES (SOX)	60 PPM SULFUR AS H2S (INLET) AVERAGED MONTHLY	0.62
PM10		0.676

NOX AND CO SHALL BE AVERAGED OVER 15 MINUTES. VOC SHALL BE AVERAGED OVER THE SAMPLING TIME REQUIRED BY THE TEST METHOD.
[RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET, 1110.2, 40 CFR PART 63 SUBPART ZZZZ, 40 CFR PART 60 Subpart JJJJ]

9) THIS ENGINE SHALL NOT EMIT ANY SINGLE HAZARDOUS AIR POLLUTANT (HAP) IN EXCESS OF 10 TONS PER YEAR, OR, ANY COMBINATION OF HAPS IN EXCESS OF 25 TONS PER YEAR. THE OPERATOR SHALL DEMONSTRATE COMPLIANCE WITH THIS PERMIT CONDITION BY CONDUCTING SOURCE TESTS OF HAPS, AS LISTED IN SECTION 112(B) OF THE CLEAN AIR ACT OR IN RULE 1150.1, IN ACCORDANCE WITH THE SCHEDULE AND TEST PROCEDURES SPECIFIED IN PERMIT CONDITION NO. 21, AS FOUND IN THE POST-CONTROL ENGINE EXHAUST.
[40 CFR PART 63 SUBPART ZZZZ]

10) A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN STANDARD CUBIC FEET PER MINUTE) BEING SUPPLIED TO THE ENGINE. THE RECORDING DEVICE SHALL BE CAPABLE OF RECORDING GAS FLOW AT LEAST EVERY 15 MINUTES.
[RULE 1150.1, 1303(b)(2)-OFFSET, 40 CFR PART 60 SUBPART WWW]

11) THE HEAT INPUT RATE FOR THE LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 29.91 MILLION BTU'S PER HOUR. THE OPERATOR SHALL MAINTAIN AN ELECTRONIC DATA ACQUISITION SYSTEM OR OTHER ELECTRONIC LOG TO RECORD THE AVERAGE HOURLY LANDFILL GAS FLOW RATE BASED ON READINGS TAKEN EVERY 15-MINUTE INTERVALS. THE HIGH HEATING VALUE (HHV) AND PERCENT METHANE CONTENT OF THE LANDFILL GAS SHALL BE MEASURED AT LEAST ONCE PER WEEK. THE HOURLY AVERAGE HEAT INPUT RATE (MMBTU/HOUR) SHALL BE CALCULATED BASED ON THE AVERAGE HOURLY LFG FLOW RATE, HHV AND PERCENT METHANE.
[RULE 1303(b) (2)-OFFSET]

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12) GAS QUALITY PARAMETERS, INCLUDING BUT NOT LIMITED TO LFG HIGH HEATING VALUE AND METHANE PERCENT, SHALL BE MONITORED AND MEASURED USING AN INSTRUMENT APPROVED BY THE SCAQMD. THE MONITOR SHALL BE LOCATED AT THE INLET HEADER TO ALL LFG I.C. ENGINES. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b) (2)-OFFSET]

13) THIS EQUIPMENT SHALL EITHER REDUCE THE NON-METHANE ORGANIC COMPOUNDS (NMOC) BY AT LEAST 98 PERCENT BY WEIGHT OR REDUCE THE OUTLET NMOC CONCENTRATION TO LESS THAN 20 PPM BY VOLUME, DRY BASIS AS HEXANE AT 3 PERCENT OXYGEN. THE OPERATOR OF THIS FACILITY DOES NOT HAVE TO COMPLY WITH THE REQUIREMENTS OF 40 CFR PART 60 SUBPART WWW IF THE FACILITY HAS RECEIVED AN APPROVED TREATMENT EXEMPTION FROM THE USEPA.
[RULE 1150.1, 40 CFR PART 60 SUBPART WWW]

14) THIS EQUIPMENT SHALL REDUCE THE OUTLET METHANE CONCENTRATION TO LESS THAN 3000 PPMV, DRY BASIS, CORRECTED TO 15 PERCENT OXYGEN.
[RULE 1150.1]

15) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) CAPABLE OF MEASURING AND MONITORING NOX AND CO EMISSIONS SHALL BE INSTALLED, MAINTAINED AND OPERATED. THIS CEMS SHALL:

A. COMPLY WITH ALL APPLICABLE SPECIFICATIONS, CERTIFICATION, OPERATION, RECORDKEEPING, QUALITY ASSURANCE, REPORTING, PERFORMANCE AND TESTING REQUIREMENTS OF SCAQMD RULES 218 AND 218.1.

B. CONTINOUSLY MEASURE AND RECORD NOX, CO AND O2 EXHAUST GAS CONCENTRATIONS, UNCORRECTED AND CORRECTED TO 15 PERCENT OXYGEN ON A DRY BASIS.

C. HAVE DATA GATHERING AND RETRIEVAL CAPABILITY THAT HAS BEEN APPROVED BY THE DISTRICT. DATA SHALL BE RECORDED ON A STRIP CHART OR STORED ELECTRONICALLY. IF DATA IS ELECTRONICALLY STORED, THE OPERATOR SHALL PROVIDE FOR DATA STORAGE REDUNDANCY OF AT LEAST 15 DAYS AND SHALL DEMONSTRATE TO THE EXECUTIVE OFFICER THAT THE STORED ELECTRONIC DATA IS EQUIVALENT TO THE STRIP CHART DATA.

D. BE TESTED FOR RELATIVE ACCURACY AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST, IN ACCORDANCE WITH RULE 1110.2 (F)(1)(C)(I) – AMENDED 2/1/2008. THE MINIMUM SAMPLING TIME FOR EACH RELATIVE ACCURACY TEST SHALL BE 15 MINUTES.

E. PRIOR TO INSTALLATION OR MODIFICATION, THIS CEMS MONITORING SYSTEM SHALL BE CERTIFIED AND APPROVED IN WRITING BY THE EXECUTIVE OFFICER.

[RULE 1110.2, 218, 218.1, 3004 (a)(4)]

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16) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL THE MONITORING, TESTING, RECORDKEEPING AND REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1) – AMENDED 9/7/2012, AS OUTLINED BELOW:

A. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER ON THE ENGINE (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.

B. CONDUCT SOURCE TESTING FOR VOC REPORTED AS CARBON CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS, AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST.

THE SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE).

THE OPERATOR SHALL USE ONLY A SOURCE TEST CONTRACTOR THAT IS APPROVED BY THE EXECUTIVE OFFICER UNDER THE DISTRICT'S LABORATORY APPROVAL PROGRAM (LAP) FOR THE NECESSARY TEST METHODS. THE OPERATOR SHALL COMPLY WITH THE PROCEDURES STATED IN RULE 1110.2 (F)(1)(C)(IV) THROUGH (VII) – AMENDED 2/1/2008, REGARDING THE SUBMITTAL OF SOURCE TEST PROTOCOL, SOURCE TEST REPORTS AND UTILITIES FOR SAMPLING AND TESTING EQUIPMENT.

C. MAINTAIN A MONTHLY OPERATING ENGINE LOG (ELECTRONIC LOG IS ACCEPTABLE) THAT INCLUDES:

(i) TOTAL HOURS OF OPERATION,
(ii) TYPE OF GASEOUS FUEL,
(iii) FUEL CONSUMPTION (CUBIC FEET OF GAS), AND
(iv) CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (f)(1)(C) OF RULE 1110.2 - AMENDED 9/7/2012.

THE LOG SHALL BE MADE AVAILABLE FOR INSPECTION AT ANY TIME.

D. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1)(H)(I) THROUGH (III) – AMENDED 2/1/2008, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.

[RULE 1110.2]

17) 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, 431.1, 1150.1]

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18) TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE ENGINE EXHAUST 8 TO 10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AT 90 DEGREES APART, AND SHALL CONSIST OF TWO 2-1/2 INCH WELDED NIPPLES WITH CAPS. 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]

19) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF THE ENERGY AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]

20) THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE WITH THE ABILITY OF THE LANDFILL OPERATOR/OWNER TO COMPLY WITH SCAQMD RULE 1150.1 OR ANY OTHER DISTRICT, STATE OR FEDERAL RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

21) WITHIN 180 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 WITH WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD TEN (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 60 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)
E. TOTAL PARTICULATES (EXHAUST ONLY)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
H. CARBON DIOXIDE
I. ALDEHYDES (EXHAUST ONLY)
J. RULE 1150.1 TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1,1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, VINYL CHLORIDE, ACETALDEHYDE, FORMALDEHYDE, 1,4-DIOXANE AND XYLENE ISOMERS.
K. OXYGEN
L. NITROGEN
M. MOISTURE CONTENT
N. TEMPERATURE

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

O. FLOW RATE
P. NMOC DESTRUCTION EFFICIENCY
Q. METHANE DESTRUCTION EFFICIENCY
R. BTU CONTENT (INLET ONLY)
[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET]

22) ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY. [RULE 1303(b) (2)-OFFSET]

23) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 3004 (a)(4), 1110.2, 40 CFR PART 60 SUBPART WWW]

24) PERTAINING TO THE OPERATION OF THIS EQUIPMENT, THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING CODE OF FEDERAL REGULATIONS: TITLE 40 PART 60 SUBPART WWW - STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART AAAA - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART ZZZZ - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES; AND TITLE 40 PART 60 SUBPART JJJJ - STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES.
[40 CFR PART 60 SUBPARTS WWW AND JJJJ, 40 CFR PART 63 SUBPARTS AAAA AND ZZZZ]

Emissions and Requirements:

25) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV @15% O_2, DRY, RULE 1110.2
CO: 250 PPMV @15% O_2, DRY, RULE 1303 (a)(1)-BACT
CO: 610 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NOx: 36 PPMV @15% O_2, DRY, RULE 1110.2, ECF = 1
NOx: 11 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
NOx: 150 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NMOC: 20 PPMV, AS HEXANE, @3% O_2, DRY, OR 98% BY WEIGHT REDUCTION, RULE 1150.1, 40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.066 GRAMS/BHP-HR, 1303 (a)(1)-BACT
ROG: 40 PPMV @15% O_2, DRY, RULE 1110.2
ROG: 30 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
ROG: 80 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
SOx: BASED ON 60 PPMV SULFUR AVERAGED MONTHLY, AS H_2S, CONCENTRATION IN LFG AT INLET, 1303(a)(1)-BACT

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554161

Equipment Description:

LANDFILL GAS CONTROL AND GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.

2. INTERNAL COMBUSTION ENGINE, NO. 6, CATERPILLAR, MODEL NO. CG260, LANDFILL GAS FUELED, FOUR CYCLES, SIXTEEN CYLINDERS, LEAN BURN, TURBOCHARGED, RATED AT 4650 B.H.P., DRIVING AN ELECTRICAL GENERATOR WITH A GROSS ELECTRICAL OUTPUT OF 3.37 MW.

3. EXHAUST STACK, 2' - 6" DIA., CONVERGING INTO A COMMON EXHAUST STACK ENCLOSURE WITH SIX OTHER EXHAUST STACKS, 12' - 0" DIA. X 48' - 0" H.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1110.2 (AMENDED 9/7/2012) AND RULE 1150.1, WHETHER OR NOT EXPLICITLY STATED ON THIS PERMIT.
[RULE 204, 1110.2, 1150.1]

5) THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO AN AIR POLLUTION CONTROL SYSTEM WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED A PERMIT TO CONSTRUCT/OPERATE BY THE EXECUTIVE OFFICER, EXCEPT DURING ENGINE COLD START-UPS AND SHUT-DOWNS.
[RULE 204]

6) THIS ENGINE SHALL BE FIRED WITH LANDFILL GAS ONLY.
[RULE 204, 1303(b)(2)-OFFSET]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

7) THE OPERATOR SHALL COMBUST IN THIS ENGINE ONLY LANDFILL GAS THAT DOES NOT CONTAIN SULFUR COMPOUNDS, CALCULATED AS H2S, IN EXCESS OF 85 PPMV AVERAGED DAILY, AND 60 PPMV AVERAGED MONTHLY. COMPLIANCE WITH THIS SULFUR CONCENTRATION LIMIT SHALL BE DEMONSTRATED USING THE READINGS ON TOTAL REDUCED SULFUR (IN PPMV) OBTAINED FROM THE CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) THAT IS INSTALLED DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND THE LANDFILL GAS TREATMENT SYSTEM, AT THE INLET GAS SUPPLY LINE TO THE ENGINES. [RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET]

8) THE ENGINE EMISSIONS SHALL NOT EXCEED THE FOLLOWING LIMITS (EXCEPT DURING PERIODS OF START-UP AND SHUTDOWN WHICH SHALL NOT EXCEED 30 MINUTES PER INCIDENT):

POLLUTANT	PPMV @15%O2, DRY	LBS/HOUR
VOLATILE ORGANIC COMPOUNDS (VOC)	30	1.21
OXIDES OF NITROGEN (NOX)	11	1.28
CARBON MONOXIDE (CO)	250	17.71
SULFUR OXIDES (SOX)	60 PPM SULFUR AS H2S (INLET) AVERAGED MONTHLY	0.62
PM10		0.676

NOX AND CO SHALL BE AVERAGED OVER 15 MINUTES. VOC SHALL BE AVERAGED OVER THE SAMPLING TIME REQUIRED BY THE TEST METHOD.
[RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET, 1110.2, 40 CFR PART 63 SUBPART ZZZZ, 40 CFR PART 60 Subpart JJJJ]

9) THIS ENGINE SHALL NOT EMIT ANY SINGLE HAZARDOUS AIR POLLUTANT (HAP) IN EXCESS OF 10 TONS PER YEAR, OR, ANY COMBINATION OF HAPS IN EXCESS OF 25 TONS PER YEAR. THE OPERATOR SHALL DEMONSTRATE COMPLIANCE WITH THIS PERMIT CONDITION BY CONDUCTING SOURCE TESTS OF HAPS, AS LISTED IN SECTION 112(B) OF THE CLEAN AIR ACT OR IN RULE 1150.1, IN ACCORDANCE WITH THE SCHEDULE AND TEST PROCEDURES SPECIFIED IN PERMIT CONDITION NO. 21, AS FOUND IN THE POST-CONTROL ENGINE EXHAUST.
[40 CFR PART 63 SUBPART ZZZZ]

10) A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN STANDARD CUBIC FEET PER MINUTE) BEING SUPPLIED TO THE ENGINE. THE RECORDING DEVICE SHALL BE CAPABLE OF RECORDING GAS FLOW AT LEAST EVERY 15 MINUTES.
[RULE 1150.1, 1303(b)(2)-OFFSET, 40 CFR PART 60 SUBPART WWW]

11) THE HEAT INPUT RATE FOR THE LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 29.91 MILLION BTU'S PER HOUR. THE OPERATOR SHALL MAINTAIN AN ELECTRONIC DATA ACQUISITION SYSTEM OR OTHER ELECTRONIC LOG TO RECORD THE AVERAGE HOURLY LANDFILL GAS FLOW RATE BASED ON READINGS TAKEN EVERY 15-MINUTE INTERVALS. THE HIGH HEATING VALUE (HHV) AND PERCENT METHANE CONTENT OF THE LANDFILL GAS SHALL BE MEASURED AT LEAST ONCE PER WEEK. THE HOURLY AVERAGE HEAT INPUT RATE (MMBTU/HOUR) SHALL BE CALCULATED BASED ON THE AVERAGE HOURLY LFG FLOW RATE, HHV AND PERCENT METHANE.
[RULE 1303(b) (2)-OFFSET]

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12) GAS QUALITY PARAMETERS, INCLUDING BUT NOT LIMITED TO LFG HIGH HEATING VALUE AND METHANE PERCENT, SHALL BE MONITORED AND MEASURED USING AN INSTRUMENT APPROVED BY THE SCAQMD. THE MONITOR SHALL BE LOCATED AT THE INLET HEADER TO ALL LFG I.C. ENGINES. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b) (2)-OFFSET]

13) THIS EQUIPMENT SHALL EITHER REDUCE THE NON-METHANE ORGANIC COMPOUNDS (NMOC) BY AT LEAST 98 PERCENT BY WEIGHT OR REDUCE THE OUTLET NMOC CONCENTRATION TO LESS THAN 20 PPM BY VOLUME, DRY BASIS AS HEXANE AT 3 PERCENT OXYGEN. THE OPERATOR OF THIS FACILITY DOES NOT HAVE TO COMPLY WITH THE REQUIREMENTS OF 40 CFR PART 60 SUBPART WWW IF THE FACILITY HAS RECEIVED AN APPROVED TREATMENT EXEMPTION FROM THE USEPA.
[RULE 1150.1, 40 CFR PART 60 SUBPART WWW]

14) THIS EQUIPMENT SHALL REDUCE THE OUTLET METHANE CONCENTRATION TO LESS THAN 3000 PPMV, DRY BASIS, CORRECTED TO 15 PERCENT OXYGEN.
[RULE 1150.1]

15) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) CAPABLE OF MEASURING AND MONITORING NOX AND CO EMISSIONS SHALL BE INSTALLED, MAINTAINED AND OPERATED. THIS CEMS SHALL:

A. COMPLY WITH ALL APPLICABLE SPECIFICATIONS, CERTIFICATION, OPERATION, RECORDKEEPING, QUALITY ASSURANCE, REPORTING, PERFORMANCE AND TESTING REQUIREMENTS OF SCAQMD RULES 218 AND 218.1.

