PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR PROGRAM

33 N. Stone Avenue, Suite 700 • Tucson, Arizona 85701 • Phone: (520) 724-7400

AIR QUALITY INSTALLATION

&

OPERATING PERMIT

(As required by Title 17.12, Article II, Pima County Code)

ISSUED TO

CITY OF TUCSON
ENVIRONMENTAL SERVICES
LOS REALES MUNICIPAL
SOLID WASTE LANDFILL
5300 EAST LOS REALES ROAD
TUCSON, AZ 85706

This air quality operating permit does not relieve applicant of responsibility for meeting all air pollution regulations

THIS PERMIT ISSUED SUBJECT TO THE FOLLOWING: **Conditions contained in Parts A & B AND Attachments 1 & 2.**

PERMIT NUMBER **3618** PERMIT CLASS **I**

ISSUED: _____ EXPIRES: _____

Scott Porter , Environmental Quality Manager, PDEQ

SIGNATURE TITLE

SUMMARY

The Los Reales landfill is a Municipal Solid Waste (MSW) Landfill owned and operated by the City of Tucson Environmental Services (COTES) Department. The site began operation in 1967 and covers 1,087 acres, of which 428 acres include the existing waste disposal footprint and areas declared for expansion of that footprint.

The decomposition of solid waste generates landfill gases (LFG) containing methane (CH4), carbon dioxide (CO_2) and non- methane organic compounds (NMOC). COTES has contracted with US Energy Biogas Corporation to install, own, and operate both a well-collection system, to prevent the migration of these gases, and an industrial flare, to burn the collected LFG that are not sold to the Tucson Electric Power (TEP) Irvington Generating Station (Pima County Air Quality Permit # 1052).

Regulated pollutants emitted from the flare burning of the LFG include nitrogen oxides (NO_X), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (PM), volatile organic compounds (VOC), and hazardous air pollutants (HAP). While the landfill, including its associated facilities, is a True Minor source of all criteria and hazardous air pollutants, it is a Class I stationary source pursuant to Pima County Code (PCC) 17.12.140.B.1.d and Code of Federal Regulations (CFR) 40 CFR 70.3(a)(5). Though an "existing" source subject to 40 CFR 60, Subpart Cc, Pima County regulations PCC 17.16.390.A.1 and PCC 17.16.390.C amend that applicability to include 40 CFR 60, Subpart WWW. Pursuant to that subpart (40 CFR 60.752(b)), any MSW landfill with a design capacity "greater than, or equal to 2.5 million megagrams" is subject to Part 70 permitting requirements. This landfill has declared a total design capacity of 50 million (short) tons (45.4 million megagrams).

This MSW landfill is also subject to 40 CFR 60, Subpart A, and 40 CFR 63, Subparts A and AAAA.

The active area of the landfill operates with internal, unpaved haul roads. Municipal and private hauler garbage trucks travel these roads along with private vehicles of various sizes. The source also performs continuous earthmoving activity, intermittent land clearing, trenching and unpaved road construction. The facility has a variety of equipment powered by small diesel engines. These engines are Non-Road engines which are all less than 600 horsepower and have been determined to be Insignificant Activities. The facility has one diesel-fired stationary emergency generator subject to 40 CFR 63, Subpart ZZZZ. A subsurface leachate collection system stores the byproduct of precipitation that drains through the buried refuse.

The following emission numbers are for reference purposes only and are used to establish baseline emissions for the source. They are not intended to be enforceable emission limits unless specified in Part B of this permit. The estimates are a result of information submitted in the renewal application resubmitted May 9, 2011 and updated through the drafting of the permit.

Emission Source	Facility-Wide Regulated Pollutant Emissions (tons/yr)								
	PM_{10}	$PM_{2.5}$	NO_X	SO_2	CO	VOC	HAP Total	HAP Single	GHG
Landfill Gas Collection & Flare	5.30	5.30	24.23	3.86	88.44	2.13	5.12	4.87	82,293
Fugitive & Landfill Leachate	67.14	7.12	---	---	0.41	35.37	4.17	1.64	109,177

Source: EPA/CARB certification testing and EPA AP-42

All terms and conditions of this permit are Federally Enforceable by the Administrator of the United States Environmental Protection Agency (U.S.EPA) under the Clean Air Act, except as otherwise noted.

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PART A: GENERAL PROVISIONS

(References to A.R.S. are references to the Arizona Revised Statutes, references to A.A.C. are references to the Arizona Administrative Code, and references to PCC are references to Title 17 of the Pima County Code)

I. PERMIT EXPIRATION AND RENEWAL

[PCC 17.12.180.A.1 and PCC 17.12.160.D.1]

A. This permit is valid for a period of five years from the date of issuance of the permit.

B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not greater than 18 months prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

[PCC 17.12.180.A.8.a and b]

A. The Permittee shall comply with all conditions of this permit including all applicable requirements of Arizona air quality statutes A.R.S. Title 49, Chapter 3, and Pima County air quality rules. Any permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.

B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

[PCC 17.12.180.A.8.c and PCC 17.12.270]

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. The permit shall be reopened and revised under any of the following circumstances:

1. Additional applicable requirements under the Clean Air Act become applicable to a major source with a remaining permit term of three or more years. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to PCC 17.12.280.B. Any permit reopening required pursuant to this paragraph shall comply with provisions in PCC 17.12.280 for permit renewal and shall reset the five-year permit term.

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Control Officer, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.

3. The Control Officer or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

4. The Control Officer or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in paragraph III.B.1 of Part A shall not result in the resetting of the five-year permit term.

IV. POSTING OF PERMIT [PCC 17.12.080]

The Permittee who has been granted an operating permit or an Authorization to Operate (ATO) by PDEQ shall maintain a complete copy of the operating permit and ATO onsite. If it is not feasible to maintain a copy of the operating permit or ATO onsite, the Permittee may request, in writing, to maintain a copy of the permit at an alternate location. Upon written approval by the Control Officer, the Permittee must maintain a complete copy of the permit at the approved alternative location.

V. FEE PAYMENT [PCC 17.12.180.A.9 and PCC 17.12.510]

The Permittee shall pay fees to the Control Officer pursuant to PCC 17.12.510.

VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE [PCC 17.12.320]

A. When requested by the Control Officer, the Permittee shall complete and submit an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Control Officer makes the inventory form available, whichever occurs later, and shall include emission information for the previous calendar year. These requirements apply whether or not a permit has been issued and whether or not a permit application has been filed.

B. The questionnaire shall be on a form provided by or approved by the control officer and shall include the information required by PCC 17.12.320.

VII. COMPLIANCE CERTIFICATION [PCC 17.12.220.A.2]

The Permittee shall submit to the Control Officer a compliance certification that describes the compliance status of the source with respect to each permit condition. Certifications shall be submitted as specified in Part B of this permit.

A. The compliance certification shall include the following:

1. Identification of each term or condition contained in the permit including emission limitations, standards, work practice, or management practices that are the basis of the certification.

2. Identification of the method(s) or other means used by the Permittee for determining the compliance status of the source with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required under PCC 17.12.180 (A)(3), (monitoring including the related recordkeeping and reporting requirements that verify compliance with the monitoring). If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with Section 113(c)(2) of the Clean Air Act, which prohibits knowingly making a false certification or omitting material information.

3. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification.

4. For emission units subject to 40 CFR 64, the certification shall also identify as possible exceptions to compliance any period during which compliance is required and in which an excursion or exceedance defined under 40 CFR 64 occurred.