B. CONTINOUSLY MEASURE AND RECORD NOX, CO AND O2 EXHAUST GAS CONCENTRATIONS, UNCORRECTED AND CORRECTED TO 15 PERCENT OXYGEN ON A DRY BASIS.

C. HAVE DATA GATHERING AND RETRIEVAL CAPABILITY THAT HAS BEEN APPROVED BY THE DISTRICT. DATA SHALL BE RECORDED ON A STRIP CHART OR STORED ELECTRONICALLY. IF DATA IS ELECTRONICALLY STORED, THE OPERATOR SHALL PROVIDE FOR DATA STORAGE REDUNDANCY OF AT LEAST 15 DAYS AND SHALL DEMONSTRATE TO THE EXECUTIVE OFFICER THAT THE STORED ELECTRONIC DATA IS EQUIVALENT TO THE STRIP CHART DATA.

D. BE TESTED FOR RELATIVE ACCURACY AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST, IN ACCORDANCE WITH RULE 1110.2 (F)(1)(C)(I) – AMENDED 2/1/2008. THE MINIMUM SAMPLING TIME FOR EACH RELATIVE ACCURACY TEST SHALL BE 15 MINUTES.

E. PRIOR TO INSTALLATION OR MODIFICATION, THIS CEMS MONITORING SYSTEM SHALL BE CERTIFIED AND APPROVED IN WRITING BY THE EXECUTIVE OFFICER.

[RULE 1110.2, 218, 218.1, 3004 (a)(4)]

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16) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL THE MONITORING, TESTING, RECORDKEEPING AND REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1) – AMENDED 9/7/2012, AS OUTLINED BELOW:

A. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER ON THE ENGINE (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.

B. CONDUCT SOURCE TESTING FOR VOC REPORTED AS CARBON CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS, AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST.

THE SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE).

THE OPERATOR SHALL USE ONLY A SOURCE TEST CONTRACTOR THAT IS APPROVED BY THE EXECUTIVE OFFICER UNDER THE DISTRICT'S LABORATORY APPROVAL PROGRAM (LAP) FOR THE NECESSARY TEST METHODS. THE OPERATOR SHALL COMPLY WITH THE PROCEDURES STATED IN RULE 1110.2 (F)(1)(C)(IV) THROUGH (VII) – AMENDED 2/1/2008, REGARDING THE SUBMITTAL OF SOURCE TEST PROTOCOL, SOURCE TEST REPORTS AND UTILITIES FOR SAMPLING AND TESTING EQUIPMENT.

C. MAINTAIN A MONTHLY OPERATING ENGINE LOG (ELECTRONIC LOG IS ACCEPTABLE) THAT INCLUDES:

(i) TOTAL HOURS OF OPERATION,
(ii) TYPE OF GASEOUS FUEL,
(iii) FUEL CONSUMPTION (CUBIC FEET OF GAS), AND
(iv) CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (f)(1)(C) OF RULE 1110.2 - AMENDED 9/7/2012.

THE LOG SHALL BE MADE AVAILABLE FOR INSPECTION AT ANY TIME.

D. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1)(H)(I) THROUGH (III) – AMENDED 2/1/2008, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.

[RULE 1110.2]

17) 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, 431.1, 1150.1]

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18) TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE ENGINE EXHAUST 8 TO 10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AT 90 DEGREES APART, AND SHALL CONSIST OF TWO 2-1/2 INCH WELDED NIPPLES WITH CAPS. 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]

19) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF THE ENERGY AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]

20) THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE WITH THE ABILITY OF THE LANDFILL OPERATOR/OWNER TO COMPLY WITH SCAQMD RULE 1150.1 OR ANY OTHER DISTRICT, STATE OR FEDERAL RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

21) WITHIN 180 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 WITH WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD TEN (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 60 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)
E. TOTAL PARTICULATES (EXHAUST ONLY)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
H. CARBON DIOXIDE
I. ALDEHYDES (EXHAUST ONLY)
J. RULE 1150.1 TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1,1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, VINYL CHLORIDE, ACETALDEHYDE, FORMALDEHYDE, 1,4-DIOXANE AND XYLENE ISOMERS.
K. OXYGEN
L. NITROGEN
M. MOISTURE CONTENT
N. TEMPERATURE

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O. FLOW RATE
P. NMOC DESTRUCTION EFFICIENCY
Q. METHANE DESTRUCTION EFFICIENCY
R. BTU CONTENT (INLET ONLY)
[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET]

22) ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY. [RULE 1303(b) (2)-OFFSET]

23) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 3004 (a)(4), 1110.2, 40 CFR PART 60 SUBPART WWW]

24) PERTAINING TO THE OPERATION OF THIS EQUIPMENT, THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING CODE OF FEDERAL REGULATIONS: TITLE 40 PART 60 SUBPART WWW - STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART AAAA - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART ZZZZ - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES; AND TITLE 40 PART 60 SUBPART JJJJ - STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES.
[40 CFR PART 60 SUBPARTS WWW AND JJJJ, 40 CFR PART 63 SUBPARTS AAAA AND ZZZZ]

Emissions and Requirements:

25) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV @15% O_2, DRY, RULE 1110.2
CO: 250 PPMV @15% O_2, DRY, RULE 1303 (a)(1)-BACT
CO: 610 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NOx: 36 PPMV @15% O_2, DRY, RULE 1110.2, ECF = 1
NOx: 11 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
NOx: 150 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NMOC: 20 PPMV, AS HEXANE, @3% O_2, DRY, OR 98% BY WEIGHT REDUCTION, RULE 1150.1, 40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.066 GRAMS/BHP-HR, 1303 (a)(1)-BACT
ROG: 40 PPMV @15% O_2, DRY, RULE 1110.2
ROG: 30 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
ROG: 80 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
SOx: BASED ON 60 PPMV SULFUR AVERAGED MONTHLY, AS H_2S, CONCENTRATION IN LFG AT INLET, 1303(a)(1)-BACT

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PERMIT TO CONSTRUCT

A/N 554162

Equipment Description:

LANDFILL GAS CONTROL AND GAS-TO-ENERGY SYSTEM CONSISTING OF:

1. PRETREATED LANDFILL GAS (LFG) SUPPLY.

2. INTERNAL COMBUSTION ENGINE, NO. 7, CATERPILLAR, MODEL NO. CG260, LANDFILL GAS FUELED, FOUR CYCLES, SIXTEEN CYLINDERS, LEAN BURN, TURBOCHARGED, RATED AT 4650 B.H.P., DRIVING AN ELECTRICAL GENERATOR WITH A GROSS ELECTRICAL OUTPUT OF 3.37 MW.

3. EXHAUST STACK, 2' - 6" DIA., CONVERGING INTO A COMMON EXHAUST STACK ENCLOSURE WITH SIX OTHER EXHAUST STACKS, 12' - 0" DIA. X 48' - 0" H.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1110.2 (AMENDED 9/7/2012) AND RULE 1150.1, WHETHER OR NOT EXPLICITLY STATED ON THIS PERMIT.
[RULE 204, 1110.2, 1150.1]

5) THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS ITS EXHAUST IS VENTED TO AN AIR POLLUTION CONTROL SYSTEM WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED A PERMIT TO CONSTRUCT/OPERATE BY THE EXECUTIVE OFFICER, EXCEPT DURING ENGINE COLD START-UPS AND SHUT-DOWNS.
[RULE 204]

6) THIS ENGINE SHALL BE FIRED WITH LANDFILL GAS ONLY.
[RULE 204, 1303(b)(2)-OFFSET]

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7) THE OPERATOR SHALL COMBUST IN THIS ENGINE ONLY LANDFILL GAS THAT DOES NOT CONTAIN SULFUR COMPOUNDS, CALCULATED AS H2S, IN EXCESS OF 85 PPMV AVERAGED DAILY, AND 60 PPMV AVERAGED MONTHLY. COMPLIANCE WITH THIS SULFUR CONCENTRATION LIMIT SHALL BE DEMONSTRATED USING THE READINGS ON TOTAL REDUCED SULFUR (IN PPMV) OBTAINED FROM THE CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) THAT IS INSTALLED DOWNSTREAM OF THE SULFUR REMOVAL SYSTEM AND THE LANDFILL GAS TREATMENT SYSTEM, AT THE INLET GAS SUPPLY LINE TO THE ENGINES. [RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET]

8) THE ENGINE EMISSIONS SHALL NOT EXCEED THE FOLLOWING LIMITS (EXCEPT DURING PERIODS OF START-UP AND SHUTDOWN WHICH SHALL NOT EXCEED 30 MINUTES PER INCIDENT):

POLLUTANT	PPMV @15%O2, DRY	LBS/HOUR
VOLATILE ORGANIC COMPOUNDS (VOC)	30	1.21
OXIDES OF NITROGEN (NOX)	11	1.28
CARBON MONOXIDE (CO)	250	17.71
SULFUR OXIDES (SOX)	60 PPM SULFUR AS H2S (INLET) AVERAGED MONTHLY	0.62
PM10		0.676

NOX AND CO SHALL BE AVERAGED OVER 15 MINUTES. VOC SHALL BE AVERAGED OVER THE SAMPLING TIME REQUIRED BY THE TEST METHOD.
[RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET, 1110.2, 40 CFR PART 63 SUBPART ZZZZ, 40 CFR PART 60 Subpart JJJJ]

9) THIS ENGINE SHALL NOT EMIT ANY SINGLE HAZARDOUS AIR POLLUTANT (HAP) IN EXCESS OF 10 TONS PER YEAR, OR, ANY COMBINATION OF HAPS IN EXCESS OF 25 TONS PER YEAR. THE OPERATOR SHALL DEMONSTRATE COMPLIANCE WITH THIS PERMIT CONDITION BY CONDUCTING SOURCE TESTS OF HAPS, AS LISTED IN SECTION 112(B) OF THE CLEAN AIR ACT OR IN RULE 1150.1, IN ACCORDANCE WITH THE SCHEDULE AND TEST PROCEDURES SPECIFIED IN PERMIT CONDITION NO. 21, AS FOUND IN THE POST-CONTROL ENGINE EXHAUST.
[40 CFR PART 63 SUBPART ZZZZ]

10) A CONTINUOUS FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF LANDFILL GAS (IN STANDARD CUBIC FEET PER MINUTE) BEING SUPPLIED TO THE ENGINE. THE RECORDING DEVICE SHALL BE CAPABLE OF RECORDING GAS FLOW AT LEAST EVERY 15 MINUTES.
[RULE 1150.1, 1303(b)(2)-OFFSET, 40 CFR PART 60 SUBPART WWW]

11) THE HEAT INPUT RATE FOR THE LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 29.91 MILLION BTU'S PER HOUR. THE OPERATOR SHALL MAINTAIN AN ELECTRONIC DATA ACQUISITION SYSTEM OR OTHER ELECTRONIC LOG TO RECORD THE AVERAGE HOURLY LANDFILL GAS FLOW RATE BASED ON READINGS TAKEN EVERY 15-MINUTE INTERVALS. THE HIGH HEATING VALUE (HHV) AND PERCENT METHANE CONTENT OF THE LANDFILL GAS SHALL BE MEASURED AT LEAST ONCE PER WEEK. THE HOURLY AVERAGE HEAT INPUT RATE (MMBTU/HOUR) SHALL BE CALCULATED BASED ON THE AVERAGE HOURLY LFG FLOW RATE, HHV AND PERCENT METHANE.
[RULE 1303(b) (2)-OFFSET]

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12) GAS QUALITY PARAMETERS, INCLUDING BUT NOT LIMITED TO LFG HIGH HEATING VALUE AND METHANE PERCENT, SHALL BE MONITORED AND MEASURED USING AN INSTRUMENT APPROVED BY THE SCAQMD. THE MONITOR SHALL BE LOCATED AT THE INLET HEADER TO ALL LFG I.C. ENGINES. ALL RESULTS SHALL BE RECORDED.
[RULE 1303(b) (2)-OFFSET]

13) THIS EQUIPMENT SHALL EITHER REDUCE THE NON-METHANE ORGANIC COMPOUNDS (NMOC) BY AT LEAST 98 PERCENT BY WEIGHT OR REDUCE THE OUTLET NMOC CONCENTRATION TO LESS THAN 20 PPM BY VOLUME, DRY BASIS AS HEXANE AT 3 PERCENT OXYGEN. THE OPERATOR OF THIS FACILITY DOES NOT HAVE TO COMPLY WITH THE REQUIREMENTS OF 40 CFR PART 60 SUBPART WWW IF THE FACILITY HAS RECEIVED AN APPROVED TREATMENT EXEMPTION FROM THE USEPA.
[RULE 1150.1, 40 CFR PART 60 SUBPART WWW]

14) THIS EQUIPMENT SHALL REDUCE THE OUTLET METHANE CONCENTRATION TO LESS THAN 3000 PPMV, DRY BASIS, CORRECTED TO 15 PERCENT OXYGEN.
[RULE 1150.1]

15) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) CAPABLE OF MEASURING AND MONITORING NOX AND CO EMISSIONS SHALL BE INSTALLED, MAINTAINED AND OPERATED. THIS CEMS SHALL:

A. COMPLY WITH ALL APPLICABLE SPECIFICATIONS, CERTIFICATION, OPERATION, RECORDKEEPING, QUALITY ASSURANCE, REPORTING, PERFORMANCE AND TESTING REQUIREMENTS OF SCAQMD RULES 218 AND 218.1.

B. CONTINOUSLY MEASURE AND RECORD NOX, CO AND O2 EXHAUST GAS CONCENTRATIONS, UNCORRECTED AND CORRECTED TO 15 PERCENT OXYGEN ON A DRY BASIS.

C. HAVE DATA GATHERING AND RETRIEVAL CAPABILITY THAT HAS BEEN APPROVED BY THE DISTRICT. DATA SHALL BE RECORDED ON A STRIP CHART OR STORED ELECTRONICALLY. IF DATA IS ELECTRONICALLY STORED, THE OPERATOR SHALL PROVIDE FOR DATA STORAGE REDUNDANCY OF AT LEAST 15 DAYS AND SHALL DEMONSTRATE TO THE EXECUTIVE OFFICER THAT THE STORED ELECTRONIC DATA IS EQUIVALENT TO THE STRIP CHART DATA.

D. BE TESTED FOR RELATIVE ACCURACY AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST, IN ACCORDANCE WITH RULE 1110.2 (F)(1)(C)(I) – AMENDED 2/1/2008. THE MINIMUM SAMPLING TIME FOR EACH RELATIVE ACCURACY TEST SHALL BE 15 MINUTES.

E. PRIOR TO INSTALLATION OR MODIFICATION, THIS CEMS MONITORING SYSTEM SHALL BE CERTIFIED AND APPROVED IN WRITING BY THE EXECUTIVE OFFICER.

[RULE 1110.2, 218, 218.1, 3004 (a)(4)]

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16) THIS ENGINE SHALL BE OPERATED IN COMPLIANCE WITH ALL THE MONITORING, TESTING, RECORDKEEPING AND REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1) – AMENDED 9/7/2012, AS OUTLINED BELOW:

A. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER ON THE ENGINE (DISPLAY READING SHALL BE READILY AVAILABLE) TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.

B. CONDUCT SOURCE TESTING FOR VOC REPORTED AS CARBON CONCENTRATION IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS, AT LEAST ONCE EVERY TWO YEARS, OR EVERY 8,760 OPERATING HOURS, WHICHEVER OCCURS FIRST. THE SOURCE TEST FREQUENCY MAY BE REDUCED TO ONCE EVERY THREE YEARS IF THE ENGINE HAS OPERATED LESS THAN 2,000 HOURS SINCE THE LAST SOURCE TEST.

THE SOURCE TEST SHALL BE CONDUCTED FOR A MINIMUM OF 30 MINUTES DURING NORMAL OPERATION (ACTUAL DUTY CYCLE).

THE OPERATOR SHALL USE ONLY A SOURCE TEST CONTRACTOR THAT IS APPROVED BY THE EXECUTIVE OFFICER UNDER THE DISTRICT'S LABORATORY APPROVAL PROGRAM (LAP) FOR THE NECESSARY TEST METHODS. THE OPERATOR SHALL COMPLY WITH THE PROCEDURES STATED IN RULE 1110.2 (F)(1)(C)(IV) THROUGH (VII) – AMENDED 2/1/2008, REGARDING THE SUBMITTAL OF SOURCE TEST PROTOCOL, SOURCE TEST REPORTS AND UTILITIES FOR SAMPLING AND TESTING EQUIPMENT.

C. MAINTAIN A MONTHLY OPERATING ENGINE LOG (ELECTRONIC LOG IS ACCEPTABLE) THAT INCLUDES:

(i) TOTAL HOURS OF OPERATION,
(ii) TYPE OF GASEOUS FUEL,
(iii) FUEL CONSUMPTION (CUBIC FEET OF GAS), AND
(iv) CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST REQUIRED IN SUBPARAGRAPH (f)(1)(C) OF RULE 1110.2 - AMENDED 9/7/2012.

THE LOG SHALL BE MADE AVAILABLE FOR INSPECTION AT ANY TIME.

D. THE OPERATOR SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF RULE 1110.2 (F)(1)(H)(I) THROUGH (III) – AMENDED 2/1/2008, PERTAINING TO ANY EQUIPMENT BREAKDOWN THAT RESULTS IN EMISSIONS IN EXCESS OF RULE OR PERMIT EMISSION LIMITS.

[RULE 1110.2]

17) 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, 431.1, 1150.1]

FACILITY PERMIT TO OPERATE
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18) TWO SAMPLING PORTS SHALL BE INSTALLED AND MAINTAINED IN THE ENGINE EXHAUST 8 TO 10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AT 90 DEGREES APART, AND SHALL CONSIST OF TWO 2-1/2 INCH WELDED NIPPLES WITH CAPS. 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]

19) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF THE ENERGY AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]

20) THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO INTERFERE WITH THE ABILITY OF THE LANDFILL OPERATOR/OWNER TO COMPLY WITH SCAQMD RULE 1150.1 OR ANY OTHER DISTRICT, STATE OR FEDERAL RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

21) WITHIN 180 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 WITH WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 60 DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD TEN (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 60 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)
E. TOTAL PARTICULATES (EXHAUST ONLY)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS AND TOTAL REDUCED SULFUR, AS H2S (SPECIATED, INLET ONLY)
H. CARBON DIOXIDE
I. ALDEHYDES (EXHAUST ONLY)
J. RULE 1150.1 TOXIC AIR CONTAMINANTS (TAC) INCLUDING, BUT NOT LIMITED TO, BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1,1-DICHLOROETHENE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, VINYL CHLORIDE, ACETALDEHYDE, FORMALDEHYDE, 1,4-DIOXANE AND XYLENE ISOMERS.
K. OXYGEN
L. NITROGEN
M. MOISTURE CONTENT
N. TEMPERATURE

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O. FLOW RATE
P. NMOC DESTRUCTION EFFICIENCY
Q. METHANE DESTRUCTION EFFICIENCY
R. BTU CONTENT (INLET ONLY)
[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET]

22) ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY. [RULE 1303(b) (2)-OFFSET]

23) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 3004 (a)(4), 1110.2, 40 CFR PART 60 SUBPART WWW]

24) PERTAINING TO THE OPERATION OF THIS EQUIPMENT, THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING CODE OF FEDERAL REGULATIONS: TITLE 40 PART 60 SUBPART WWW - STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART AAAA - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MUNICIPAL SOLID WASTE LANDFILLS; TITLE 40 PART 63 SUBPART ZZZZ - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES; AND TITLE 40 PART 60 SUBPART JJJJ - STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES.
[40 CFR PART 60 SUBPARTS WWW AND JJJJ, 40 CFR PART 63 SUBPARTS AAAA AND ZZZZ]

Emissions and Requirements:

25) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV @15% O_2, DRY, RULE 1110.2
CO: 250 PPMV @15% O_2, DRY, RULE 1303 (a)(1)-BACT
CO: 610 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NOx: 36 PPMV @15% O_2, DRY, RULE 1110.2, ECF = 1
NOx: 11 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
NOx: 150 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
NMOC: 20 PPMV, AS HEXANE, @3% O_2, DRY, OR 98% BY WEIGHT REDUCTION, RULE 1150.1, 40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 0.066 GRAMS/BHP-HR, 1303 (a)(1)-BACT
ROG: 40 PPMV @15% O_2, DRY, RULE 1110.2
ROG: 30 PPMV @15% O_2, DRY, 1303 (a)(1)-BACT
ROG: 80 PPMV @15% O_2, DRY, 40 CFR PART 60 SUBPART JJJJ, 40 CFR PART 63 SUBPART ZZZZ
SOx: BASED ON 60 PPMV SULFUR AVERAGED MONTHLY, AS H_2S, CONCENTRATION IN LFG AT INLET, 1303(a)(1)-BACT

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554180

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. SELECTIVE CATALYTIC REDUCTION UNIT NO. 1, STEULER, MODEL NO. DENOX-CG260-16/3370, WITH THREE MODULES OF BASF HONEYCOMB-TYPE MIXED METAL OXIDE MICRO POROUS CATALYST, EACH MODULE 5' - 0" L. X 5' - 0" W. X 1' - 0" H., WITH A TOTAL VOLUME OF 75 CUBIC FEET, AND A UREA INJECTION SYSTEM WITH AN INTERCONNECTING AQUEOUS UREA STORAGE TANK, 6500 GALLONS CAPACITY.

2. OXIDATION CATALYST, CLARIANT, WITH ONE MODULE OF PLATINUM METAL CATALYST MATERIAL, 5' - 0" L. X 5' - 0" W. X 0' - 4" H., WITH A TOTAL VOLUME OF 8.33 CUBIC FEET.

3. ONE NOX MONITOR UNIT, MONITORING NOX LEVELS AT THE OUTLET OF THE OXIDATION CATALYST, AND

4. EXHAUST SYSTEM VENTING ONE INTERNAL COMBUSTION ENGINE (PERMITTED UNDER A/N 554156)

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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 NOX MONITOR AND UREA INJECTION SYSTEM SHALL BE IN FULL OPERATION WHENEVER THE SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM IS IN OPERATION.
[RULE 204]

4) THIS SYSTEM SHALL BE IN OPERATION WHENEVER THE INTERNAL COMBUSTION ENGINE IT IS VENTING IS IN OPERATION, EXCEPT AS OTHERWISE NOTED IN THE PERMIT.
[RULE 204]

5) THIS EQUIPMENT SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF THE INSPECTIONS AND MAINTENANCE OF THIS EQUIPMENT SHALL BE MAINTAINED AND BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

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6) SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]

7) THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE GAUGES TO ACCURATELY INDICATE THE TEMPERATURE IN DEGREES FAHRENHEIT AT THE INLET AND OUTLET OF THE SCR.
[RULE 204]

8) THE MINIMUM TEMPERATURE OF THE ENGINE EXHAUST AT THE INLET OF THE SCR UNIT SHALL BE AT LEAST 572 DEGREES FAHRENHEIT. THE PERIOD DURING WHICH THE TEMPERATURE OF EXHAUST GASES ENTERING THE SCR UNIT IS LESS THAN 572 DEGREES FAHRENHEIT SHALL NOT EXCEED 30 MINUTES FOR EACH COLD START-UP AND SHUTDOWN.
[RULE 204]

9) THE MAXIMUM TEMPERATURE OF THE EXHAUST GASES ENTERING THE SCR UNIT SHALL NOT EXCEED 950 DEGREES FAHRENHEIT.
[RULE 204]

10) THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE DIFFERENTIAL GAUGES TO ACCURATELY INDICATE THE PRESSURE DROP IN INCHES OF WATER COLUMN OR MILLIBAR ACROSS THE SCR CATALYST AND OXIDATION CATALYST.
[RULE 204]

11) THE PRESSURE DROP ACROSS EACH OF THE SCR CATALYST AND OXIDATION CATALYST SHALL NOT EXCEED 5 INCHES OF WATER COLUMN OR 12.5 MILLIBAR.
[RULE 204]

12) THE UREA INJECTION SYSTEM SHALL BE OPERATED ONLY WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204]

13) THE HOURLY AVERAGE AMMONIA CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 5 PPMV CORRECTED TO 15% OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

14) THE FIFTEEN-MINUTE AVERAGE NOX CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 11 PPMVD CORRECTED TO 15 PERCENT OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

15) A DATA GATHERING AND RETRIEVAL SYSTEM OR ITS EQUIVALENT SHALL BE INSTALLED AND MAINTAINED TO RECORD THE FOLLOWING:

A. THE DATE, TIME AND HOURS OF OPERATION.
B. THE 15-MINUTE AVERAGE NOX CONCENTRATION, CORRECTED TO 15% OXYGEN ON A DRY BASIS, AT THE OUTLET OF THE SCR CATALYST.
C. THE EXHAUST GAS INLET AND OUTLET TEMPERATURE TO THE SCR UNIT.

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D. THE TOTAL TIME FROM COLD START-UP TO REACH SCR INLET TEMPERATURE OF 572 DEGREES FAHRENHEIT.
E. THE UREA INJECTION RATE IN POUNDS PER HOUR.
F. THE MOLAR RATIO OF THE UREA FLOWRATE TO THE NOX FLOWRATE.
[RULE 3004 (a)(4)]

16) THE AMMONIA SLIP SHOULD BE TESTED AT LEAST ONCE PER YEAR. THE AMMONIA SLIP TEST SHALL BE DONE USING AQMD APPROVED TEST METHODS. RECORDS OF THE AMMONIA SLIP TESTS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

17) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NH_3: 5 PPMV @15% O_2 AMMONIA SLIP
NH_3: < 1.0 CHRONIC AND ACUTE HAZARD INDICES, RULE 1401

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554181

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. SELECTIVE CATALYTIC REDUCTION UNIT NO. 2, STEULER, MODEL NO. DENOX-CG260-16/3370, WITH THREE MODULES OF BASF HONEYCOMB-TYPE MIXED METAL OXIDE MICRO POROUS CATALYST, EACH MODULE 5' - 0" L. X 5' - 0" W. X 1' - 0" H., WITH A TOTAL VOLUME OF 75 CUBIC FEET, AND A UREA INJECTION SYSTEM WITH AN INTERCONNECTING AQUEOUS UREA STORAGE TANK, 6500 GALLONS CAPACITY.

2. OXIDATION CATALYST, CLARIANT, WITH ONE MODULE OF PLATINUM METAL CATALYST MATERIAL, 5' - 0" L. X 5' - 0" W. X 0' - 4" H., WITH A TOTAL VOLUME OF 8.33 CUBIC FEET.

3. ONE NOX MONITOR UNIT, MONITORING NOX LEVELS AT THE OUTLET OF THE OXIDATION CATALYST, AND

4. EXHAUST SYSTEM VENTING ONE INTERNAL COMBUSTION ENGINE (PERMITTED UNDER A/N 554157)

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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 NOX MONITOR AND UREA INJECTION SYSTEM SHALL BE IN FULL OPERATION WHENEVER THE SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM IS IN OPERATION.
[RULE 204]

4) THIS SYSTEM SHALL BE IN OPERATION WHENEVER THE INTERNAL COMBUSTION ENGINE IT IS VENTING IS IN OPERATION, EXCEPT AS OTHERWISE NOTED IN THE PERMIT.
[RULE 204]

5) THIS EQUIPMENT SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF THE INSPECTIONS AND MAINTENANCE OF THIS EQUIPMENT SHALL BE MAINTAINED AND BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

6) SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]

7) THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE GAUGES TO ACCURATELY INDICATE THE TEMPERATURE IN DEGREES FAHRENHEIT AT THE INLET AND OUTLET OF THE SCR.
[RULE 204]

8) THE MINIMUM TEMPERATURE OF THE ENGINE EXHAUST AT THE INLET OF THE SCR UNIT SHALL BE AT LEAST 572 DEGREES FAHRENHEIT. THE PERIOD DURING WHICH THE TEMPERATURE OF EXHAUST GASES ENTERING THE SCR UNIT IS LESS THAN 572 DEGREES FAHRENHEIT SHALL NOT EXCEED 30 MINUTES FOR EACH COLD START-UP AND SHUTDOWN.
[RULE 204]

9) THE MAXIMUM TEMPERATURE OF THE EXHAUST GASES ENTERING THE SCR UNIT SHALL NOT EXCEED 950 DEGREES FAHRENHEIT.
[RULE 204]

10) THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE DIFFERENTIAL GAUGES TO ACCURATELY INDICATE THE PRESSURE DROP IN INCHES OF WATER COLUMN OR MILLIBAR ACROSS THE SCR CATALYST AND OXIDATION CATALYST.
[RULE 204]

11) THE PRESSURE DROP ACROSS EACH OF THE SCR CATALYST AND OXIDATION CATALYST SHALL NOT EXCEED 5 INCHES OF WATER COLUMN OR 12.5 MILLIBAR.
[RULE 204]

12) THE UREA INJECTION SYSTEM SHALL BE OPERATED ONLY WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204]

13) THE HOURLY AVERAGE AMMONIA CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 5 PPMV CORRECTED TO 15% OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

14) THE FIFTEEN-MINUTE AVERAGE NOX CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 11 PPMVD CORRECTED TO 15 PERCENT OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

15) A DATA GATHERING AND RETRIEVAL SYSTEM OR ITS EQUIVALENT SHALL BE INSTALLED AND MAINTAINED TO RECORD THE FOLLOWING:

A. THE DATE, TIME AND HOURS OF OPERATION.
B. THE 15-MINUTE AVERAGE NOX CONCENTRATION, CORRECTED TO 15% OXYGEN ON A DRY BASIS, AT THE OUTLET OF THE SCR CATALYST.
C. THE EXHAUST GAS INLET AND OUTLET TEMPERATURE TO THE SCR UNIT.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

D. THE TOTAL TIME FROM COLD START-UP TO REACH SCR INLET TEMPERATURE OF 572 DEGREES FAHRENHEIT.
E. THE UREA INJECTION RATE IN POUNDS PER HOUR.
F. THE MOLAR RATIO OF THE UREA FLOWRATE TO THE NOX FLOWRATE.
[RULE 3004 (a)(4)]

16) THE AMMONIA SLIP SHOULD BE TESTED AT LEAST ONCE PER YEAR. THE AMMONIA SLIP TEST SHALL BE DONE USING AQMD APPROVED TEST METHODS. RECORDS OF THE AMMONIA SLIP TESTS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

17) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NH_3: 5 PPMV @15% O_2 AMMONIA SLIP
NH_3: < 1.0 CHRONIC AND ACUTE HAZARD INDICES, RULE 1401

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554182

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. SELECTIVE CATALYTIC REDUCTION UNIT NO. 3, STEULER, MODEL NO. DENOX-CG260-16/3370, WITH THREE MODULES OF BASF HONEYCOMB-TYPE MIXED METAL OXIDE MICRO POROUS CATALYST, EACH MODULE 5' - 0" L. X 5' - 0" W. X 1' - 0" H., WITH A TOTAL VOLUME OF 75 CUBIC FEET, AND A UREA INJECTION SYSTEM WITH AN INTERCONNECTING AQUEOUS UREA STORAGE TANK, 6500 GALLONS CAPACITY.