5. A progress report on all outstanding compliance schedules submitted pursuant to PCC 17.12.220; and

6. Other facts the Control Officer may require to determine the compliance status of the facility.

B. A copy of all compliance certifications for Class I permits shall also be submitted to the EPA Administrator. The address for the EPA Administrator is:

EPA Region 9 Enforcement Office, 75 Hawthorne St (Air-5), San Francisco, CA 94105

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS [PCC 17.12.220.A.3]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required by this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY [PCC 17.12.220.A.4]

The Permittee shall allow the Control Officer or the authorized representative of the Control Officer upon presentation of proper credentials to:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;

B. Have access to and copy, at reasonable times, any records that are required to 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;

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

[PCC 17.12.160.D.3]

If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Clean Air Act (Hazardous Air Pollutants), then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING [PCC 17.12.040]

A. Excess Emissions Reporting [PCC 17.12.040]

1. Excess emissions shall be reported as follows:

   a. The Permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. The report shall be in 2 parts as specified below:

      i. Notification by telephone or facsimile within 24 hours of the time the Permittee first learned of the occurrence of excess emissions that includes all available information from PCC 17.12.040.B. The number to call to report excess emissions is **520-243-7400.** The facsimile number to report excess emissions is **520-838-7432.**

      ii. Detailed written notification by submission of an excess emissions report within 72 hours of the notification under XI.A.1.a.i of Part A. Notifications should be sent to:

      PDEQ Air Program 33 N. Stone Avenue, Suite 700, Tucson, Arizona 85701.

   b. The excess emission report shall contain the following information:

      i. The identity of each stack or other emission point where the excess emission occurred;

      ii. The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

      iii. The time and duration or expected duration of the excess emissions;

      iv. The identity of the equipment from which the excess emissions emanated;

      v. The nature and cause of the emissions;

      vi. The steps taken, if the excess emissions were the result of a malfunction, to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunctions; and

      vii. The steps that were or are being taken to limit the excess emissions; If the source's permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the permit procedures.

2. In the case of continuous or recurring excess emissions, the notification requirements of this Section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in the notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to XI.A.1.a and b of Part A.

B. Permit Deviations Reporting [PCC 17.12.180.A.5.b]

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Notice in accordance with PCC 17.12.180.E.3.d shall be considered prompt for purposes of this permit.

C. Emergency Provision [PCC 17.12.180.E]

1. An ″Emergency″ means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emission attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the conditions of PCC 17.12.180.E.3 are met.

3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An emergency occurred and that the Permittee can identify the cause or causes of the emergency;

   b. At the time of the emergency, the permitted facility was being properly operated;

   c. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

   d. The Permittee submitted notice of the emergency to the Control Officer by certified mail, hand delivery, or facsimile transmission within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule [ARS § 49-480.F.3 and 5]

For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Control Officer within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

E. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown.

[PCC 17.12.035]

1. Applicability

This rule establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

a. Promulgated pursuant to Sections 111 or 112 of the Clean Air Act,

b. Promulgated pursuant to Titles IV or VI of the Clean Air Act,

c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. E.P.A., or

d. Included in a permit to meet the requirements of PCC 17.16.590.A.5.

2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. The Permittee of a source with emissions in excess of an applicable emission limitation due to malfunction has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner or operator of the source has complied with the reporting requirements of XIII.B of this Part and has demonstrated all of the following:

a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the operator;

b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the owner or operator satisfactorily demonstrated that the measures were impracticable;

d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in PCC Chapter 17.08 that could be attributed to the emitting source;

h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;

i. All emissions monitoring systems were kept in operation if at all practicable; and

j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

3. Affirmative Defense for Startup and Shutdown

a. Except as provided in XI.E.3.b of Part A, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. The Permittee of a source with emissions in excess of an applicable emission limitation due to startup and shutdown has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner or operator of the source has complied with the reporting requirements of XIII.B of Part A and has demonstrated all of the following:

i. The excess emissions could not have been prevented through careful and prudent planning and design;

ii. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;

iii. The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

iv. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

v. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

vi. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in PCC Chapter 17.08 that could be attributed to the emitting source;

vii. All emissions monitoring systems were kept in operation if at all practicable; and

viii. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to XI.E.2 of Part A.

4. Affirmative Defense for Malfunctions during Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to XI.E.2 of Part A.

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under XI.E.2 or 3 of Part A, the Permittee of the source shall demonstrate, through submission of the data and information required by XI.E.1 – 5 and XIII.B of Part A, that all reasonable and practicable measures within the owner or operator's control were implemented to prevent the occurrence of the excess emissions.

XII. RECORDKEEPING REQUIREMENTS [PCC 17.12.180.A.4]

A. The Permittee shall keep records of all required monitoring information including recordkeeping requirements established pursuant to PCC 17.12.190, where applicable, for the following:

1. The date, place as defined in the permit, and time of sampling or measurements;

2. The date(s) analyses were performed;

3. The name of the company or entity that performed the analyses;

4. A description of the analytical techniques or methods used;

5. The results of such analyses; and

6. The operating conditions as existing at the time of sampling or measurement.

B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

C. All required records shall be maintained using a normal business electronic recordkeeping format or printed records including handwritten forms or logbooks utilizing indelible ink.

XIII. REPORTING REQUIREMENTS [PCC 17.12.180.A.5]

The Permittee shall comply with all of the reporting requirements of this permit. These include all of the following:

A. Compliance certifications pursuant to VII of Part A.

B. Excess emissions; permit deviations, and emergency reports in accordance with XI of Part A.

C. Performance test results in accordance with XVII.F of Part A.

D. Reporting requirements are listed in Part B of this permit.

XIV. DUTY TO PROVIDE INFORMATION [PCC 17.12.180.A.8.e, PCC 17.12.160.G, and PCC 17.12.160.H]

A. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee, for Class I sources, shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit.

XV. PERMIT AMENDMENT OR REVISION

[PCC 17.12.245, PCC 17.12.255 and PCC 17.12.260]

The Permittee shall apply for a permit amendment or revision for changes to the facilities which do not qualify for a facility change without revision under XVI of Part A, as follows:

A. Administrative Permit Amendment (PCC 17.12.245);

B. Minor Permit Revision (PCC 17.12.255);

C. Significant Permit Revision (PCC 17.12.260).

The applicability and requirements for such action are defined in the above referenced regulations.

XVI. FACILITY CHANGES ALLOWED WITHOUT PERMIT REVISIONS

[PCC 17.12.230]

A. A facility with a Class I permit may make changes without a permit revision if all of the following apply:

1. The changes are not modifications under any provision of Title I of the Clean Air Act (Air Pollution Prevention and Control) or under modifications as defined in A.R.S. 49-401.01;

2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions;

3. The changes do not violate any applicable requirements or trigger any additional applicable requirements;

4. The changes satisfy all requirements for a minor permit revision under PCC 17.12.255; and

5 The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.

B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if the substitution meets all of the requirements of XVI.A, D and E of Part A.

C. Except for sources with authority to operate under general permits, permitted sources may trade increases and decreases in emissions within the permitted facility, as established in the permit under PCC 17.12.180.A.12 if an applicable implementation plan provides for the emissions trades, without applying for a permit revision and based on the seven working days' notice prescribed in XVI.D of Part A. This provision is available if the permit does not provide for the emissions trading as a minor permit revision.

D. For each change under XVI.A through C of Part A, a written notice, by certified mail or hand delivery, shall be received by the Control Officer and the Administrator a minimum of seven (7) working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change, or if advance notification is not practicable as soon after the change as possible.

E. Each notification shall include:

1. When the proposed change will occur;

2. A description of the change;

3. Any change in emissions of regulated air pollutants;

4. The pollutants emitted subject to the emissions trade, if any;

5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade;

6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply; and

7. Any permit term or condition that is no longer applicable as a result of the change.

F. The permit shield described in PCC 17.12.310 shall not apply to any change made under XVI.A through C of this Part. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the implementation plan authorizing the emissions trade.

G. Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under PCC 17.12.180.A.11 shall not require any prior notice under XVI Part A.

H. Notwithstanding any other part of this Section, the Control Officer may require a permit to be revised for any change that when considered together with any other changes submitted by the same source under the provisions of PCC 17.12.230 over the term of the permit, do not satisfy XVI.A of this Part.

XVII. TESTING REQUIREMENTS [PCC 17.12.050]

A. Operational Conditions During Testing

Performance tests shall be conducted while the unit is operating at full load under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Control Officer, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in PCC 17.04.340.A) shall not constitute representative operational conditions unless otherwise specified in the applicable requirement.

B. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual, 40 CFR 52; Appendices D and E, 40 CFR 60; Appendices A through F; and 40 CFR 61, Appendices B and C unless modified by the Control Officer pursuant to PCC 17.12.050.B.

C. Test Plan

At least 14 calendar days prior to performing a test, the Permittee shall submit a test plan to the Control Officer, in accordance with PCC 17.12.050.D and the Arizona Testing Manual.

D. Stack Sampling Facilities

The Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;

2. Safe sampling platform(s);

3. Safe access to sampling platform(s); and,

4. Utilities for sampling and testing equipment.

E. Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control, compliance may, upon the Control Officer's approval, be determined using the arithmetic mean of the results of the other two runs. If the Control Officer or the Control Officer's designee is present, tests may only be stopped with the Control Officer's or such designee's approval. If the Control Officer or the Control Officer's designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

F. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the control officer within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual.

XVIII. PROPERTY RIGHTS

[PCC 17.12.180.A.8.d]

This permit does not convey any property rights of any sort, or any exclusive privilege to the Permittee.

XIX. SEVERABILITY CLAUSE [PCC 17.12.180.A.7]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit that results in any provision of this permit being held invalid, the remainder of this permit shall not be affected thereby.

XX. ACCIDENT PREVENTION REQUIREMENTS UNDER THE CLEAN AIR ACT (CAA Section 112(r))

Should this stationary source, as defined in 40 CFR Part 68.3, become subject to the accidental release prevention regulations in Part 68, then the Permittee shall submit a risk management plan (RMP) by the date specified in Section 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 CFR Part 70 and Part B of this permit.

XXI. ASBESTOS REQUIREMENTS (Demolition/ Renovation)

Should this stationary source, pursuant to 40 CFR 61, Subpart M become subject to the National Emission Standards for Hazardous Air Pollutants - Asbestos for asbestos regulations when conducting any renovation or demolition at this premises, then the Permittee shall submit proper notification as described in 40 CFR Subpart M and shall comply with all other applicable requirements of subpart M. The Permittee shall keep a record of all relevant paperwork on file. [40 CFR 61, Subpart M]

XXII. STRATOSPHERIC OZONE DEPLETING SUBSTANCES

The Permittee shall not use, sell, or offer for sale any fluid as a substitute material for use in any motor vehicle, residential, commercial, or industrial air conditioning system, refrigerator or freezer unit, or other cooling or heating device designed to use a chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) compound as a working fluid, unless such fluid has been approved for sale and such use by the Administrator. The Permittee shall keep a record of all paperwork relevant to the applicable requirements of 40 CFR 82, Subpart F onsite. [40 CFR 82 and PCC 17.16.710]

PART B: SPECIFIC CONDITIONS

[References are to Title 17 of the Pima County Code unless otherwise noted]

APPLICABILITY

This Part contains requirements that apply to the landfill gas (LFG) collection system and LFG fuel-fired equipment, diesel engine-driven crushers, shredders, emergency generators, and to various fugitive dust producing activities on-site. Applicable regulatory standards include New Source Performance Standards 40 CFR Part 60 Subparts A, Cc, WWW and National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subparts A & AAAA which apply exclusively to the LFG collection system and flare; and 40 CFR 63, Subpart ZZZZ which applies to the stationary emergency generator. Title 17 of the Pima County Code (PCC), section 17.16.390, "Standards of Performance for Municipal Solid Waste Landfills" applies, as do the fugitive dust rules found in both Title 17 and in the State Implementation Plan (SIP). A complete set of applicable regulations may be found in Attachment 1.

This is a renewal to the five-year, Title V, Class I permit that expired September 4, 2008.

PART B

SECTION 1 – LANDFILL OPERATIONS

I. APPLICABLE EQUIPMENT

Affected Emission Source or Process: This Section contains equipment specific requirements for the operation of a LFG collection and control system.

Number of Units	Equipment Description
(1)	Make: John Zink Company candlestick flare Model: ZEF 1030 Maximum Rated Capacity: 80.7 MMBtu/Hr (2,690 scfm@50% methane) Stack Height: 30 feet Primary Use(s): Control of landfill gases by flaring.
(1)	LFG collection system constructed on site.

II. EMISSION LIMITS/ STANDARDS

A. Municipal Solid Waste Landfill

1. The Permittee shall comply with the provisions of 40 CFR 60, Subpart WWW, "Standards of Performance for Municipal Solid Waste Landfills".
[40 CFR 63.1955(a)(1), PCC 17.16.390.C & 40 CFR 60, Subpart Cc]

2. By May 7, 2000, the Permittee shall install a collection and control system that captures the gas generated within the landfill. An active collection system shall:
[40 CFR 63.1955(b), 40 CFR 60.752(b)(2)(ii) & PCC 17.16.390.C.4]
[Material Permit Condition]

   a. Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;
[40 CFR 60.752(b)(2)(ii)(A)]

   b. Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:

      (1) 5 years or more if active; or

      (2) 2 years or more if closed or at final grade.

   c. Collect gas at a sufficient extraction rate;

   d. Be designed to minimize off-site migration of subsurface gas.

3. The Permittee shall either: [40 CFR 60.752(b)(2)(iii)(A) and (C) & PCC 17.12.190]

a. Route all the collected gas to a treatment system that processes the collected gas for subsequent sale or use, or,

b. Route all the collected gas to an open flare designed and operated in accordance with the approved Gas Collection and Control System design Plan and the following provisions:

[Material Permit Condition]

(1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in II.A.3.b.(8)(a) of this Section except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [40 CFR 60.18(c)(1)]

[Material Permit Condition]

(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in II.A.3.b.(8)(b) of this Section. [40 CFR 60.18(c)(2)]

(3) The Permittee has the choice of adhering to either the heat content specifications in II.A.3.b.(4) of this Section and the maximum tip velocity specifications in II.A.3.b.(5) of this Section, or adhering to the requirements in II.A.3.b.(3)(a) and (b) of this Section. [40 CFR 60.18(c)(3)]

(a) Flares shall be used that have a diameter of 3 inches or greater, are non-assisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max}, as determined by the following equation:

$$V_{max} = (X_{H2} - K_1) * K_2$$

Where:

V_{max} = Maximum permitted velocity, m/sec.
K_1 = Constant, 6.0 volume-percent hydrogen.
K_2 = Constant, 3.9(m/sec)/volume-percent hydrogen.
X_{H2} = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77.

(b) The actual exit velocity of a flare shall be determined by the method specified in II.A.3.b.(8)(d) of this Section or as specified in the approved Gas Collection and Control System Design Plan.

(4) The flare shall be used only with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater, when the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in II.A.3.b.(8) (c) of this Section. [40 CFR 60.18(c)(3)(ii)]

(5) Exit Velocity

(a) The flare shall be designed for and operated with an exit velocity, as determined by the method specified in II.A.3.b.(8)(d) of this Section, less than 18.3 meters per second (60 ft/sec), except as provided in II.A.3.b(5)(b) and (c) of this Section.

(b) The flare, if designed for and operated with an exit velocity, as determined by the methods specified in II.A.3.b.(8)(d) of this Section, equal to or greater than 18.3 meters per second (60 ft/sec), but less than 122 meters per second (400 ft/sec) shall be allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1000 BTU/scf).

(c) A Non assisted flare, designed for and operated with an exit velocity, as determined by the methods specified in II.A.3.b.(8)(d) of this Section, less than the velocity V_{max}, as determined by the method specified in II.A.3.b.(8)(e) of this Section, and less than 122 meters per second (400 ft/sec) is allowed.

(6) Flares used to comply with the provisions of this Permit shall be non-assisted flares.

(7) Flares used to comply with provisions of this Permit shall be operated at all times when emissions may be vented to them. [40 CFR 60.18(e)]

(8) Additional provisions [40 CFR 60.18(f)]

(a) Reference Method 22 of appendix A, 40 CFR 60 shall be used to determine the compliance of flares with the visible emission provisions of this Permit. The observation period is 2 hours and shall be used according to Method 22.