2. OXIDATION CATALYST, CLARIANT, WITH ONE MODULE OF PLATINUM METAL CATALYST MATERIAL, 5' - 0" L. X 5' - 0" W. X 0' - 4" H., WITH A TOTAL VOLUME OF 8.33 CUBIC FEET.

3. ONE NOX MONITOR UNIT, MONITORING NOX LEVELS AT THE OUTLET OF THE OXIDATION CATALYST, AND

4. EXHAUST SYSTEM VENTING ONE INTERNAL COMBUSTION ENGINE (PERMITTED UNDER A/N 554158)

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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 NOX MONITOR AND UREA INJECTION SYSTEM SHALL BE IN FULL OPERATION WHENEVER THE SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM IS IN OPERATION.
[RULE 204]

4) THIS SYSTEM SHALL BE IN OPERATION WHENEVER THE INTERNAL COMBUSTION ENGINE IT IS VENTING IS IN OPERATION, EXCEPT AS OTHERWISE NOTED IN THE PERMIT.
[RULE 204]

5) THIS EQUIPMENT SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF THE INSPECTIONS AND MAINTENANCE OF THIS EQUIPMENT SHALL BE MAINTAINED AND BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

6) SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]

7) THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE GAUGES TO ACCURATELY INDICATE THE TEMPERATURE IN DEGREES FAHRENHEIT AT THE INLET AND OUTLET OF THE SCR.
[RULE 204]

8) THE MINIMUM TEMPERATURE OF THE ENGINE EXHAUST AT THE INLET OF THE SCR UNIT SHALL BE AT LEAST 572 DEGREES FAHRENHEIT. THE PERIOD DURING WHICH THE TEMPERATURE OF EXHAUST GASES ENTERING THE SCR UNIT IS LESS THAN 572 DEGREES FAHRENHEIT SHALL NOT EXCEED 30 MINUTES FOR EACH COLD START-UP AND SHUTDOWN.
[RULE 204]

9) THE MAXIMUM TEMPERATURE OF THE EXHAUST GASES ENTERING THE SCR UNIT SHALL NOT EXCEED 950 DEGREES FAHRENHEIT.
[RULE 204]

10) THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE DIFFERENTIAL GAUGES TO ACCURATELY INDICATE THE PRESSURE DROP IN INCHES OF WATER COLUMN OR MILLIBAR ACROSS THE SCR CATALYST AND OXIDATION CATALYST.
[RULE 204]

11) THE PRESSURE DROP ACROSS EACH OF THE SCR CATALYST AND OXIDATION CATALYST SHALL NOT EXCEED 5 INCHES OF WATER COLUMN OR 12.5 MILLIBAR.
[RULE 204]

12) THE UREA INJECTION SYSTEM SHALL BE OPERATED ONLY WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204]

13) THE HOURLY AVERAGE AMMONIA CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 5 PPMV CORRECTED TO 15% OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

14) THE FIFTEEN-MINUTE AVERAGE NOX CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 11 PPMVD CORRECTED TO 15 PERCENT OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

15) A DATA GATHERING AND RETRIEVAL SYSTEM OR ITS EQUIVALENT SHALL BE INSTALLED AND MAINTAINED TO RECORD THE FOLLOWING:

A. THE DATE, TIME AND HOURS OF OPERATION.
B. THE 15-MINUTE AVERAGE NOX CONCENTRATION, CORRECTED TO 15% OXYGEN ON A DRY BASIS, AT THE OUTLET OF THE SCR CATALYST.
C. THE EXHAUST GAS INLET AND OUTLET TEMPERATURE TO THE SCR UNIT.

FACILITY PERMIT TO OPERATE
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D. THE TOTAL TIME FROM COLD START-UP TO REACH SCR INLET TEMPERATURE OF 572 DEGREES FAHRENHEIT.
E. THE UREA INJECTION RATE IN POUNDS PER HOUR.
F. THE MOLAR RATIO OF THE UREA FLOWRATE TO THE NOX FLOWRATE.
[RULE 3004 (a)(4)]

16) THE AMMONIA SLIP SHOULD BE TESTED AT LEAST ONCE PER YEAR. THE AMMONIA SLIP TEST SHALL BE DONE USING AQMD APPROVED TEST METHODS. RECORDS OF THE AMMONIA SLIP TESTS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

17) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NH_3: 5 PPMV @15% O_2 AMMONIA SLIP
NH_3: < 1.0 CHRONIC AND ACUTE HAZARD INDICES, RULE 1401

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554183

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. SELECTIVE CATALYTIC REDUCTION UNIT NO. 4, STEULER, MODEL NO. DENOX-CG260-16/3370, WITH THREE MODULES OF BASF HONEYCOMB-TYPE MIXED METAL OXIDE MICRO POROUS CATALYST, EACH MODULE 5' - 0" L. X 5' - 0" W. X 1' - 0" H., WITH A TOTAL VOLUME OF 75 CUBIC FEET, AND A UREA INJECTION SYSTEM WITH AN INTERCONNECTING AQUEOUS UREA STORAGE TANK, 6500 GALLONS CAPACITY.

2. OXIDATION CATALYST, CLARIANT, WITH ONE MODULE OF PLATINUM METAL CATALYST MATERIAL, 5' - 0" L. X 5' - 0" W. X 0' - 4" H., WITH A TOTAL VOLUME OF 8.33 CUBIC FEET.

3. ONE NOX MONITOR UNIT, MONITORING NOX LEVELS AT THE OUTLET OF THE OXIDATION CATALYST, AND

4. EXHAUST SYSTEM VENTING ONE INTERNAL COMBUSTION ENGINE (PERMITTED UNDER A/N 554159)

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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 NOX MONITOR AND UREA INJECTION SYSTEM SHALL BE IN FULL OPERATION WHENEVER THE SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM IS IN OPERATION.
[RULE 204]

4) THIS SYSTEM SHALL BE IN OPERATION WHENEVER THE INTERNAL COMBUSTION ENGINE IT IS VENTING IS IN OPERATION, EXCEPT AS OTHERWISE NOTED IN THE PERMIT.
[RULE 204]

5) THIS EQUIPMENT SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF THE INSPECTIONS AND MAINTENANCE OF THIS EQUIPMENT SHALL BE MAINTAINED AND BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

6) SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]

7) THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE GAUGES TO ACCURATELY INDICATE THE TEMPERATURE IN DEGREES FAHRENHEIT AT THE INLET AND OUTLET OF THE SCR.
[RULE 204]

8) THE MINIMUM TEMPERATURE OF THE ENGINE EXHAUST AT THE INLET OF THE SCR UNIT SHALL BE AT LEAST 572 DEGREES FAHRENHEIT. THE PERIOD DURING WHICH THE TEMPERATURE OF EXHAUST GASES ENTERING THE SCR UNIT IS LESS THAN 572 DEGREES FAHRENHEIT SHALL NOT EXCEED 30 MINUTES FOR EACH COLD START-UP AND SHUTDOWN.
[RULE 204]

9) THE MAXIMUM TEMPERATURE OF THE EXHAUST GASES ENTERING THE SCR UNIT SHALL NOT EXCEED 950 DEGREES FAHRENHEIT.
[RULE 204]

10) THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE DIFFERENTIAL GAUGES TO ACCURATELY INDICATE THE PRESSURE DROP IN INCHES OF WATER COLUMN OR MILLIBAR ACROSS THE SCR CATALYST AND OXIDATION CATALYST.
[RULE 204]

11) THE PRESSURE DROP ACROSS EACH OF THE SCR CATALYST AND OXIDATION CATALYST SHALL NOT EXCEED 5 INCHES OF WATER COLUMN OR 12.5 MILLIBAR.
[RULE 204]

12) THE UREA INJECTION SYSTEM SHALL BE OPERATED ONLY WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204]

13) THE HOURLY AVERAGE AMMONIA CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 5 PPMV CORRECTED TO 15% OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

14) THE FIFTEEN-MINUTE AVERAGE NOX CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 11 PPMVD CORRECTED TO 15 PERCENT OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

15) A DATA GATHERING AND RETRIEVAL SYSTEM OR ITS EQUIVALENT SHALL BE INSTALLED AND MAINTAINED TO RECORD THE FOLLOWING:

A. THE DATE, TIME AND HOURS OF OPERATION.
B. THE 15-MINUTE AVERAGE NOX CONCENTRATION, CORRECTED TO 15% OXYGEN ON A DRY BASIS, AT THE OUTLET OF THE SCR CATALYST.
C. THE EXHAUST GAS INLET AND OUTLET TEMPERATURE TO THE SCR UNIT.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

D. THE TOTAL TIME FROM COLD START-UP TO REACH SCR INLET TEMPERATURE OF 572 DEGREES FAHRENHEIT.
E. THE UREA INJECTION RATE IN POUNDS PER HOUR.
F. THE MOLAR RATIO OF THE UREA FLOWRATE TO THE NOX FLOWRATE.
[RULE 3004 (a)(4)]

16) THE AMMONIA SLIP SHOULD BE TESTED AT LEAST ONCE PER YEAR. THE AMMONIA SLIP TEST SHALL BE DONE USING AQMD APPROVED TEST METHODS. RECORDS OF THE AMMONIA SLIP TESTS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

17) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NH_3: 5 PPMV @15% O_2 AMMONIA SLIP
NH_3: < 1.0 CHRONIC AND ACUTE HAZARD INDICES, RULE 1401

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554184

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. SELECTIVE CATALYTIC REDUCTION UNIT NO. 5, STEULER, MODEL NO. DENOX-CG260-16/3370, WITH THREE MODULES OF BASF HONEYCOMB-TYPE MIXED METAL OXIDE MICRO POROUS CATALYST, EACH MODULE 5' - 0" L. X 5' - 0" W. X 1' - 0" H., WITH A TOTAL VOLUME OF 75 CUBIC FEET, AND A UREA INJECTION SYSTEM WITH AN INTERCONNECTING AQUEOUS UREA STORAGE TANK, 6500 GALLONS CAPACITY.

2. OXIDATION CATALYST, CLARIANT, WITH ONE MODULE OF PLATINUM METAL CATALYST MATERIAL, 5' - 0" L. X 5' - 0" W. X 0' - 4" H., WITH A TOTAL VOLUME OF 8.33 CUBIC FEET.

3. ONE NOX MONITOR UNIT, MONITORING NOX LEVELS AT THE OUTLET OF THE OXIDATION CATALYST, AND

4. EXHAUST SYSTEM VENTING ONE INTERNAL COMBUSTION ENGINE (PERMITTED UNDER A/N 554160)

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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 NOX MONITOR AND UREA INJECTION SYSTEM SHALL BE IN FULL OPERATION WHENEVER THE SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM IS IN OPERATION.
[RULE 204]

4) THIS SYSTEM SHALL BE IN OPERATION WHENEVER THE INTERNAL COMBUSTION ENGINE IT IS VENTING IS IN OPERATION, EXCEPT AS OTHERWISE NOTED IN THE PERMIT.
[RULE 204]

5) THIS EQUIPMENT SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF THE INSPECTIONS AND MAINTENANCE OF THIS EQUIPMENT SHALL BE MAINTAINED AND BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

6) SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]

7) THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE GAUGES TO ACCURATELY INDICATE THE TEMPERATURE IN DEGREES FAHRENHEIT AT THE INLET AND OUTLET OF THE SCR.
[RULE 204]

8) THE MINIMUM TEMPERATURE OF THE ENGINE EXHAUST AT THE INLET OF THE SCR UNIT SHALL BE AT LEAST 572 DEGREES FAHRENHEIT. THE PERIOD DURING WHICH THE TEMPERATURE OF EXHAUST GASES ENTERING THE SCR UNIT IS LESS THAN 572 DEGREES FAHRENHEIT SHALL NOT EXCEED 30 MINUTES FOR EACH COLD START-UP AND SHUTDOWN.
[RULE 204]

9) THE MAXIMUM TEMPERATURE OF THE EXHAUST GASES ENTERING THE SCR UNIT SHALL NOT EXCEED 950 DEGREES FAHRENHEIT.
[RULE 204]

10) THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE DIFFERENTIAL GAUGES TO ACCURATELY INDICATE THE PRESSURE DROP IN INCHES OF WATER COLUMN OR MILLIBAR ACROSS THE SCR CATALYST AND OXIDATION CATALYST.
[RULE 204]

11) THE PRESSURE DROP ACROSS EACH OF THE SCR CATALYST AND OXIDATION CATALYST SHALL NOT EXCEED 5 INCHES OF WATER COLUMN OR 12.5 MILLIBAR.
[RULE 204]

12) THE UREA INJECTION SYSTEM SHALL BE OPERATED ONLY WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204]

13) THE HOURLY AVERAGE AMMONIA CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 5 PPMV CORRECTED TO 15% OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

14) THE FIFTEEN-MINUTE AVERAGE NOX CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 11 PPMVD CORRECTED TO 15 PERCENT OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

15) A DATA GATHERING AND RETRIEVAL SYSTEM OR ITS EQUIVALENT SHALL BE INSTALLED AND MAINTAINED TO RECORD THE FOLLOWING:

A. THE DATE, TIME AND HOURS OF OPERATION.
B. THE 15-MINUTE AVERAGE NOX CONCENTRATION, CORRECTED TO 15% OXYGEN ON A DRY BASIS, AT THE OUTLET OF THE SCR CATALYST.
C. THE EXHAUST GAS INLET AND OUTLET TEMPERATURE TO THE SCR UNIT.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

D. THE TOTAL TIME FROM COLD START-UP TO REACH SCR INLET TEMPERATURE OF 572 DEGREES FAHRENHEIT.
E. THE UREA INJECTION RATE IN POUNDS PER HOUR.
F. THE MOLAR RATIO OF THE UREA FLOWRATE TO THE NOX FLOWRATE.
[RULE 3004 (a)(4)]

16) THE AMMONIA SLIP SHOULD BE TESTED AT LEAST ONCE PER YEAR. THE AMMONIA SLIP TEST SHALL BE DONE USING AQMD APPROVED TEST METHODS. RECORDS OF THE AMMONIA SLIP TESTS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

17) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NH_3: 5 PPMV @15% O_2 AMMONIA SLIP
NH_3: < 1.0 CHRONIC AND ACUTE HAZARD INDICES, RULE 1401

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554185

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. SELECTIVE CATALYTIC REDUCTION UNIT NO. 6, STEULER, MODEL NO. DENOX-CG260-16/3370, WITH THREE MODULES OF BASF HONEYCOMB-TYPE MIXED METAL OXIDE MICRO POROUS CATALYST, EACH MODULE 5' - 0" L. X 5' - 0" W. X 1' - 0" H., WITH A TOTAL VOLUME OF 75 CUBIC FEET, AND A UREA INJECTION SYSTEM WITH AN INTERCONNECTING AQUEOUS UREA STORAGE TANK, 6500 GALLONS CAPACITY.

2. OXIDATION CATALYST, CLARIANT, WITH ONE MODULE OF PLATINUM METAL CATALYST MATERIAL, 5' - 0" L. X 5' - 0" W. X 0' - 4" H., WITH A TOTAL VOLUME OF 8.33 CUBIC FEET.