(b) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. (Monitoring of the flare pilot flame is unnecessary while the flare is combusting gas).

(c) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C;

K = Constant, $1.740 \times 10^{-7} \left(\frac{1}{\text{ppm}}\right)\left(\frac{\text{g mole}}{\text{scm}}\right)\left(\frac{\text{MJ}}{\text{kcal}}\right)$

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77; and

H_i = Net heat of combustion of sample component i, kcal/g mole at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 if published values are not available or cannot be calculated.

(d) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D of appendix A, 40 CFR 60 as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(e) The maximum permitted velocity, V_{max}, for flares complying with II.A.3.b.(5).(c) of this Section shall be determined by the following equation.

$$Log_{10} (V_{max}) = (H_T + 28.8)/31.7$$

where,

V_{max} = Maximum permitted velocity, M/sec
28.8 = Constant
31.7 = Constant
H_T = The net heating value as determined in II.A.3.b.(8).(c) of this Section.

4. The Permittee shall operate the collection and control device in accordance with the approved Gas Collection and Control System Design Plan and the provisions of this Permit. [40 CFR 60.752(b)(2)(iv)] **[Material Permit Condition]**

5. The Permittee shall: **[Material Permit Condition]**

   a. Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for: [40 CFR 60.753(a)]

      (1) 5 years or more if active; or

      (2) 2 years or more if closed or at final grade;

   b. Operate the collection system with negative pressure at each wellhead except under the following conditions: [40 CFR 60.753(b)]

      (1) A fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in VII.A.6.a of this Section;

      (2) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan;

      (3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator;

      (4) A temporarily inactive well. [Approved Gas Collection and Control System Design Plan]

   c. Operate each interior wellhead in the collection system with a LFG temperature less than 55°C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. [40 CFR 60.753(c)]

      (1) The nitrogen level shall be determined using EPA Test Method 3C unless an alternative test method is established as allowed by 40 CFR 60.752(b)(2)(i).

(2) Unless an alternative test method is established, the oxygen shall be determined by an oxygen meter using EPA Test Method 3A or 3C except that:

(a) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;

(b) A data recorder is not required;

(c) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;

(d) A calibration error check is not required;

(e) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

d. Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of LFG, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing. [40 CFR 60.753(d)]

e. Operate the system such that all collected gases are vented to a control system designed and operated in compliance with the provisions of this Permit. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and [40 CFR 60.753(e)]

f. Operate the control or treatment system at all times when the collected gas is routed to the system. [40 CFR 60.753(f)]

g. If monitoring demonstrates that the operational requirements in II.A.5.b, c, or d of this Section are not met, corrective action shall be taken as specified in III.A.3 through 5 or III.C of this Section. If corrective actions are taken as specified in III of this Section, the monitored exceedance is not a violation of the operational requirements in this section. [40 CFR 60.753(g)]

6. Odor Limiting Standard.

The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities as to cause air pollution. [SIP Rule 344 & PCC 17.16.030]

III. COMPLIANCE PROVISIONS FOR THE MUNICIPAL SOLID WASTE LFG COLLECTION SYSTEM

A. The specified methods in III.A.1 through 5 of this Section and alternative methods approved in this permit as identified in the approved Gas Collection and Control System Design Plan shall be used to determine whether the gas collection system is in compliance with II.A.2 of this Section.

[40 CFR 60.755(a), 40 CFR 63.1955(c) & 40 CFR 63.1960]

1. For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with II.A.2.a of this Section, the following procedure shall be used. The k and L_o kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in VIII.A.1.d of this Section, the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

   a. For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^{n} 2kL_0M_i(e^{-kti})$$

   Where;

   Q_M = maximum expected gas generation flow rate, cubic meters per year
   K = methane generation rate constant, $year^{-1}$
   L_o = methane generation potential, cubic meters per megagram solid waste
   M_i = mass of solid waste in the i^{th} section, megagrams
   ti = age of the i^{th} section, years

   b. If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equation in III.A.1.a of this Section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equation in III.A.1.a of this Section or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

2. For the purposes of determining sufficient density of gas collectors for compliance with II.A.2.b of this Section, the Permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

3. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with II.A.2.c of this Section, the Permittee shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under II.A.5.b of this Section. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

4. The Permittee is not required to expand the system as required in III.A.3 of this Section during the first 180 days after gas collection system startup.

5. For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in II.A.5.c of this Section. If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

B. For purposes of compliance with II.A.5.a of this Section, the Permittee shall place each well or design component as specified in an approved design plan. Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:

[40 CFR 60.755(b) & 40 CFR 63.1960]

1. 5 years or more if active; or

2. 2 years or more if closed or at final grade.

C. The following procedures shall be used for compliance with the surface methane operational standard as provided in II.A.5.d of this Section.

[40 CFR 60.755(c), 40 CFR 63.1960 and the Approved Gas Collection and Control System Design Plan]

1. After installation of the collection system, the Permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or the SEM 500, or other portable monitor meeting the specifications provided in III.D of this Section.

2. The background concentration for methane shall be determined by recording one upwind methane measurement prior to the initiation of monitoring for the day.

3. Surface emission monitoring shall be performed in accordance with section 4.3.1 of EPA Test Method 21 (40 CFR 60, Appendix A), except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions. Surface emissions monitoring is not performed in areas that are considered too steep to monitor, defined by those areas of the landfill that have slopes steeper than 3:1 (horizontal to vertical. Several areas of the landfill meet this requirement, including the outer slopes of Cell Number 1 and Cell Number 2. Surface emissions monitoring is also not performed at the Former Tire Shredder Area, the Tire Waste Area, the Asbestos Disposal Area, and the Southwest Disposal Area as these areas emit only negligible amounts of LFG.

4. Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in III.C.4.a through e of this Section shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of II.A.5.d of this Section.

a. The location of each monitored exceedance shall be marked and the location recorded.

b. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.

c. If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in III.C.4.e of this Section shall be taken, and no further monitoring of that location is required until the action specified in III.C.4.e of this Section has been taken.

d. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in III.C.4.b or c of this Section shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in III.C.4.c or e of this Section shall be taken.

e. For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

5. The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

D. The Permittee seeking to comply with the provisions in III.C of this Section shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices: [40 CFR 60.755(d) & 40 CFR 63.1960]

1. The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of 40 CFR 60, except that "methane" shall replace all references to VOC.

2. The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

3. To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of 40 CFR 60, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of 40 CFR 60 shall be used.

4. The calibration procedures provided in section 4.2 of Method 21 of appendix A of 40 CFR 60 shall be followed immediately before commencing a surface monitoring survey.

E. The provisions of this Permit apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices. [40 CFR 60.755(e)]

F. The Permittee must develop and implement a written start-up, shutdown & malfunction (SSM) plan according to the provisions in 40 CFR 63.6(e)(3). [40 CFR 63.1960 & 40 CFR 63.6(e)(3)]

IV. SPECIFICATIONS FOR ACTIVE MUNICIPAL SOLID WASTE LFG COLLECTION SYSTEMS

A. The Permittee shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator:

[40 CFR 60.759(a) & 40 CFR 63.1960]

1. The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.

2. The sufficient density of gas collection devices determined in IV.A.1 of this Section shall address LFG migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

3. The placement of gas collection devices determined in IV.A.1 of this Section shall control all gas producing areas, except as provided by IV.A.3.a and b of this Section.

   a. Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under 40 CFR 60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the Administrator upon request. Areas of asbestos and nondegradable material located at the Los Reales Landfill include the following and have been excluded from collection: [Approved Gas Collection and Control System Design Plan]

      (1) Former tire shredder area.

      (2) Tire waste area.

      (3) Asbestos disposal area.