3. ONE NOX MONITOR UNIT, MONITORING NOX LEVELS AT THE OUTLET OF THE OXIDATION CATALYST, AND

4. EXHAUST SYSTEM VENTING ONE INTERNAL COMBUSTION ENGINE (PERMITTED UNDER A/N 554161)

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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 NOX MONITOR AND UREA INJECTION SYSTEM SHALL BE IN FULL OPERATION WHENEVER THE SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM IS IN OPERATION.
[RULE 204]

4) THIS SYSTEM SHALL BE IN OPERATION WHENEVER THE INTERNAL COMBUSTION ENGINE IT IS VENTING IS IN OPERATION, EXCEPT AS OTHERWISE NOTED IN THE PERMIT.
[RULE 204]

5) THIS EQUIPMENT SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF THE INSPECTIONS AND MAINTENANCE OF THIS EQUIPMENT SHALL BE MAINTAINED AND BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

6) SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]

7) THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE GAUGES TO ACCURATELY INDICATE THE TEMPERATURE IN DEGREES FAHRENHEIT AT THE INLET AND OUTLET OF THE SCR.
[RULE 204]

8) THE MINIMUM TEMPERATURE OF THE ENGINE EXHAUST AT THE INLET OF THE SCR UNIT SHALL BE AT LEAST 572 DEGREES FAHRENHEIT. THE PERIOD DURING WHICH THE TEMPERATURE OF EXHAUST GASES ENTERING THE SCR UNIT IS LESS THAN 572 DEGREES FAHRENHEIT SHALL NOT EXCEED 30 MINUTES FOR EACH COLD START-UP AND SHUTDOWN.
[RULE 204]

9) THE MAXIMUM TEMPERATURE OF THE EXHAUST GASES ENTERING THE SCR UNIT SHALL NOT EXCEED 950 DEGREES FAHRENHEIT.
[RULE 204]

10) THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE DIFFERENTIAL GAUGES TO ACCURATELY INDICATE THE PRESSURE DROP IN INCHES OF WATER COLUMN OR MILLIBAR ACROSS THE SCR CATALYST AND OXIDATION CATALYST.
[RULE 204]

11) THE PRESSURE DROP ACROSS EACH OF THE SCR CATALYST AND OXIDATION CATALYST SHALL NOT EXCEED 5 INCHES OF WATER COLUMN OR 12.5 MILLIBAR.
[RULE 204]

12) THE UREA INJECTION SYSTEM SHALL BE OPERATED ONLY WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204]

13) THE HOURLY AVERAGE AMMONIA CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 5 PPMV CORRECTED TO 15% OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

14) THE FIFTEEN-MINUTE AVERAGE NOX CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 11 PPMVD CORRECTED TO 15 PERCENT OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

15) A DATA GATHERING AND RETRIEVAL SYSTEM OR ITS EQUIVALENT SHALL BE INSTALLED AND MAINTAINED TO RECORD THE FOLLOWING:

A. THE DATE, TIME AND HOURS OF OPERATION.
B. THE 15-MINUTE AVERAGE NOX CONCENTRATION, CORRECTED TO 15% OXYGEN ON A DRY BASIS, AT THE OUTLET OF THE SCR CATALYST.
C. THE EXHAUST GAS INLET AND OUTLET TEMPERATURE TO THE SCR UNIT.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

D. THE TOTAL TIME FROM COLD START-UP TO REACH SCR INLET TEMPERATURE OF 572 DEGREES FAHRENHEIT.
E. THE UREA INJECTION RATE IN POUNDS PER HOUR.
F. THE MOLAR RATIO OF THE UREA FLOWRATE TO THE NOX FLOWRATE.
[RULE 3004 (a)(4)]

16) THE AMMONIA SLIP SHOULD BE TESTED AT LEAST ONCE PER YEAR. THE AMMONIA SLIP TEST SHALL BE DONE USING AQMD APPROVED TEST METHODS. RECORDS OF THE AMMONIA SLIP TESTS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

17) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NH_3: 5 PPMV @15% O_2 AMMONIA SLIP
NH_3: < 1.0 CHRONIC AND ACUTE HAZARD INDICES, RULE 1401

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554186

Equipment Description:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. SELECTIVE CATALYTIC REDUCTION UNIT NO. 7, STEULER, MODEL NO. DENOX-CG260-16/3370, WITH THREE MODULES OF BASF HONEYCOMB-TYPE MIXED METAL OXIDE MICRO POROUS CATALYST, EACH MODULE 5' - 0" L. X 5' - 0" W. X 1' - 0" H., WITH A TOTAL VOLUME OF 75 CUBIC FEET, AND A UREA INJECTION SYSTEM WITH AN INTERCONNECTING AQUEOUS UREA STORAGE TANK, 6500 GALLONS CAPACITY.

2. OXIDATION CATALYST, CLARIANT, WITH ONE MODULE OF PLATINUM METAL CATALYST MATERIAL, 5' - 0" L. X 5' - 0" W. X 0' - 4" H., WITH A TOTAL VOLUME OF 8.33 CUBIC FEET.

3. ONE NOX MONITOR UNIT, MONITORING NOX LEVELS AT THE OUTLET OF THE OXIDATION CATALYST, AND

4. EXHAUST SYSTEM VENTING ONE INTERNAL COMBUSTION ENGINE (PERMITTED UNDER A/N 554162)

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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 NOX MONITOR AND UREA INJECTION SYSTEM SHALL BE IN FULL OPERATION WHENEVER THE SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM IS IN OPERATION.
[RULE 204]

4) THIS SYSTEM SHALL BE IN OPERATION WHENEVER THE INTERNAL COMBUSTION ENGINE IT IS VENTING IS IN OPERATION, EXCEPT AS OTHERWISE NOTED IN THE PERMIT.
[RULE 204]

5) THIS EQUIPMENT SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER'S SPECIFICATIONS. RECORDS OF THE INSPECTIONS AND MAINTENANCE OF THIS EQUIPMENT SHALL BE MAINTAINED AND BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

6) SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]

7) THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE GAUGES TO ACCURATELY INDICATE THE TEMPERATURE IN DEGREES FAHRENHEIT AT THE INLET AND OUTLET OF THE SCR.
[RULE 204]

8) THE MINIMUM TEMPERATURE OF THE ENGINE EXHAUST AT THE INLET OF THE SCR UNIT SHALL BE AT LEAST 572 DEGREES FAHRENHEIT. THE PERIOD DURING WHICH THE TEMPERATURE OF EXHAUST GASES ENTERING THE SCR UNIT IS LESS THAN 572 DEGREES FAHRENHEIT SHALL NOT EXCEED 30 MINUTES FOR EACH COLD START-UP AND SHUTDOWN.
[RULE 204]

9) THE MAXIMUM TEMPERATURE OF THE EXHAUST GASES ENTERING THE SCR UNIT SHALL NOT EXCEED 950 DEGREES FAHRENHEIT.
[RULE 204]

10) THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE DIFFERENTIAL GAUGES TO ACCURATELY INDICATE THE PRESSURE DROP IN INCHES OF WATER COLUMN OR MILLIBAR ACROSS THE SCR CATALYST AND OXIDATION CATALYST.
[RULE 204]

11) THE PRESSURE DROP ACROSS EACH OF THE SCR CATALYST AND OXIDATION CATALYST SHALL NOT EXCEED 5 INCHES OF WATER COLUMN OR 12.5 MILLIBAR.
[RULE 204]

12) THE UREA INJECTION SYSTEM SHALL BE OPERATED ONLY WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204]

13) THE HOURLY AVERAGE AMMONIA CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 5 PPMV CORRECTED TO 15% OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

14) THE FIFTEEN-MINUTE AVERAGE NOX CONCENTRATION AT THE OUTLET OF THE SCR UNIT SHALL NOT EXCEED 11 PPMVD CORRECTED TO 15 PERCENT OXYGEN WHEN THE SCR INLET TEMPERATURE IS ABOVE 572 DEGREES FAHRENHEIT.
[RULE 204, 1303(a)(1)]

15) A DATA GATHERING AND RETRIEVAL SYSTEM OR ITS EQUIVALENT SHALL BE INSTALLED AND MAINTAINED TO RECORD THE FOLLOWING:

A. THE DATE, TIME AND HOURS OF OPERATION.
B. THE 15-MINUTE AVERAGE NOX CONCENTRATION, CORRECTED TO 15% OXYGEN ON A DRY BASIS, AT THE OUTLET OF THE SCR CATALYST.
C. THE EXHAUST GAS INLET AND OUTLET TEMPERATURE TO THE SCR UNIT.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

D. THE TOTAL TIME FROM COLD START-UP TO REACH SCR INLET TEMPERATURE OF 572 DEGREES FAHRENHEIT.
E. THE UREA INJECTION RATE IN POUNDS PER HOUR.
F. THE MOLAR RATIO OF THE UREA FLOWRATE TO THE NOX FLOWRATE.
[RULE 3004 (a)(4)]

16) THE AMMONIA SLIP SHOULD BE TESTED AT LEAST ONCE PER YEAR. THE AMMONIA SLIP TEST SHALL BE DONE USING AQMD APPROVED TEST METHODS. RECORDS OF THE AMMONIA SLIP TESTS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

17) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NH_3: 5 PPMV @15% O_2 AMMONIA SLIP
NH_3: < 1.0 CHRONIC AND ACUTE HAZARD INDICES, RULE 1401

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 564386

Equipment Description:

LANDFILL GAS (LFG) TREATMENT AND SULFUR CONTROL SYSTEM, 9,000 SCFM DESIGN CAPACITY, CONSISTING OF:

1. RAW LFG SUPPLY LINE FROM EXISTING GAS COLLECTION HEADER (FRANK R. BOWERMAN LANDFILL), WITH SECONDARY SUPPLY LINE BYPASSING THE SULFUR CONTROL SYSTEM.

2. SULFUR CONTROL SYSTEM CONSISTING OF APPROXIMATELY FIVE (5) FIXED-BED VESSELS IN PARALLEL (4 OPERATIONAL; 1 STANDBY), WITH APPROXIMATELY 70,233 POUNDS OF HYDROCAT G-SERIES SOLID GRANULAR REACTANT MEDIA OR EQUIVALENT IN EACH VESSEL.

3. PRELIMINARY CONDENSATION, COOLING/DEHYDRATION, LIQUID/GAS SEPARATION AND INITIAL GAS COMPRESSION EQUIPMENT.

4. INTERMEDIATE GAS/LIQUID SEPARATION AND COALESCING FILTRATION EQUIPMENT.

5. SILOXANE REMOVAL/ADSORPTION SYSTEM, TEMPERATURE SWING ADSORPTION (TSA) TYPE, WITH PRESSURE VESSELS OR EQUIVALENT, EACH WITH A PROPRIETARY BLEND OF ACTIVATED ALUMINA OR OTHER MEDIA, ASSOCIATED AIR HEATER, FINAL FILTRATION/POLISHING.

6. TREATED GAS COOLING EQUIPMENT.

7. ONE (1) CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) MEASURING AND MONITORING TOTAL SULFUR CONCENTRATION, CALCULATED AS H2S, AT THE INLET HEADER TO SEVEN (7) LFG-FIRED INTERNAL COMBUSTION ENGINES (PERMITTED UNDER APPLICATION NUMBERS 554156, 554157, 554158, 554159, 554160, 554161 AND 554162).

8. REGENERATIVE OFF-GAS LINE TO A LANDFILL GAS FLARE.

9. ASSOCIATED OILY WATER SEPARATORS, SUMPS AND PUMPS, AND CONDENSATE STORAGE.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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 ONLY BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

[RULE 204]

4) THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO SCAQMD, ATTN: RRONQUILLO1@AQMD.GOV, AT LEAST 30 DAYS PRIOR TO THE INITIAL EQUIPMENT INSTALLATION, A SYSTEM DESIGN AND PROCESS FLOW DIAGRAM, CONTROLS, LOCATIONS OF AND TYPE OF PROCESS INSTRUMENTATION INCLUDING TEMPERATURE AND PRESSURE GAUGES, AND EQUIPMENT SPECIFICATIONS (INCLUDING BUT NOT LIMITED TO MAKE, MODEL, CAPACITY, MOTOR SIZE, QUANTITY AND TYPE OF ADSORBENT MEDIA).
[RULE 204]

5) AT LEAST 24 HOURS PRIOR TO STARTUP OF THE INITIAL EQUIPMENT INSTALLED, THE OWNER/OPERATOR SHALL NOTIFY THE SCAQMD, ATTN: RRONQUILLO1@AQMD.GOV, AND GKAKISHITA@AQMD.GOV, OF COMPLETION OF CONSTRUCTION OF THE INITIAL EQUIPMENT INSTALLED AND INTENTION TO COMMENCE OPERATION.
[RULE 204]

6) THE LANDFILL GAS AT THE INLET GAS SUPPLY LINE TO THE ENGINES SHALL CONTAIN NO MORE THAN 60 PPMV AVERAGED MONTHLY AND 85 PPMV AVERAGED DAILY, TOTAL SULFUR COMPOUNDS, CALCULATED AS H2S. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL DEMONSTRATE COMPLIANCE WITH THIS LIMIT BY RECORDING THE READINGS ON TOTAL REDUCED SULFUR (IN PPMV) OBTAINED FROM THE CONTINUOUS FUEL GAS MONITORING SYSTEM (CFGMS) THAT IS INSTALLED DOWNSTREAM OF THE SULFUR CONTROL SYSTEM AND THE LANDFILL GAS TREATMENT SYSTEM, AT THE INLET HEADER TO THE ENGINES.
[RULE 1303 (a)(1)-BACT, 3004 (a)(4)]

7) WHENEVER THE RECORDED TOTAL SULFUR READINGS FROM THE CFGMS DEMONSTRATE A STEADY RISE IN VALUE OVER TIME, BUT BEFORE THE MAXIMUM READING REACHES 60 PPMV, THE OWNER OR OPERATOR SHALL CHANGE OUT THE H2S REACTANT MEDIA IN ONE OR SEVERAL PRESSURE VESSELS. THE OWNER OR OPERATOR SHALL MAINTAIN RECORDS OF MEDIA CHANGE-OUT.
[RULE 204]

8) SPENT REACTANT MEDIA REMOVED FROM THE SULFUR CONTROL SYSTEM SHALL BE STORED IN CLOSED CONTAINERS PRIOR TO DISPOSAL.
[RULE 204]

9) A FLOW INDICATOR SHALL BE INSTALLED AND MAINTAINED AT THE INLET STREAM TO THE LFG TREATMENT SYSTEM, TREATMENT SYSTEM EXIT, AND REGENERATION OFF-GAS EXIT, TO INDICATE THESE TOTAL FLOW RATES IN STANDARD CUBIC FEET PER MINUTE (SCFM). IN CASE A PRESSURE SENSOR DEVICE IS USED IN PLACE OF THE FLOW INDICATOR, A CONVERSION CHART SHALL BE AVAILABLE TO INDICATE THE CORRESPONDENT FLOW RATE, IN SCFM, TO THE PRESSURE READING.
[RULE 204]

10) WHENEVER THE LFG TREATMENT SYSTEM IS IN OPERATION, THE DAILY FLOW RATE OF RAW LFG ACCEPTED, LFG TREATED, AND REGENERATION OFF-GAS GENERATED, IN SCFD, SHALL BE RECORDED.
[RULE 204]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

11) SAMPLING PORTS, FOR EACH PRIMARY AND SECONDARY ADSORBER TRAIN, FOR THE LANDFILL GAS TREATMENT SYSTEM, SHALL BE PROVIDED IN THE INLET AND OUTLET LINE, AND THE ADSORBER'S REGENERATION OFF-GAS LINE.
[RULE 204, 217]

12) THIS EQUIPMENT SHALL BE OPERATED SO THAT THERE ARE NO LEAKS THAT EXCEED 500 PPMV TOTAL ORGANIC COMPOUNDS, MEASURED AS METHANE, AT ANY LFG PROCESSING COMPONENT UNDER POSITIVE PRESSURE. ANY COMPONENT LEAK MUST BE TAGGED AND REPAIRED WITHIN 10 CALENDAR DAYS FROM THE TIME OF THE FIRST EXCEEDANCE.
[RULE 1150.1, 204]

13) ALL COMPONENTS UNDER POSITIVE PRESSURE SHALL BE MONITORED FOR LEAKS ONCE EACH WEEK OF OPERATION USING AN APPROVED ORGANIC VAPOR ANALYZER (OVA). DATES OF ALL MONITORING EVENTS AND ALL READINGS EXCEEDING 500 PPM SHALL BE RECORDED AND KEPT ON FILE. A WRITTEN REQUEST FOR A REDUCTION OF THE MONITORING FREQUENCY MAY BE SUBMITTED TO THE SCAQMD, ATTN: RRONQUILLO1@AQMD.GOV, AFTER ACHIEVING NO LEAKS ABOVE 500 PPMV FOR ONE QUARTER OF OPERATION.
[RULE 1150.1, 204]

14) SAMPLES SHALL BE COLLECTED AT THE INLET AND OUTLET OF THE LFG TREATMENT SYSTEM AND REGENERATION OFF-GAS LINE, AT INITIAL START-UP AND ON A MONTHLY BASIS FOR THE FIRST THREE MONTHS, AND, THEREAFTER, ON A QUARTERLY BASIS. LFG TREATMENT PROCESS OPERATING PARAMETERS SHALL BE RECORDED FOR EACH SAMPLING EVENT. ALL SAMPLES SHALL BE ANALYZED FOR CONCENTRATION (PPMV) OF:

A. TOTAL SILOXANES (ORGANIC SILICON COMPOUNDS),
B. TOTAL NON METHANE ORGANIC COMPOUNDS (TNMOC), AND
C. TOTAL REDUCED SULFUR, AS H2S, ALL SAMPLING AND ANALYSES SHALL CONFORM WITH EPA, CARB, OR DISTRICT APPROVED METHODS (IF AVAILABLE). ALL RESULTS SHALL BE RECORDED.