      (4) Southwest disposal area.

   b. Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Administrator upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

$$Q_i = 2kL_oM_i(e^{-kti})(C_{NMOC})(3.6 \times 10^{-9})$$

where,

Q_i = NMOC emission rate from the ith section, megagrams per year
k = methane generation rate constant, $year^{-1}$
L_o = methane generation potential, cubic meters per megagram solid waste
M_i = mass of the degradable solid waste in the ith section, megagram
ti = age of the solid waste in the ith section, years

C_{NMOC} = concentration of nonmethane organic compounds, parts per million by volume
3.6×10^{-9} = conversion factor

A nonproductive area of the Los Reales Landfill has been identified as the "Old Landfill Area" and has been excluded from control. [Approved Gas Collection and Control System Design Plan]

c. The values for k and C_{NMOC} determined in field testing shall be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (this distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, L_o and C_{NMOC} provided in VIII.A.1.a of this Section or the alternative values from VIII.A.1.e of this Section shall be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in IV.A.3.a of this Section.

B. The Permittee shall construct the gas collection devices using the following equipment or procedures: [40 CFR 60.759(b)]

1. The LFG extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

2. Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

3. Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

C. The Permittee shall convey the LFG in compliance with II.A.3 of this Section through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures: [40 CFR 60.759(c)]

1. For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in IV.C.2 of this Section shall be used.

2. For new collection systems, the maximum flow rate shall be in accordance with III.A.1 of this Section.

V. MONITORING REQUIREMENTS

A. LFG Collection Systems [40 CFR 63.1960]

1. For an active gas collection system, the Permittee shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and: [40 CFR 60.756(a)]

    a. Measure the gauge pressure in the gas collection header on a monthly basis as provided in III.A.3 of this Section; and

    b. Monitor nitrogen or oxygen concentration in the LFG on a monthly basis as provided in III.A.5 of this Section and

    c. Monitor temperature of the LFG on a monthly basis as provided in III.A.5 of this Section

2. When using an open flare to control LFG, the Permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment: [40 CFR 60.756(c)]

    a. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

    b. A device that records flow to or bypass of the flare. The Permittee shall either:

        (1) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

        (2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

3. A Permittee seeking to control LFG using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Administrator describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator shall review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures. [40 CFR 60.756(d)]

4. The Permittee seeking to install a collection system that does not meet the specifications in IV of this Section or seeking to monitor alternative parameters to those required by V of this Section shall provide information satisfactory to the Administrator describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures. [40 CFR 60.756(e)]

5. The Permittee seeking to demonstrate compliance with III.C of this Section shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in III.D of this Section. Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring. [40 CFR 60.756(f)]

6. Visible Emissions from the Flare [PCC 17.12.180.A.3]

a. Whenever the flare is turned on and a flame is started, a startup check shall be made, and recorded as described in VI.B of this Section, for visible emissions during the first few minutes of operation, or during the first few hours of daylight when the operator is present if the flare is started during night darkness.

b. The flare shall be checked for visible emissions on a weekly basis while the flame is present, and recorded as described in VI.B of this Section.

c. If any visible emissions are observed, a Method 22 Test shall be performed and recorded, as described in II.A.3.b(8)(a) of this Section. The allowable standard is not more than five minutes of visible emissions in any 2 hour period. If the Test Method 22 observed emissions are in excess of this standard, the results shall be reported as excess emissions as described in Section 4 of this permit.

VI. RECORDKEEPING REQUIREMENTS [PCC 17.12.180.A.4]

A. LFG Collection Systems [40 CFR 63.1980]

1. The Permittee shall keep, for at least 5 years, up-to-date, readily accessible, on-site records of the design capacity report which triggered II.A.2 of this Section, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. [40 CFR 60.758(a)]

2. The Permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in VI.A.2.a and b of this Section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal. [40 CFR 60.758(b)]

a. Where the Permittee seeks to demonstrate compliance with II.A.2 of this Section:

(1) For the maximum expected gas generation flow rate as calculated in III.A.1 of this Section, the Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.

(2) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in IV.A.1 of this Section.

b. Where the Permittee seeks to control LFG through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

3. The Permittee shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in V of this Section as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. [40 CFR 60.758(c)]

a. The Permittee shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under V of this Section.

b. The Permittee seeking to comply with the provisions of this permit by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under V.A.2 of this Section, and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

To comply with the above requirement, (VI.A.3.b of this Section), the Permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications, a mechanism that closes or shuts off the flow of LFG to the flare when the operating temperature of the flare is below 150 F. Records of the installation date and maintenance dates shall be maintained onsite for the life of the flare. If there are no manufacturer's specifications or Operations and Maintenance Plans for the mechanism, the Permittee shall test the mechanism approximately once every 12 month period.

4. The Permittee shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector. [40 CFR 60.758(d)]

a. The Permittee shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under III.B of this Section.

b. The Permittee shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in IV.A.3.a of this Section as well as any nonproductive areas excluded from collection as provided in IV.A.3.b of this Section.

5. The Permittee shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in II.A.5.a through g of this Section, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. [40 CFR 60.758(e)]

6. Permittees who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million Megagrams or 2.5 million cubic meters, as provided in the definition of "design capacity" as defined in 40 CFR 60.751 shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. [40 CFR 60.758(f)]

7. The Permittee shall maintain a copy of the SSM plan and SSM plan reports on site. Failure to write, implement, or maintain a copy of the SSM plan is a deviation from the requirements of 40 CFR 63 Subpart AAAA. [40 CFR 63.1960 & 40 CFR 63.1980(b)]

B. Visible Emissions from the Flare

1. Visible Emissions Check.

For each observation made in compliance with V.A.6.a and b of this Section, the Permittee shall keep a log book on site with a record of the following:

a. The date and time the flare was started.

b. The time the Visible Emissions observation was made.

c. The name of the person who performed the Visible Emissions check

d. Indicate whether there were, or were not, any visible emissions observed during the check.

e. If Visible Emissions are observed, indicate a pass or fail for the required follow-up Method 22 Testing.

f. The cause, or suspected cause, of the observed visible emissions.

g. Corrective action taken, including the name of the person who completed or supervised the corrective action, the date and time of the completion of the corrective action, and a description of the corrective action

2. When a Test Method 22 reading is required, a record shall be kept of the observations made during the test. A note of a pass or fail of the standard of 5 minutes of visible emissions in any 2 hour period shall be noted in the log book as described above in VI.B.1.e of this Section. A note that shows a fail result is evidence of Excess Emissions.

VII. REPORTING REQUIREMENTS [PCC 17.12.180.A.5]

A. LFG Collection Systems [40 CFR 63.1980(a)]

1. The Permittee shall submit an initial design capacity report to the Control Officer.

a. The initial design capacity report shall be submitted no later than August 20, 1999: [PCC 17.16.390.C.2]

b. The initial design capacity report shall contain the following information:

(1) A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the State, local, or tribal agency responsible for regulating the landfill.

(2) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the State, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with the relevant parameters as part of the report. The State, Tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

2. The Permittee shall submit an NMOC emission rate report to the Control Officer no later than August 20,1999, and annually to the Administrator and Control Officer thereafter, except as provided for in VII.A.2.a(2) or VII.A.2.c of this Section. The Administrator or Control Officer may request such additional information as may be necessary to verify the reported NMOC emission rate. [40 CFR 60.757(b) & PCC 17.16.390.C.2]

a. The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in VIII.A.1.a (1) or (2) of this Section, as applicable.

(1) The initial NMOC emission rate report may be combined with the initial design capacity report required in VII.A.1 of this Section.

(2) If the estimated NMOC emission rate as reported in the annual report to the Administrator and Control Officer is less than 50 Megagrams per year in each of the next 5 consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Administrator and Control Officer. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Administrator and Control Officer. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

b. The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

c. The Permittee is exempted from the requirements of VII.A.2.a and b of this Section, after the installation of a collection and control system in compliance with II.A.2 of this Section, during such time as the collection and control system is in operation and in compliance with II.A.5.d through g and III of this Section.

3. The Permittee subject to the provisions of II.A.2 of this Section shall submit a collection and control system design plan to the Control Officer by August 20, 1999, except as follows:

[40 CFR 60.757(c) & PCC 17.16.390.C.3]

a. If the Permittee elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in VIII.A.1.c of this Section and the resulting rate is less than 50 Megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 Megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 Megagrams per year.

b. If the Permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in VIII.A.1.d of this Section, and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of VIII.A.1.d of this Section and the resulting site-specific methane generation rate constant (k) shall be submitted to the Administrator and Control Officer within 1 year of the first calculated emission rate exceeding 50 Megagrams per year.

4. The Permittee of a controlled landfill shall submit a closure report to the Administrator and Control Officer within 30 days of waste acceptance cessation. The Administrator or Control Officer may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Administrator and Control Officer, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4). [40 CFR 60.757(d)]

5. The Permittee of a controlled landfill shall submit an equipment removal report to the Administrator and Control Officer 30 days prior to removal or cessation of operation of the control equipment. [40 CFR 60.757(e)]

   a. The equipment removal report shall contain all of the following items:

      (1) A copy of the closure report submitted in accordance with VII.A.4 of this Section;

      (2) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and

      (3) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 Megagrams or greater of NMOC per year.

   b. The Administrator or Control Officer may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) have been met.

      (1) The landfill shall be a closed landfill as defined in 40 CFR 60.751. A closure report shall be submitted to the Control Officer as defined in 40 CFR 60.757(d).

      (2) The collection and control system shall have been in operation a minimum of 15 years.

      (3) Following the procedures specified in 40 CFR 60.754(b), the calculated NMOC gas produced by the landfill shall be less than 50 Megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart and no more than 180 days apart.

6. The Permittee of a landfill seeking to comply with II.A.2 of this Section using an active collection system designed in accordance with II.A.2 of this Section shall submit to the Administrator and Control Officer semiannual (every six (6) months) reports of the recorded information in VII.A.6.a through f of this Section. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report. For enclosed combustion devices and flares, reportable exceedances are defined under VI.A.3 of this Section. [40 CFR 63.1980(a) & 40 CFR 60.757(f)]

   a. Value and length of time for exceedance of applicable parameters monitored under V.A.1 through 4 of this Section.

   b. Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under V of this Section.

   c. Description and duration of all periods when the control device is not operating for a period exceeding one hour and length of time the control device was not operating. To clarify this NSPS requirement, this reporting requirement is only for the case where the collection system is operating but the control device is not operating such that uncombusted LFG is being vented for a period in excess of one hour.

d. All periods when the collection system was not operating in excess of 5 days.

e. The location of each exceedance of the 500 parts per million methane concentration as provided in II.A.5.d of this Section and the concentration recorded at each location for which an exceedance was recorded in the previous month.

f. The date of installation and the location of each well or collection system expansion added pursuant to III.A.3, III.B, and III.C.4 of this Section.

7. The Permittee seeking to comply with II.A.2 of this Section shall include the following information with the initial performance test report: [40 CFR 60.757(g)]

a. A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

b. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

c. The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;

d. The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area; and

e. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

f. The provisions for the control of off-site migration.

VIII. TESTING REQUIREMENTS [PCC 17.12.180.A.3.A & PCC 17.20.010]

For purposes of demonstrating compliance, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed.

A. LFG Collection Systems [40 CFR 63.1960]

1. NMOC Emission Rate Calculations [40 CFR 60.754(a)]

a. The Permittee shall calculate the NMOC emission rate using the equation provided below. The values to be used in the equation are 0.05 per year for k, 170 cubic meters per megagram for L_O, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorological site, the k value to be used is 0.02 per year.

The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2kL_O M_i (e^{-kti})(C_{NMOC})(3.6x10^{-9})$$

where,

M_{NMOC} = Total NMOC emission rate from the landfill, Megagrams per year
k = methane generation rate constant, $year^{-1}$
L_O = methane generation potential, cubic meters per megagram solid waste
M_i = mass of solid waste in the i^{th} section, Megagrams
ti = age of the i^{th} section, years
C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
$3.6x10^{-9}$ = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.

b. *Tier 1.* The Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 Megagrams per year.

(1) If the NMOC emission rate calculated in VIII.A.1.a(1) of this Section is less than 50 Megagrams per year, then the Permittee shall submit an emission rate report as provided in VII.A.2.a of this Section, and shall recalculate the NMOC mass emission rate annually.

(2) If the calculated NMOC emission rate is equal to or greater than 50 Megagrams per year, then the Permittee shall either comply with II.A.2 of this Section, or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in VIII.A.1.c of this Section.

c. *Tier 2.* The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The Permittee shall collect and analyze one sample of LFG from each probe to determine the NMOC concentration using Method 25 or Method 25C of Appendix A of 40 CFR 60 Method 18 of Appendix A of 40 CFR 60 may be used to analyze the samples collected by the Method 25 or 25C sampling procedure. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). As a minimum, the instrument must be calibrated for each of the compounds on the list. If composite sampling is used, equal volumes shall be taken from each sample probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than 1 liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes. If more than the required number of samples are taken, all samples shall be used in the analysis. The Permittee shall divide the NMOC concentration from Method 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three samples must be collected from the header pipe.

(1) The Permittee shall recalculate the NMOC mass emission rate using the equation provided in VIII.A.1.a(1) of this Section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in VIII.A.1.a(1) of this Section.

(2) If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 Megagrams per year, then the Permittee shall either comply with II.A.2 of this Section or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in VIII.A.1.d of this Section.

(3) If the resulting NMOC mass emission rate is less than 50 Megagrams per year, the Permittee shall submit a periodic estimate of the emission rate report as provided in VII.A.2.a of this Section and retest the site-specific NMOC concentration every 5 years using the methods specified in this section.

d. *Tier 3*. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of 40 CFR 60. The Permittee shall estimate the NMOC mass emission rate using equation in VIII.A.1.a(1) of this Section and using a site-specific methane generation rate constant k, and the site-specific NMOC concentration as determined in VIII.A.1.c of this Section instead of the default values provided in VIII.A.1.a(1) of this Section. The Permittee shall compare the resulting NMOC mass emission rate to the standard of 50 Megagrams per year.

(1) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 Megagrams per year, the Permittee shall comply with II.A.2 of this Section.

(2) If the NMOC mass emission rate is less than 50 Megagrams per year, then the Permittee shall submit a periodic emission rate report as provided in VII.A.2 of this Section and shall recalculate the NMOC mass emission rate annually, as provided in VII.A.2.a of this Section using the equations in VIII.A.1.a(1) of this Section and using the site-specific methane generation rate constant and NMOC concentration obtained in VIII.A.1.c of this Section. The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.

e. The Permittee may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in VIII.A.1.c and d of this Section if the method has been approved by the Administrator.

2. After the installation of a collection and control system in compliance with III of this Section, the Permittee shall calculate the NMOC emission rate for purposes of determining when the system can be removed using the following equation: [40 CFR 60.754(b)]

$$M_{NMOC} = 1.89 \times 10^{-3} Q_{LFG} C_{NMOC}$$

where,

M_{NMOC} = mass emission rate of NMOC, Megagrams per year
Q_{LFG} = flow rate of LFG, cubic meters per minute
C_{NMOC} = NMOC concentration, parts per million by volume as hexane

a. The flow rate of LFG, Q_{LFG}, shall be determined by measuring the total LFG flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40 CFR 60.

b. The average NMOC concentration, C_{NMOC}, shall be determined by collecting and analyzing LFG sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of 40 CFR 60. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The Permittee shall divide the NMOC concentration from Method 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

c. The Permittee may use another method to determine LFG flow rate and NMOC concentration if the method has been approved by the Administrator.