[RULE 204, 217]

15) THE LFG TREATMENT SYSTEM SHALL BE OPERATED AS PER MANUFACTURER'S RECOMMENDED OPERATING SPECIFICATIONS AND THE FOLLOWING OPERATING PARAMETERS SHALL BE MONITORED AND RECORDED AT LEAST ONCE EACH DAY OF OPERATION:

A. PROCESS TEMPERATURES AND PRESSURES,
B. REGENERATION DURATION, AND
C. REGENERATION FREQUENCY

[RULE 204]

16) DURING AN ADSORBENT REGENERATION MODE, THE REGENERATION OFF-GAS FROM THE ADSORBER TRAIN SHALL BE VENTED AT ALL TIMES TO AN AIR POLLUTION CONTROL SYSTEM (ENCLOSED FLARE) WHICH IS IN FULL OPERATION AND HAS A VALID PERMIT TO CONSTRUCT/ OPERATE ISSUED BY THE SCAQMD.
[RULE 204]

17) CONDENSATE TANKS SHALL REMAIN COVERED AND SEALED AT ALL TIMES UNLESS DISPOSAL OF THE CONDENSATE IS TAKING PLACE OR DURING MAINTENANCE OR REPAIRS.
[RULE 204]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

18) IF A VACUUM TRUCK EMPTIES THE CONDENSATE FROM THE CONDENSATE TANKS, IT SHALL NOT DISCHARGE ODOROUS VAPORS INTO THE ATMOSPHERE.
[RULE 204]

19) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF LANDFILL GAS REGENERATION OFF-GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF REGENERATION OFF-GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF ENERGY AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR AFTER OCCURRENCE, OR WITHIN ONE HOUR OF THE TIME THE OWNER/OPERATOR'S PERSONNEL KNEW OR REASONABLY SHOULD HAVE KNOWN OF THE OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]

20) IF A DISTINCT ODOR RESULTING FROM THE OPERATION OF THIS EQUIPMENT IS DETECTED AT OR BEYOND THE PROPERTY LINE, ALL WORK SHALL CEASE UNTIL THE ODOR SOURCES ARE DETERMINED AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM. MITIGATION MEASURES WHICH ARE DEEMED APPROPRIATE BY AQMD PERSONNEL AS NECESSARY TO PROTECT THE COMFORT, REPOSE, HEALTH, OR SAFETY OF THE PUBLIC SHALL BE IMPLEMENTED UPON REQUEST.
[RULE 402]

21) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT ON FILE 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
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 558566

Equipment Description:

LANDFILL GAS FLARE, NON-EMERGENCY, ENCLOSED, ULTRA-LOW EMISSION, JOHN ZINK OR EQUIVALENT, LANDFILL GAS FIRED, MAXIMUM RATING OF 18,000,000 BTU/HR, 600 SCFM, 6' - 0" DIA. X 40' - 0 " H., WITH A CONDENSATE INJECTION SYSTEM, ANTI-FLASHBACK BURNERS, AN AUTOMATIC IGNITION CONTROL SYSTEM, A FLAME ARRESTOR, AND FOUR 4" DIAMETER SOURCE TEST PORTS, VENTING REGENERATIVE OFF-GAS FROM A LANDFILL GAS TREATMENT SYSTEM.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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) A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE REGENERATION LANDFILL GAS SUPPLY LINE TO THE FLARE TO MEASURE AND RECORD THE VOLUMETRIC FLOW RATE OF GAS (IN STANDARD CUBIC FEET PER MINUTE) BEING COMBUSTED IN THE FLARE. THE RECORDING DEVICE SHALL BE CAPABLE OF RECORDING GAS FLOW AT LEAST EVERY 15 MINUTES.
[RULE 1150.1, 1303(b)(2)-OFFSET, 40 CFR PART 60 SUBPART WWW]

5) THE TOTAL VOLUME OF REGENERATION LANDFILL GAS BURNED IN THE FLARE SHALL NOT EXCEED 600 STANDARD CUBIC FEET PER MINUTE.
[RULE 1303(b)(2)-OFFSET]

6) THIS FLARE SHALL BE EQUIPPED WITH A TEMPERATURE INDICATOR AND RECORDER WHICH MEASURES AND RECORDS THE GAS TEMPERATURE IN THE FLARE STACK. THE TEMPERATURE INDICATOR AND RECORDER SHALL OPERATE 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 FOUR (4) FEET FROM THE TOP OF THE STACK.
[RULE 1303(a)(1)-BACT, 1150.1, 40 CFR PART 60 SUBPART WWW]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

7) WHENEVER THIS FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400 DEGREES FAHRENHEIT, AVERAGED OVER 15 MINUTES, AS MEASURED BY THE TEMPERATURE INDICATOR AND RECORDER, SHALL BE MAINTAINED IN THE FLARE STACK, EXCEPT DURING PERIODS OF START-UP AND SHUTDOWN NOT TO EXCEED 30 MINUTES PER INCIDENT.
[RULE 1303(a)(1)-BACT]

8) THIS FLARE SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-DOWN AND RE-START SYSTEM WITH A FAILURE ALARM, AND AN AUTOMATIC COMBUSTION AIR CONTROL SYSTEM, WHICH HAVE BEEN APPROVED BY THE EXECUTIVE OFFICER, TO AUTOMATICALLY ISOLATE THE FLARE FROM THE LANDFILL GAS SUPPLY LINE, SHUT OFF THE BLOWERS AND IMMEDIATELY NOTIFY A RESPONSIBLE PARTY OF THE SHUT-DOWN.
[RULE 1303(a)(1)-BACT, 1150.1, 40 CFR PART 60 SUBPART WWW]

9) THE AUTOMATIC SHUT-DOWN SAFETY SYSTEM(S) SHALL BE TESTED MONTHLY FOR PROPER OPERATION AND THE RESULTS RECORDED.
[RULE 1303(a)(1)-BACT, 204]

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

11) THE HEAT INPUT THROUGH THE FLARE SHALL NOT EXCEED 18 MILLION BTU'S PER HOUR.
[RULE 1303(b)(2)-OFFSET]

12) EMISSIONS RESULTING FROM FLARE OPERATION SHALL NOT EXCEED THE FOLLOWING:

POLLUTANT	LBS/HOUR
NOx, AS NO_2	0.45
SOx, AS SO_2	0.36
CO	1.08
PM10	0.22
VOC	0.11

[RULE 1303 (a)(1)-BACT, 1303 (b)(1)-MODELING, 1303 (b)(2)-OFFSET]

13) THIS EQUIPMENT SHALL BE OPERATED WHENEVER THE LANDFILL GAS TREATMENT SYSTEM IT IS VENTING IS IN OPERATION AND SHALL EITHER REDUCE THE NON-METHANE ORGANIC COMPOUNDS (NMOC) BY AT LEAST 98 PERCENT BY WEIGHT OR REDUCE THE OUTLET NMOC CONCENTRATION TO LESS THAN 20 PPM BY VOLUME, DRY BASIS AS HEXANE AT 3 PERCENT OXYGEN.
[RULE 1150.1, 40 CFR PART 60 SUBPART WWW]

14) THIS EQUIPMENT SHALL ACHIEVE A METHANE DESTRUCTION EFFICIENCY OF AT LEAST 99 PERCENT BY WEIGHT.
[RULE 1150.1, 40 CFR PART 60 SUBPART WWW]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

15) A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE CONDENSATE LINE TO MEASURE AND RECORD THE CONDENSATE INJECTION RATE IN GALLONS PER MINUTE INTO THE FLARE.
[RULE 1303(b)(2)-OFFSET]

16) THE MAXIMUM VOLUMETRIC RATE OF CONDENSATE INJECTED INTO THE FLARE SHALL NOT EXCEED 1 GALLON PER MINUTE (GPM).
[RULE 1303(b)(2)-OFFSET]

17) EXCEPT DURING SOURCE TESTING, CONDENSATE INJECTION INTO THE FLARE MAY OCCUR ONLY AFTER SOURCE TESTS SHOW THAT NOX, CO, VOC AND TOTAL PARTICULATE EMISSIONS WILL COMPLY WITH THE PERMITTED LIMITS INDICATED IN CONDITION NO. 12 WHEN THE FLARE IS OPERATING WITH CONDENSATE INJECTION.
[RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-OFFSET]

18) FOUR (4) SAMPLING PORTS SHALL BE PROVIDED IN THE FLARE STACK AT LEAST FIVE (5) FEET UPSTREAM OF THE FLARE OUTLET. EACH SAMPLING PORT SHALL CONSIST OF A FOUR-INCH COUPLING WITH 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.
[RULE 217]

19) A SAMPLING PORT SHALL BE MAINTAINED AT THE INLET GAS LINE TO THE FLARE TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE.
[RULE 217, 431.1, 1150.1]

20) THE FLARE SHALL BE EQUIPPED WITH A SUFFICIENT NUMBER OF VIEW PORTS TO ALLOW VISUAL INSPECTION OF THE FLAME HEIGHT WITHIN THE FLARE AT ALL TIMES. THE VIEW PORTS SHALL BE LOCATED AT THE ELEVATION OF THE TEMPERATURE SENSOR LOCATIONS. SAFE AND ADEQUATE ACCESS SHALL BE PROVIDED FOR ALL VIEW PORTS UPON REQUEST BY SCAQMD PERSONNEL.
[RULE 217, 1303(a)(1)-BACT]

21) THE FLARE SHALL BE DESIGNED AND CONSTRUCTED SUCH THAT THE FLAME IN THE FLARE REMAINS BELOW THE HEIGHT OF THE FLARE'S OPERATING THERMOCOUPLE AT ALL TIMES.
[RULE 1303(a)(1)-BACT]

22) THE MAXIMUM FLARE SKIN TEMPERATURE AT ANY LOCATION SHALL NOT EXCEED 250 DEGREES FAHRENHEIT.
[RULE 217]

23) ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY.
[RULE 1303(b)(2)-OFFSET]

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BOWERMAN POWER LFG, LLC

24) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF RAW LANDFILL GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSIONS OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD MANAGER OF THE ENERGY AND WASTE MANAGEMENT TEAM WITHIN ONE HOUR OF OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, 430, 1150.1]

25) WITHIN 180 DAYS OF INTIAL START-UP, UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS AND SUBMIT WRITTEN RESULTS WITHIN 60 DAYS OF TESTING. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD SEVEN (7) 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 SIXTY (60) DAYS PRIOR TO START OF TESTS.

THE TESTS SHALL BE CONDUCTED AT THE TYPICAL OPERATIONAL LANDFILL GAS FLOW RATES, AND SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET GAS TO THE FLARE AND THE FLARE EXHAUST FOR:

A. METHANE
B. TOTAL NON-METHANE ORGANICS
C. OXIDES OF NITROGEN (EXHAUST ONLY, WITH AND WITHOUT CONDENSATE INJECTION)
D. CARBON MONOXIDE (EXHAUST ONLY, WITH AND WITHOUT CONDENSATE INJECTION)
E. TOTAL PARTICULATES (EXHAUST ONLY, WITH AND WITHOUT CONDENSATE INJECTION)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED, INLET ONLY)
H. CARBON DIOXIDE
I. RULE 1150.1 TABLE 1 COMPOUNDS
J. OXYGEN
K. NITROGEN
L. MOISTURE CONTENT
M. TEMPERATURE
N. FLOW RATE OF LANDFILL GAS (INLET ONLY)
O. FLOW RATE (EXHAUST)
P. NMOC DESTRUCTION EFFICIENCY
Q. BTU CONTENT (INLET ONLY)

[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET, 1401, 40 CFR PART 60 SUBPART WWW]

26) THE OPERATOR SHALL CONDUCT ANNUAL SOURCE TESTS AND SUBMIT RESULTS IN ACCORDANCE WITH SCAQMD RULE 1150.1 REQUIREMENTS. WRITTEN NOTICE OF THE TESTS SHALL BE PROVIDED TO THE SCAQMD SEVEN (7) 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 SIXTY (60) DAYS PRIOR TO START OF TESTS. THE TESTS SHALL BE CONDUCTED AT THE MAXIMUM FLOW RATES ALLOWED BY THIS PERMIT, OR THE MAXIMUM FLOW RATES ACHIEVABLE, AND SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET GAS TO THE FLARE AND THE FLARE EXHAUST FOR:

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

A. METHANE
B. TOTAL NON-METHANE ORGANICS
C. OXIDES OF NITROGEN (EXHAUST ONLY, WITH AND WITHOUT CONDENSATE INJECTION)
D. CARBON MONOXIDE (EXHAUST ONLY, WITH AND WITHOUT CONDENSATE INJECTION)
E. TOTAL PARTICULATES (EXHAUST ONLY, WITH AND WITHOUT CONDENSATE INJECTION)
F. HYDROGEN SULFIDE (INLET ONLY)
G. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED, INLET ONLY)
H. CARBON DIOXIDE
I. RULE 1150.1 TABLE 1 COMPOUNDS
J. OXYGEN
K. NITROGEN
L. MOISTURE CONTENT
M. TEMPERATURE
N. FLOW RATE OF LANDFILL GAS (INLET ONLY)
O. NMOC DESTRUCTION EFFICIENCY

[RULE 1150.1, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET, 1401, 40 CFR PART 60 SUBPART WWW]

27) THIS FLARE SHALL NOT BE OPERATED WITH ANY VISIBLE EMISSIONS EXCEPT FOR PERIODS NOT TO EXCEED A TOTAL OF 5 MINUTES DURING ANY 2 CONSECUTIVE HOURS. VISIBLE EMISSIONS SHALL BE DETERMINED IN ACCORDANCE WITH METHOD 22, APPENDIX A, OF 40 CFR 60.18.
[RULE 204, 401]

28) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS, AND SHALL BE MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.
[RULE 3004 (a)(4)]

29) PERTAINING TO THE OPERATION OF THIS EQUIPMENT, THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING CODE OF FEDERAL REGULATIONS: TITLE 40 PART 60 SUBPART WWW - STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS; AND, TITLE 40 PART 63 SUBPART AAAA - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MUNICIPAL SOLID WASTE LANDFILLS.
[40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA]

Emissions and Requirements:

30) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 0.06 LBS/MMBTU, OR, 1.08 LBS/HOUR, RULE 1303(a)(1)-BACT
CO: 2000 PPMV, DRY, RULE 407
NOx: 0.025 LBS/MMBTU, OR, 0.45 LBS/HOUR, RULE 1303(a)(1)-BACT
NMOC: 20 PPMV, AS HEXANE, @3% O_2, DRY, OR 98% BY WEIGHT REDUCTION, RULE 1150.1, 40 CFR PART 60 SUBPART WWW, 40 CFR PART 63 SUBPART AAAA

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PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM: 6.1 LBS/MMSCF LFG, OR, 0.22 LBS/HOUR, RULE 1303(a)(1)-BACT
PM: 0.1 GRAINS/DSCF, RULE 409
ROG: 0.006 LBS/MMBTU, OR, 0.11 LBS/HOUR, RULE 1303(a)(1)-BACT
SOx: BASED ON 60 PPMV SULFUR AVERAGED MONTHLY, AS H_2S, CONCENTRATION IN LFG AT INLET, RULE 1303 (a)(1)-BACT

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

PERMIT TO CONSTRUCT

A/N 554171

Equipment Description:

STORAGE TANK, AQUEOUS UREA SOLUTION, 10' - 0" DIA. X 12' - 0" H., 6500 GALLONS CAPACITY, VENTING TO ATMOSPHERE.

Conditions:

1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE 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 MAXIMUM VOLUME OF AQUEOUS UREA DISPENSED FROM THIS STORAGE TANK SHALL NOT EXCEED 6500 GALLONS IN ANY ONE CALENDAR MONTH.
[RULE 1303(b) (2)-OFFSET]

4) RECORDS OF MONTHLY AQUEOUS UREA DISPENSED SHALL BE PREPARED AND RETAINED ON SITE FOR FIVE YEARS, AND SHALL BE MADE AVAILABLE TO DISTRICT REPRESENTATIVES UPON REQUEST.
[RULE 3004 (a)(4)]

5) ONLY AQUEOUS UREA, WITH A MAXIMUM UREA CONCENTRATION NOT TO EXCEED 70% BY WEIGHT, SHALL BE STORED IN THIS EQUIPMENT.
[RULE 204]

6) MATERIAL SAFETY DATA SHEETS FOR THE AQUEOUS UREA USED IN THIS EQUIPMENT SHALL BE KEPT CURRENT AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

7) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NH_3: < 1.0 CHRONIC AND ACUTE HAZARD INDICES, RULE 1401

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, 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 CONSISTING 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 CONTAINING MATERIALS ARE ADDED, MAINTAIN DAILY RECORDS FOR EACH COATING CONSISTING 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
BOWERMAN POWER LFG, 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
BOWERMAN POWER LFG, LLC

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, ABRASIVE BLASTING EQUIPMENT (MEDIA BLASTER), GLOVE-BOX, < 53 FT^3, WITH DUST FILTER.

Periodic Monitoring:

1. THE OPERATOR SHALL PERFORM AN ANNUAL INSPECTION OF THE EQUIPMENT AND FILTER MEDIA FOR LEAKS, BROKEN OR TORN FILTER MEDIA AND IMPROPERLY INSTALLED FILTER MEDIA. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

   A. THE NAME OF THE PERSON PERFORMING THE INSPECTION AND/OR MAINTENANCE OF THE FILTER MEDIA;

   B. THE DATE, TIME AND RESULTS OF THE INSPECTION; AND

   C. THE DATE, TIME AND DESCRIPTION OF ANY MAINTENANCE OR REPAIRS RESULTING FROM THE INSPECTION.

   [RULE 3004 (a)(4)]

2. THE OPERATOR SHALL DISCHARGE DUST COLLECTED IN THIS EQUIPMENT ONLY INTO CLOSED CONTAINERS.
   [RULE 3004 (a)(4)]

3. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSIONS FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THERE IS A PUBLIC COMPLAINT OF VISIBLE EMISSIONS, WHENEVER VISIBLE EMISSIONS ARE OBSERVED, AND ON AN ANNUAL BASIS, AT LEAST, UNLESS THE EQUIPMENT DID NOT OPERATE DURING THE ENTIRE ANNUAL PERIOD. THE ROUTINE ANNUAL INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED, THE OPERATOR SHALL TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN ACCORDANCE WITH THE REPORTING REQUIREMENTS IN SECTION K OF THIS PERMIT.

   THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

   A. STACK OR EMISSION POINT IDENTIFICATION;

   B. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS; AND

   C. DATE AND TIME VISIBLE EMISSION WAS ABATED.
   [RULE 3004 (a)(4)]

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, BOILER (HEATED PRESSURE WASHER), WITH RATED HEAT INPUT STARTING AT 16,000 BTU/HOUR UP TO AND INCLUDING 2 MMBTU/HOUR.

Emissions and Requirements:

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

PM:	0.1 gr/scf, RULE 409
CO:	2000 PPMV, RULE 407
CO:	400 PPMV @3% O_2, DRY – TYPE 2 UNIT, >400,000 BTU/HR AND ≤ 2 MMBTU/HR, RULE 1146.2
NOx:	30 PPMV @3% O_2, DRY – TYPE 2 UNIT, >400,000 BTU/HR AND ≤ 2 MMBTU/HR, RULE 1146.2
NOx:	55 PPMV @3% O2, DRY – TYPE 1 UNIT, ≤ 400,000 BTU/HR, RULE 1146.2

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, AIR CONDITIONING UNITS.

Emissions and Requirements:

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

   VOC: RULE 1415
   VOC: 40 CFR 82 SUBPART F

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, FIRE EXTINGUISHING EQUIPMENT.

Emissions and Requirements:

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

   HALON: RULE 1418

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

SECTION I: PLANS AND SCHEDULES

This section lists all plans approved by AQMD for the purposes of meeting the requirements of applicable AQMD rules.

NONE

NOTE: This section does not list compliance schedules pursuant to the requirements of Regulation XXX - Title V Permits; Rule 3004(a)(10)(C). For equipment subject to a variance, order for abatement, or alternative operating condition granted pursuant to Rule 518.2, equipment specific conditions are added to the equipment in Section D or H of the permit.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

SECTION J: AIR TOXICS
[40CFR 63 Subpart AAAA 01-16-2003]

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS - MUNICIPAL SOLID WASTE LANDFILLS

(1) The owner/operator of a municipal solid waste (MSW) landfill shall comply with all applicable requirements of 40 CFR 63, Subpart AAAA and of 40 CFR 63, Subpart A – General Provisions by the compliance date(s) that are specified in these subparts.

(2) The owner/operator of a MSW landfill system shall comply with all applicable requirements for installation and operation of a landfill gas collection and/or control system as specified in 40 CFR 60, subpart Cc or WWW.

(3) The operator shall keep all records pursuant to Section 63.1980 of this subpart or Subpart A to demonstrate compliance with all applicable requirements. All records including data, calculations and any supporting documentation shall be prepared in a format which is acceptable to the AQMD.

(4) The operator shall submit all reports, notifications, plans, submittals and other communications required by Section 63.1980 of this subpart or Subpart A to the AQMD and, unless notified to the contrary by AQMD or US EPA, to US EPA Region IX (See Sections E and K of this permit for addresses).

(5) Alternative plans, compliance plans, and the construction and operation of new or modified air pollution control equipment that are required by this subpart shall be approved through the AQMD permit system.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

SECTION J: AIR TOXICS
[40CFR 63 Subpart ZZZZ, #1 03-09-2011]

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS: STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

The owner/operator of stationary Reciprocating Internal Combustion Engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions shall comply with the applicable requirements of 40 CFR 63 Subpart ZZZZ including but not limited to the following:

1. The owner/operator shall comply with the applicable requirements as specified in 63.6603 including but not limited to the following:

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
11. Non-emergency, non-black start landfill or digester gas-fired stationary RICE.	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

2. The owner/operator shall comply with the applicable general requirements as specified in 63.6605.

3. The owner/operator shall comply with the applicable monitoring, installation, collection, operation, and maintenance requirements specified in 63.6625.

4. The owner/operator shall demonstrate continuous compliance with the applicable emission limitations and operating limitations specified in 63.6640 including but not limited to the following:

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation according to methods specified in Table 6 to this subpart.

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SECTION J: AIR TOXICS
[40CFR 63 Subpart ZZZZ, #1 03-09-2011]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
existing non-emergency landfill or digester gas stationary SI RICE located at an area source of HAP	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650.

5. The owner/operator shall comply with the applicable record keeping requirements specified in 63.6655 and 63.6660.

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SECTION K: TITLE V Administration

GENERAL PROVISIONS

1. This permit may be revised, revoked, reopened and reissued, or terminated for cause, or for failure to comply with regulatory requirements, permit terms, or conditions. [3004(a)(7)(C)]

2. This permit does not convey any property rights of any sort or any exclusive privilege. [3004(a)(7)(E)]

Permit Renewal and Expiration

3. (A) Except for solid waste incineration facilities subject to standards under section 129(e) of the Clean Air Act, this permit shall expire five years from the date that this Title V permit is issued. The operator's right to operate under this permit terminates at midnight on this date, unless the facility is protected by an application shield in accordance with Rule 3002(b), due to the filing of a timely and complete application for a Title V permit renewal, consistent with Rule 3003. [3004(a)(2), 3004(f)]

   (B) A Title V permit for a solid waste incineration facility combusting municipal waste subject to standards under Section 129(e) of the Clean Air Act shall expire 12 years from the date of issuance unless such permit has been renewed pursuant to this regulation. These permits shall be reviewed by the Executive Officer at least every five years from the date of issuance. [3004(f)(2)]

4. To renew this permit, the operator shall submit to the Executive Officer an application for renewal at least 180 days, but not more than 545 days, prior to the expiration date of this permit. [3003(a)(6)]

Duty to Provide Information

5. The applicant for, or holder of, a Title V permit shall furnish, pursuant to Rule 3002(d) and (e), timely information and records to the Executive Officer or designee within a reasonable time as specified in writing by the Executive Officer or designee. [3004(a)(7)(F)]

Payment of Fees

6. The operator shall pay all required fees specified in Regulation III - Fees. [3004(a)(7)(G)]

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Reopening for Cause

7. The Executive Officer will reopen and revise this permit if any of the following circumstances occur:

   (A) Additional regulatory requirements become applicable with a remaining permit term of three or more years. Reopening is not required if the effective date of the requirement is later than the expiration date of this permit, unless the permit or any of its terms and conditions has been extended pursuant to paragraph (f)(4) of Rule 3004.

   (B) The Executive Officer or EPA Administrator determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

   (C) The Executive Officer or EPA Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements. [3005(g)(1)]

COMPLIANCE PROVISIONS

8. The operator shall comply with all regulatory requirements, and all permit terms and conditions, except:

   (A) As provided for by the emergency provisions of condition no. 17 or condition no. 18, or

   (B) As provided by an alternative operating condition granted pursuant to a federally approved (SIP-approved) Rule 518.2.

   Any non-compliance with any federally enforceable permit condition constitutes a violation of the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or denial of a permit renewal application. Non-compliance may also be grounds for civil or criminal penalties under the California State Health and Safety Code. [3004(a)(7)(A)]

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9. The operator shall allow the Executive Officer or authorized representative, upon presentation of appropriate credentials to:

   (A) Enter the operator's premises where emission-related activities are conducted, or records are kept under the conditions of this permit;

   (B) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

   (C) Inspect at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

   (D) Sample or monitor at reasonable times, substances or parameters for the purpose of assuring compliance with the facility permit or regulatory requirements. [3004(a)(10)(B)]

10. All terms and conditions in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the EPA Administrator and citizens under the federal Clean Air Act, unless the term or condition is designated as not federally enforceable. Each day during any portion of which a violation occurs is a separate offense. [3004(g)]

11. A challenge to any permit condition or requirement raised by EPA, the operator, or any other person, shall not invalidate or otherwise affect the remaining portions of this permit. [3007(b)]

12. The filing of any application for a permit revision, revocation, or termination, or a notification of planned changes or anticipated non-compliance does not stay any permit condition. [3004(a)(7)(D)]

13. It shall not be a defense for a person in an enforcement action, including those listed in Rule 3002(c)(2), that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit, except as provided for in "Emergency Provisions" of this section. [3004(a)(7)(H)]

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14. The operator shall not build, erect, install, or use any equipment, the use of which, without resulting in a reduction in the total release of air contaminants to atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Chapter 3 (commencing with Section 41700) of Part 4, of Division 26 of the California Health and Safety Code or of AQMD rules. This rule shall not apply to cases in which the only violation involved is of Section 41700 of the California Health and Safety Code, or Rule 402 of AQMD Rules. [408]

15. Nothing in this permit or in any permit shield can alter or affect:

    (A) Under Section 303 of the federal Clean Air Act, the provisions for emergency orders;

    (B) The liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance;

    (C) The applicable requirements of the Acid Rain Program, Regulation XXXI;

    (D) The ability of EPA to obtain information from the operator pursuant to Section 114 of the federal Clean Air Act;

    (E) The applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do apply to the facility, such as toxics requirements unique to the State; and

    (F) The applicability of regulatory requirements with compliance dates after the permit issuance date. [3004(c)(3)]

16. For any portable equipment that requires an AQMD or state permit or registration, excluding a) portable engines, b) military tactical support equipment and c) AQMD-permitted portable equipment that are not a major source, are not located at the facility for more than 12 consecutive months after commencing operation, and whose operation does not conflict with the terms or conditions of this Title V permit: 1) the facility operator shall keep a copy of the AQMD or state permit or registration; 2) the equipment operator shall comply with the conditions on the permit or registration and all other regulatory requirements; and 3) the facility operator shall treat the permit or registration as a part of its Title V permit, subject to recordkeeping, reporting and certification requirements. [3004(a)(1)]

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EMERGENCY PROVISIONS

17. An emergency[1] constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limit only if:

    (A) Properly signed, contemporaneous operating records or other credible evidence demonstrate that:

        (1) An emergency occurred and the operator can identify the cause(s) of the emergency;

        (2) The facility was operated properly (i.e. operated and maintained in accordance with the manufacturer's specifications, and in compliance with all regulatory requirements or a compliance plan), before the emergency occurred;

        (3) The operator took all reasonable steps to minimize levels of emissions that exceeded emissions standard, or other requirements in the permit; and,

        (4) The operator submitted a written notice of the emergency to the AQMD within two working days of the time when the emissions limitations were exceeded due to the emergency. The notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and

    (B) The operator complies with the breakdown provisions of Rule 430 – Breakdown Provisions, or subdivision (i) of Rule 2004 – Requirements, whichever is applicable. [3002(g), 430, 2004(i)]

18. The operator is excused from complying with any regulatory requirement that is suspended by the Executive Officer during a state of emergency or state of war emergency, in accordance with Rule 118 - Emergencies. [118]

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1 "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the operator, including acts of God, which: (A) requires immediate corrective action to restore normal operation; and (B) causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency; and (C) is not caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

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RECORDKEEPING PROVISIONS

19. In addition to any other recordkeeping requirements specified elsewhere in this permit, the operator shall keep records of required monitoring information, where applicable, that include:

    (A) The date, place as defined in the Title V permit, and time of sampling or measurements;

    (B) The date(s) analyses were performed;

    (C) The company or entity that performed the analyses;

    (D) The analytical techniques or methods used;

    (E) The results of such analyses; and

    (F) The operating conditions as existing at the time of sampling or measurement. [3004(a)(4)(B)]

20. The operator shall maintain records pursuant to Rule 109 and any applicable material safety data sheet (MSDS) for any equipment claimed to be exempt from a written permit by Rule 219 based on the information in those records. [219(t)]

21. The operator shall keep all records of monitoring data required by this permit or by regulatory requirements for a period of at least five years from the date of the monitoring sample, measurement, report, or application. [3004(a)(4)(E)]

REPORTING PROVISIONS

22. The operator shall comply with the following requirements for prompt reporting of deviations:

    (A) Breakdowns shall be reported as required by Rule 430 – Breakdown Provisions or subdivision (i) of Rule 2004 - Requirements, whichever is applicable.

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(B) Other deviations from permit or applicable rule emission limitations, equipment operating conditions, or work practice standards, determined by observation or by any monitoring or testing required by the permit or applicable rules that result in emissions greater than those allowed by the permit or applicable rules shall be reported within 72 hours (unless a shorter reporting period is specified in an applicable State or Federal Regulation) of discovery of the deviation by contacting AQMD enforcement personnel assigned to this facility or otherwise calling (800) CUT-SMOG.

(C) A written report of such deviations reported pursuant to (B), and any corrective actions or preventative measures taken, shall be submitted to AQMD, in an AQMD approved format, within 14 days of discovery of the deviation.

(D) All other deviations shall be reported with the monitoring report required by condition no. 23. [3004(a)(5)]

23. Unless more frequent reporting of monitoring results are specified in other permit conditions or in regulatory requirements, the operator shall submit reports of any required monitoring to the AQMD at least twice per year. The report shall include a) a statement whether all monitoring required by the permit was conducted; and b) identification of all instances of deviations from permit or regulatory requirements. A report for the first six calendar months of the year is due by August 31 and a report for the last six calendar months of the year is due by February 28. [3004(a)(4)(F)]

24. The operator shall submit to the Executive Officer and to the Environmental Protection Agency (EPA), an annual compliance certification. For RECLAIM facilities, the certification is due when the Annual Permit Emissions Program (APEP) report is due and shall cover the same reporting period. For other facilities, the certification is due on March 1 for the previous calendar year. The certification need not include the period preceding the date the initial Title V permit was issued. Each compliance certification shall include:

(A) Identification of each permit term or condition that is the basis of the certification;

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(B) The compliance status during the reporting period;

(C) Whether compliance was continuous or intermittent;

(D) The method(s) used to determine compliance over the reporting period and currently, and

(E) Any other facts specifically required by the Executive Officer to determine compliance.