3. When calculating emissions for PSD purposes, the Permittee shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 51.166 or 52.21 of 40 CFR using AP-42 or other approved measurement procedures. [40 CFR 60.754(c)]

4. Within 60 days after achieving the initial maximum production rate at which the collection system and flare will be operated, but not later than 180 days after initial startup of the collection system and at such times as may be required by the Administrator under section 114 of the Clean air Act or the Control Officer under PCC 17.17.20.010, the Permittee shall conduct a performance test to determine compliance with II.A.3.b(1) of this Section and furnish the Administrator and Control Officer a written report of such performance test. [40 CFR 60.8(a) & PCC 17.12.050.A]

PART B

SECTION 2

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) FOR RECIPROCATING INTERNAL COMBUSTION ENGINES 'RICE' (40 CFR PART 63, SUBPART ZZZZ)

I. Applicability

A. The provisions of this Section apply to stationary reciprocating internal combustion engines (RICE) at an area source of HAP emissions. [40 CFR 63.6585(c)]

B. For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006. [40 CFR 63.6590(a)(1)(iii)]

C. The Permittee must comply with the applicable emission limitations and operating limitations identified in this Section no later than May 3, 2013. [40 CFR 63.6595(a)(1)]

D. The Permittee must comply with the requirements in Table 2d and any applicable operating limitations in Table 2b of Subpart ZZZZ for the existing stationary RICE located at an area source of HAP emissions. [40 CFR 63.6603(a)]

II. Emission Limitations and Standards

A. The Permittee must comply with the following requirements, except during periods of startup: [40 CFR 63.6603 and Table 2d to Subpart ZZZZ of Part 63]

1. Change oil and filter every 500 hours of operation or annually, whichever comes first; [4.a of Table 2d to Subpart ZZZZ of Part 63]

2. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and [4.b of Table 2d to Subpart ZZZZ of Part 63]

3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [4.c of Table 2d to Subpart ZZZZ of Part 63]

B. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in II.A. of this Section, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. [Footnote 2, Table 2d to Subpart ZZZZ of Part 63]

C. The Permittee has the option to utilize an oil analysis program as described in IV.D of this Section in order to extend the specified oil change requirement in II.A.1 of this Section. [Footnote 1, Table 2d to Subpart ZZZZ of Part 63 & 40 CFR 63.6625(i)]

D. The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than ten consecutive seconds that exceeds 40 percent opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [PCC 17.12.185.A & PCC 17.16.340.E]

[Locally Enforceable Condition]

E. The Permittee shall not cause or permit the effluent from any generator to have an average optical density equal to or greater than 60 percent when a cold diesel engine is started or when a diesel engine is accelerated under load as measured in accordance with EPA Reference Method 9. [PCC 17.12.185.A & PCC 17.16.040]

[Locally Enforceable Condition]

F. The Permittee shall burn only the specified fuel allowed for each generator listed in Attachment 2. The Permittee shall only fire fuel with a sulfur content less than 0.90 percent by weight. [PCC 17.12.190.B]

[Material Permit Condition]

III. General Compliance Requirements

A. The Permittee must be in compliance with the emission limitations, operating limitations and other requirements in this Section at all times. [40 CFR 63.6605(a)]

B. The Permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, at all times, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this Section have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

IV. Monitoring, Installation, Collection, Operation, and Maintenance Requirements

A. The Permittee must operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions or develop 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. [40 CFR 63.6625(e) & 40 CFR 63.6625(e)(3)]

B. The Permittee must install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

C. The Permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in II.A of this Section apply. [40 CFR 63.6625(h)]

D. If the Permittee decides to utilize an oil analysis program in order to extend the specified oil change requirement in II.A.1 of this Section, the oil analysis must be performed at the same frequency specified for changing the oil in II.A.1 of this Section. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the Permittee is not required to change the oil. If any of the limits are exceeded, the Permittee must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later. The Permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625(i) & Table 2d to Subpart ZZZZ of Part 63]

E. In order to demonstrate compliance with the opacity limitation in II.D of this Section, the Permittee shall conduct a visible emissions check on the exhaust stack of the generator at least quarterly if the generator is run during the quarter. For the purposes of this permit, a visible emissions check is verification that abnormal emissions are not present at the generator stack. [PCC 17.12.180.A.3.c]

[Locally Enforceable Condition]

F. If the observer sees visible emissions from the generator that, on an instantaneous basis, appears to exceed 40 percent then the Permittee shall, if practicable, take a EPA Reference Method 9 observation of the plume. If the emissions are more than the referenced limitation and standard in II.D of this Section, then this occurrence shall be recorded and reported as an excess emission and a permit deviation. [PCC 17.12.180.A.3.c]

[Locally Enforceable Condition]

G. When requested by the Control Officer, the Permittee shall perform visible emissions observations in accordance with EPA Reference Method 9, on the generator to demonstrate compliance with the opacity standard in II.D of this Section. [PCC 17.16.040]

[Locally Enforceable Condition]

H. The Permittee shall be considered in compliance with the fuel limitation required in II.F of this Section by demonstrating that only the specified fuel allowed was fired in the subject stationary RICE. Such a demonstration may be made by making available to the Control Officer for his inspection, documentation, such as invoices or statements from the fuel supplier which verify the sulfur content of the fuel being piped and/or delivered. [PCC 17.12.180.A.3.c]

[Locally Enforceable Condition]

V. Demonstration of Continuous Compliance with the Emission Limitations and Operating Limitations

A. The Permittee must demonstrate continuous compliance with each emission and operating limitation and work or management practice as required in II of this Section according to the following specified method: [40 CFR 63.6640(a) & Table 6 to Subpart ZZZZ of Part 63]

1. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or [Row 9 of Table 6 to Subpart ZZZZ of Part 63]

2. 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. [Row 9 of Table 6 to Subpart ZZZZ of Part 63]

B. The Permittee you must operate the emergency stationary RICE according to the requirements in paragraphs V.B.1 through V.B.3 of this Section. Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs V.B.1 through V.B.3 of this Section, is prohibited. If the Permittee does not operate the engine according to the requirements in paragraphs V.B.1 through V.B.3 of this Section, the engine will not be considered an emergency engine under this Section and will need to meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]

1. There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)]

2 The Permittee may operate the subject emergency stationary RICE for any combination of the purposes specified in V.B.2.a through V.B.2.c of this Section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed in V.B.3 of this Section counts as part of the 100 hours per calendar year allowed by this paragraph V.B.2. [40 CFR 63.6640(f)(2)]

a. The subject emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Control Officer for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [40 CFR 63.6640(f)(2)(i)]

b. Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. [40 CFR 63.6640(f)(2)(ii)]

c. Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. [40 CFR 63.6640(f)(2)(iii)]

3. The Permittee may operate the subject emergency stationary RICE up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing and emergency demand response provided in paragraph V.B.2 of this Section. Except as provided in paragraphs V.B.3.a and V.B.3.b of this Section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 63.6640(f)(4)]

a. Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system. [40 CFR 63.6640(f)(4)(i)]

b. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
[40 CFR 63.6640(f)(4)(ii)]

i. The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

ii. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

iii. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

iv. The power is provided only to the facility itself or to support the local transmission and distribution system.

v. The Permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the Permittee.

VI. Reporting Requirements

A. The Permittee must report any failure to perform the management practice on the schedule required in II.A of this Section, and the Federal, State or local law under which the risk was deemed unacceptable.
[Footnote 2, Table 2d to Subpart ZZZZ of Part 63]

B. The Permittee shall promptly notify and submit written reports to the Control Officer of any instances of excess emissions or deviations from the permit requirements in accordance with the requirements of XI.A, Part A of this Permit. [PCC 17.12.040 & PCC 17.12.180.A.5]
[Locally Enforceable Condition]

C. The Permittee shall report to the Control Officer any daily period during which the sulfur content of the fuel being fired in the diesel fired engines exceeds 0.8 percent. [PCC 17.16.340.J & PCC 17.12.180.A.5]
[Locally Enforceable Condition]

VII. Recordkeeping Requirements

A. The Permittee must keep the records described in paragraphs VII.A.1 through A.3 of this Section.
[40 CFR 63.6655(a)]

1. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]

2. Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]

3. Records of actions taken during periods of malfunction to minimize emissions in accordance with III.B of this Section, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
[40 CFR 63.6655(a)(5) & 40 CFR 63.6605(b)]

B. The Permittee must keep the records required in V.A of this Section to show continuous compliance with each applicable emission or operating limitation. [40 CFR 63.6655(d)]