The EPA copy of the certification shall be sent to: Director of the Air Division Attn: Air-3 USEPA, Region IX 75 Hawthorne St. San Francisco, CA 94105 [3004(a)(10)(E)]

25. All records, reports, and documents required to be submitted by a Title V operator to AQMD or EPA shall contain a certification of accuracy consistent with Rule 3003(c)(7) by a responsible official (as defined in Rule 3000). [3004(a)(12)]

PERIODIC MONITORING

26. All periodic monitoring required by this permit pursuant to Rule 3004(a)(4)(c) is based on the requirements and justifications in the AQMD document "Periodic Monitoring Guidelines for Title V Facilities" or in case-by-case determinations documented in the TitleV application file. [3004(a)(4)]

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FACILITY RULES

This facility is subject to the following rules and regulations

With the exception of Rule 402, 473, 477, 1118 and Rules 1401 through 1420, the following rules that are designated as non-federally enforceable are pending EPA approval as part of the state implementation plan. Upon the effective date of that approval, the approved rule(s) will become federally enforceable, and any earlier versions of those rules will no longer be federally enforceable.

RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
RULE 109	5-2-2003	Federally enforceable
RULE 1110.2	2-1-2008	Federally enforceable
RULE 1110.2	9-7-2012	Non federally enforceable
RULE 1113	7-13-2007	Federally enforceable
RULE 1113	9-6-2013	Non federally enforceable
RULE 1150.1	3-17-2000	Federally enforceable
RULE 1150.1	4-1-2011	Non federally enforceable
RULE 1171	2-1-2008	Federally enforceable
RULE 1171	5-1-2009	Non federally enforceable
RULE 1303(a)(1)-BACT	12-6-2002	Non federally enforceable
RULE 1303(a)(1)-BACT	5-10-1996	Federally enforceable
RULE 1303(a)-BACT	5-10-1996	Federally enforceable
RULE 1303(b)(1)-Modeling	12-6-2002	Non federally enforceable
RULE 1303(b)(1)-Modeling	5-10-1996	Federally enforceable
RULE 1303(b)(2)-Offset	12-6-2002	Non federally enforceable
RULE 1303(b)(2)-Offset	5-10-1996	Federally enforceable
RULE 1401	9-10-2010	Non federally enforceable
RULE 204	10-8-1993	Federally enforceable
RULE 217	1-5-1990	Federally enforceable
RULE 218	5-14-1999	Federally enforceable
RULE 218.1	5-14-1999	Federally enforceable
RULE 219	5-3-2013	Non federally enforceable

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RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
RULE 219	9-4-1981	Federally enforceable
RULE 3002	11-14-1997	Federally enforceable
RULE 3002	11-5-2010	Non federally enforceable
RULE 3003	11-14-1997	Federally enforceable
RULE 3003	11-5-2010	Non federally enforceable
RULE 3004	12-12-1997	Federally enforceable
RULE 3004(a)(4)-Periodic Monitoring	12-12-1997	Federally enforceable
RULE 3005	11-14-1997	Federally enforceable
RULE 3005	11-5-2010	Non federally enforceable
RULE 3006	11-14-1997	Federally enforceable
RULE 3006	11-5-2010	Non federally enforceable
RULE 3007	10-8-1993	Federally enforceable
RULE 301	6-6-2014	Non federally enforceable
RULE 304	6-6-2014	Non federally enforceable
RULE 306	6-6-2014	Non federally enforceable
RULE 401	11-9-2001	Non federally enforceable
RULE 401	3-2-1984	Federally enforceable
RULE 402	5-7-1976	Non federally enforceable
RULE 404	2-7-1986	Federally enforceable
RULE 407	4-2-1982	Federally enforceable
RULE 409	8-7-1981	Federally enforceable
RULE 430	7-12-1996	Non federally enforceable
RULE 431.1	6-12-1998	Federally enforceable
RULE 461	4-6-2012	Non federally enforceable
RULE 461	6-3-2005	Federally enforceable
RULE 701	6-13-1997	Federally enforceable
40CFR 60 Subpart JJJJ	1-18-2008	Federally enforceable
40CFR 60 Subpart WWW	10-17-2000	Federally enforceable
40CFR 63 Subpart AAAA	1-16-2003	Federally enforceable
40CFR 63 Subpart AAAA	4-20-2006	Federally enforceable
40CFR 63 Subpart ZZZZ	1-30-2013	Federally enforceable
40CFR 63SubpartZZZZ_01	3-9-2011	Federally enforceable

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RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
40CFR 68 - Accidental Release Prevention	4-9-2004	Federally enforceable

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APPENDIX A: NOX AND SOX EMITTING EQUIPMENT EXEMPT FROM WRITTEN PERMIT PURSUANT TO RULE 219

NONE

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APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 07-13-2007]

(1) Except as provided in paragraphs (c)(2), (c)(3), (c)(4), and specified coatings averaged under (c)(6), no person shall supply, sell, offer for sale, manufacture, blend, or repackage any architectural coating for use in the District which, at the time of sale or manufacture, contains more than 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, and less any colorant added to tint bases, and no person shall apply or solicit the application of any architectural coating within the District that exceeds 250 grams of VOC per liter of coating as calculated in this paragraph.

(2) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6), no person shall supply, sell, offer for sale, manufacture, blend, or repackage, for use within the District, any architectural coating listed in the Table of Standards which contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified, and no person shall apply or solicit the application of any architectural coating within the District that exceeds the VOC limit as specified in this paragraph. No person shall apply or solicit the application within the District of any industrial maintenance coatings, except anti-graffiti coatings, for residential use or for use in areas such as office space and meeting rooms of industrial, commercial or institutional facilities not exposed to such extreme environmental conditions described in the definition of industrial maintenance coatings; or of any rust-preventative coating for industrial use, unless such a rust preventative coating complies with the Industrial Maintenance Coating VOC limit specified in the Table of Standards.

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APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 07-13-2007]
TABLE OF STANDARDS
VOC LIMITS

Grams of VOC Per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	Ceiling Limit*	Current Limit	Effective Date					
			1/1/03	1/1/04	1/1/05	7/1/06	7/1/07	7/1/08
Bond Breakers	350							
Clear Wood Finishes	350					275		
Varnish	350					275		
Sanding Sealers	350					275		
Lacquer	680	550			275			
Clear Brushing Lacquer	680				275			
Concrete-Curing Compounds	350						100	
Concrete-Curing Compounds For Roadways and Bridges**	350							
Dry-Fog Coatings	400						150	
Fire-Proofing Exterior Coatings	450	350						
Fire-Retardant Coatings***								
Clear	650							
Pigmented	350							
Flats	250	100						50
Floor Coatings	420		100			50		
Graphic Arts (Sign) Coatings	500							
Industrial Maintenance (IM) Coatings	420			250		100		
High Temperature IM Coatings			420					
Zinc-Rich IM Primers	420		340			100		
Japans/Faux Finishing Coatings	700	350						
Magnesite Cement Coatings	600	450						
Mastic Coatings	300							
Metallic Pigmented Coatings	500							
Multi-Color Coatings	420	250						
Nonflat Coatings	250		150			50		

FACILITY PERMIT TO OPERATE
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APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 07-13-2007]

COATING CATEGORY	Ceiling Limit*	Current Limit	Effective Date					
			1/1/03	1/1/04	1/1/05	7/1/06	7/1/07	7/1/08
Nonflat High Gloss	250		150				50	
Pigmented Lacquer	680	550			275			
Pre-Treatment Wash Primers	780		420					
Primers, Sealers, and Undercoaters	350		200			100		
Quick-Dry Enamels	400		250			150	50	
Quick-Dry Primers, Sealers, and Undercoaters	350		200			100		
Recycled Coatings			250					
Roof Coatings	300		250		50			
Roof Coatings, Aluminum	500				100			
Roof Primers, Bituminous	350		350					
Rust Preventative Coatings	420		400			100		
Shellac								
Clear	730							
Pigmented	550							
Specialty Primers	350					250	100	
Stains	350		250				100	
Stains, Interior	250							
Swimming Pool Coatings								
Repair	650		340					
Other	340							
Traffic Coatings	250	150					100	
Waterproofing Sealers	400		250			100		
Waterproofing Concrete/Masonry Sealers	400					100		
Wood Preservatives								
Below-Ground	350							
Other	350							

* The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.

** Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.

*** The Fire-Retardant Coating category will be eliminated on January 1, 2007 and subsumed by the coating category for which they are formulated.

FACILITY PERMIT TO OPERATE
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APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 07-13-2007]
TABLE OF STANDARDS (cont.)
VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

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APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]

(1) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6), no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solid the application of any architectural coating within in the District:

(A) That is listed in the Table of Standards 1 and contains VOC (exclusing any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified; or

(B) That is not listed in the Table of Standards 1, and contains VOC (excluding any colorant added to tint bases) in excess of 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, until January 1, 2014, at which time the limit drops to 50 grams of VOC per liter of coating, less water, less exempt compounds (0.42 pounds per gallon).

(2) No person within the District shall add colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding VOC limit specified in the Table of Standards 2, after the effective date specified.

FACILITY PERMIT TO OPERATE
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APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]
TABLE OF STANDARDS 1
VOC LIMITS

Grams of VOC Per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Bond Breakers		350			
Clear Wood Finishes		275			
Varnish	350	275			
Sanding Sealers	350	275			
Lacquer		275			
Concrete-Curing Compounds		100			
Concrete-Curing Compounds For Roadways and Bridges[3]		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	100
Decorative Coatings		350			
Glazes		350			
Japan		350			
Trowel Applied Coatings		350		150	50
Fire-Proofing Coatings		350			150
Flats	250	50	50		
Floor Coatings	100	50			
Form Release Compound		250			100
Graphic Arts (Sign) Coatings		500			150
Industrial Maintenance (IM) Coatings	420	100			
High Temperature IM Coatings		420			
Non-SacrificialAnti-Graffiti Coatings		100			
Zinc-Rich IM Primers		100			
Magnesite Cement Coatings		450			
Mastic Coatings		300			100
Metallic Pigmented Coatings	500	500			150
Multi-Color Coatings		250			
Nonflat Coatings	150	50			
Pre-Treatment Wash Primers		420			
Primers, Sealers, and Undercoaters		100			
Reactive Penetrating Sealers		350			

FACILITY PERMIT TO OPERATE
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APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]

Recycled Coatings		250			
Roof Coatings		50			
Roof Coatings, Aluminum		100			
Roof Primers, Bituminous		350			
Rust Preventative Coatings	400	100			
Sacrificial Anti-Graffiti Coatings		100		50	
Shellac					
Clear		730			

FACILITY PERMIT TO OPERATE
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APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Pigmented		550			
Specialty Primers		100			
Stains	350	100			
Stains, Interior	250	250			
Stone Consolidant		450			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers		100			
Waterproofing Concrete/Masonry Sealers		100			
Wood Preservatives		350			

1 The specified ceiling limits are applicable to products sold under the Averaging Compliance Option.

2 The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.

3. Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.

TABLE OF STANDARDS 1 (cont.)
VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

TABLE OF STANDARDS 2
VOC LIMITS FOR COLORANTS

Grams of VOC Per Liter of Colorant
Less Water and Less Exempt Compounds

COLORANT ADDED TO	Limit[4]
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 02-01-2008]

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

	CURRENT LIMITS*	EFFECTIVE 1/1/2008*	EFFECTIVE 1/1/2009
SOLVENT CLEANING ACTIVITY	VOC g/l (lb/gal)	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application			
(i) General	25 (0.21)		
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)		
(iii) Medical Devices & Pharmaceuticals	800 (6.7)		
(B) Repair and Maintenance Cleaning			
(i) General	25 (0.21)		
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)		

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 02-01-2008]

SOLVENT CLEANING ACTIVITY (cont.)	CURRENT LIMITS* VOC g/l (lb/gal)	EFFECTIVE 1/1/2008* VOC g/l (lb/gal)	EFFECTIVE 1/1/2009 VOC g/l (lb/gal)
(iii) Medical Devices & Pharmaceuticals			
(A) Tools, Equipment, & Machinery	800 (6.7)		
(B) General Work Surfaces	600 (5.0)		
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)		
(D) Cleaning of Ink Application Equipment			
(i) General	25 (0.21)		
(ii) Flexographic Printing	25 (0.21)		
(iii) Gravure Printing			
(A) Publication	100 (0.83)		
(B) Packaging	25 (0.21)		
(iv) Lithographic (Offset) or Letter Press Printing			
(A) Roller Wash, Blanket Wash, & On-Press Components			
(I) Newsprint	100 (0.83)		

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 02-01-2008]

SOLVENT CLEANING ACTIVITY (cont.)	CURRENT LIMITS* VOC g/l (lb/gal)	EFFECTIVE 1/1/2008* VOC g/l (lb/gal)	EFFECTIVE 1/1/2009 VOC g/l (lb/gal)
(II) Other Substrates	500 (4.2)	100 (0.83)	
(B) Removable Press Components	25 (0.21)		
(v) Screen Printing	500 (4.2)	100 (0.83)	
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	650 (5.4)	650 (5.4)	100 (0.83)
(vii) Specialty Flexographic Printing	100 (0.83)		
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)		

* The specified limits remain in effect unless revised limits are listed in subsequent columns.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 05-01-2009]

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY	VOC g/l (lb/gal)	VOC g/l (lb/gal)
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	
(iii) Medical Devices & Pharmaceuticals	800 (6.7)	
(B) Repair and Maintenance Cleaning		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 05-01-2009]

SOLVENT CLEANING ACTIVITY (cont.)	CURRENT LIMITS* VOC g/l (lb/gal)	EFFECTIVE 1/1/2010 VOC g/l (lb/gal)
(iii) Medical Devices & Pharmaceuticals		
(A) Tools, Equipment, & Machinery	800 (6.7)	
(B) General Work Surfaces	600 (5.0)	
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)	
(D) Cleaning of Ink Application Equipment		
(i) General	25 (0.21)	
(ii) Flexographic Printing	25 (0.21)	
(iii) Gravure Printing		
(A) Publication	100 (0.83)	
(B) Packaging	25 (0.21)	
(iv) Lithographic (Offset) or Letter Press Printing		
(A) Roller Wash, Blanket Wash, & On-Press Components	100 (0.83)	

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 05-01-2009]

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY (cont.)	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(B) Removable Press Components	25 (0.21)	
(v) Screen Printing	100 (0.83)	
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	650 (5.4)	100 (0.83)
(vii) Specialty Flexographic Printing	100 (0.83)	
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)	

* The specified limits remain in effect unless revised limits are listed in subsequent columns.

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG. LLC

APPENDIX B: RULE EMISSION LIMITS
[RULE 404 02-07-1986]

The operator shall not discharge into the atmosphere from this equipment, particulate matter in excess of the concentration at standard conditions, shown in Table 404(a). Where the volume discharged is between figures listed in the Table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

TABLE 404(a)

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter"Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
25 or less	883 or less	450	0.196	900	31780	118	0.0515
30	1059	420	.183	1000	35310	113	.0493
35	1236	397	.173	1100	38850	109	.0476
40	1413	377	.165	1200	42380	106	.0463
45	1589	361	.158	1300	45910	102	.0445

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

APPENDIX B: RULE EMISSION LIMITS
[RULE 404 02-07-1986]

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter" Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
50	1766	347	.152	1400	49440	100	.0437
60	2119	324	.141	1500	52970	97	.0424
70	2472	306	.134	1750	61800	92	.0402
80	2825	291	.127	2000	70630	87	.0380
90	3178	279	.122	2250	79460	83	.0362
100	3531	267	.117	2500	88290	80	.0349
125	4414	246	.107	3000	105900	75	.0327
150	5297	230	.100	4000	141300	67	.0293
175	6180	217	.0947	5000	176600	62	.0271
200	7063	206	.0900	6000	211900	58	.0253
250	8829	190	.0830	8000	282500	52	.0227
300	10590	177	.0773	10000	353100	48	.0210
350	12360	167	.0730	15000	529700	41	.0179
400	14130	159	.0694	20000	706300	37	.0162
450	15890	152	.0664	25000	882900	34	.0148

FACILITY PERMIT TO OPERATE
BOWERMAN POWER LFG, LLC

APPENDIX B: RULE EMISSION LIMITS
[RULE 404 02-07-1986]

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter"Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
500	17660	146	.0637	30000	1059000	32	.0140
600	21190	137	.0598	40000	1413000	28	.0122
700	24720	129	.0563	50000	1766000	26	.0114
800	28250	123	.0537	70000 or more	2472000 or more	23	.0100