C. The Permittee must keep records of the maintenance conducted on the existing stationary emergency RICE in order to demonstrate that the Permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the Permittee's own maintenance plan.
[40 CFR 63.6655(e), 40 CFR 63.6655(e)(2) & 40 CFR 63.6655(e)(3)]

D. The Permittee must keep records of the hours of operation of the subject RICE that does not meet the standards applicable to non-emergency engines that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the subject engine is used for the purposes specified in V.B.2.b, V.B.2.c, or V.B.3.b of this Section, the Permittee must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [40 CFR 63.6655(f) & 40 CFR 63.6655(f)(2)]

E. The Permittee's records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a)]

F. As specified in 40 CFR 63.10(b)(1), the Permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.6660(b)]

G. The Permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(c)]

H. The Permittee shall retain records of visible emissions checks/observations. The Permittee shall record the date and time of the check, the name of the person conducting the check, the results of the check, and the type of corrective action taken (if required). All records shall be maintained for five years.
[PCC 17.12.180.A.4]
[Locally Enforceable Condition]

I. In order to demonstrate compliance with the fuel limitation required in II.F of this Section, the Permittee shall maintain records of fuel supplier specifications which verify the sulfur content of the fuel, piped and/or as delivered. All records shall be maintained for five years. [PCC 17.12.180.A.4]
[Locally Enforceable Condition]

[The Permittee shall be considered in compliance with this recordkeeping requirement by demonstrating that each engine was fired only by the specified fuel allowed, identified in Attachment 2 of this permit. Such a demonstration may be achieved by making available for the Control Officer's inspection, documentation, such as invoices or statements from the fuel supplier, showing that only the specified fuel was purchased for use in the equipment. Alternatively, the demonstration may be made by actual inspection of the equipment showing that the specified fuel is the only fuel supply plumbed to the equipment for firing.]

VIII. Testing Requirements

[PCC 17.20.010]

[Locally Enforceable Conditions]

A. Opacity

When required by the Control Officer, the Permittee shall perform EPA Method 9 visible emissions observations on the engines identified in this Section to demonstrate compliance with the opacity standard in II.D and II.E of this Section. [PCC 17.12.045.B]

B. Alternative Test Method

The Permittee may submit an alternate and equivalent test method(s) that is listed in 40 CFR Subpart 60, Appendix A, to the Control Officer in a test plan, for approval by the Control Officer. [PCC 17.12.045.D]

PART B

SECTION 3

FUGITIVE DUST ACTIVITIES

I. APPLICABILITY

This Section contains requirements that apply to various fugitive dust producing activities on-site. The fugitive dust sources are typically as listed below but the list is not inclusive of every type of fugitive activity that the Permittee may engage in.

Identified Fugitive Dust Sources:

Wind Blown Dust
Haul Roads
Storage Piles
Earthmoving
Trenching
Road Construction
Land clearing
New Unpaved Roads

II. EMISSION LIMITS/ STANDARDS

A. Airborne Particulate Matter:

1. Opacity Limiting Standard

The Permittee shall not cause or permit the effluent from any single emission point or multiple emission point to have an average optical density greater than 20%. [SIP Rule 321 & PCC 17.16.040]

2. Visibility Limiting Standard

The Permittee shall not allow diffusion of visible emissions including fugitive dust beyond the property boundary line within which the emissions become airborne without taking reasonably necessary precautions to control generation of airborne particulate matter.
[SIP rule 343 & PCC 17.16.050.D.1 & 2]

a. This provision shall not apply when wind speeds exceed twenty-five miles per hour (using the Beaufort Scale of Wind Speed Equivalents, or SIP rule as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the activity.

b. This shall also not apply to emissions from undisturbed land.

[Non-Federally Enforceable]

3. The Permittee shall apply adequate amounts of water, chemical stabilizer, or other effective dust suppressant until the area becomes permanently stabilized by paving, landscaping or otherwise.
[SIP Rule 224 & PCC 17.16.060]

4. Vacant lots and open spaces [SIP Rule 318 & PCC 17.16.080]

a. The Permittee shall not cause, suffer, allow, or permit a building or its appurtenances, or a building or subdivision site, or a driveway, or a parking area, or a vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or leveled, or the earth to be moved or excavated, without taking reasonable precautions to limit excessive amounts of particulate matter from becoming airborne. Dust and other types of air contaminants shall be kept to a minimum by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means.

b. No vacant lot, housing plot, building site, parking area, sales lot, playground, livestock feedlot, or other open area - other than those used solely for soil-cultivation or vegetative crop-producing and harvesting agricultural purposes - shall be used or left in such a state after construction, alteration, clearing, leveling, or excavation that naturally induced wind blowing over the area causes a violation of II.A.2 of this Section. Dust emissions must be permanently suppressed by landscaping, covering with gravel or vegetation, paving, or applying equivalently effective controls.

c. No vacant lot, parking area, sales lot, or other open urban area shall be used by motor vehicles in such a manner that visible dust emissions induced by vehicular traffic on the area cause a violation of II.A.2 of this Section.

5. Roads and Streets [SIP Rule 315 & PCC 17.16.090]

a. The Permittee shall not cause, suffer, allow or permit the use, repair, construction or reconstruction of a roadway or alley without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Dust and other particulates shall be kept to a minimum by employing temporary paving, dust suppressants, wetting down, detouring or by other reasonable means.

b. Dust emissions from the construction phase of a new road must be minimized by applying the same measures specified II.A.5.a of this Section.

c. No new unpaved service road or unpaved haul road shall be constructed unless dust will be suppressed after construction by intermittently watering, limiting access, or applying chemical dust suppressants to the road, in such a way that visible dust emissions caused by vehicular traffic on the road do not violate II.A.2 of this Section.

d. No new road other than a private driveway shall be constructed unless the paving specifications are those defined by, or equivalent to those of, the planning department and/or highway department of the jurisdictional agency.

e. The surfacing of roadways with asbestos tailings is prohibited.

f. The Permittee shall not cause, suffer, allow or permit transportation of materials likely to give rise to airborne dust without taking reasonable precautions, such as wetting, applying dust suppressants, or covering the load, to prevent particulate matter from becoming airborne. Earth or other material that is deposited by trucking or earth moving equipment shall be removed from paved streets by the person responsible for such deposits.

6. Particulate Materials [SIP Rule 316 & PCC 17.16.100]

   a. The Permittee shall not cause, suffer, allow or permit crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airborne dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter from becoming airborne.

   b. Dust emissions from construction activity shall be effectively controlled by applying adequate amounts of water or other equivalently effective dust controls.

   c. Dust emissions from the transportation of materials shall be effectively controlled by covering stock loads in open-bodied trucks, limiting vehicular speeds, or other equivalently effective controls.

7. Storage Piles. The Permittee shall not cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne. [SIP Rule 316 & PCC 17.16.110.A]

8. Fugitive Dust Producing Activities. A Permittee whose permit specifically allows fugitive dust producing operations or activities is responsible for controlling windblown dust, dust from haul roads, and dust emitted from land clearing, earthmoving, demolition, trenching, blasting, road construction, mining, and other activities, as applicable. [SIP Rule 224 & PCC 17.16.060]

   a. Dust emissions shall be controlled by applying adequate amounts of water, chemical stabilizer, or other effective dust suppressant until the area becomes permanently stabilized by paving, landscaping, or otherwise.

   b. The Permittee shall not leave land in such a state that fugitive dust emissions (including windblown dust or dust caused by vehicular traffic on the area) would violate this permit.

III. MONITORING REQUIREMENTS

A. Airborne Particulate Matter [PCC 17.12.180.A.3]

1. At least once in each consecutive 14-day period, a certified Method 9 observer shall conduct a visual survey of visible emissions from the sources of fugitive dust listed in I. of this Section.

2. If the observer sees visible emissions from a source that on an instantaneous basis appears to exceed 20 percent, then the observer shall, if possible, take a six-minute Method 9 observation of the plume.

3. If the six-minute opacity of the plume exceeds the opacity standard, then the Permittee shall immediately take whatever action is necessary to reduce the opacity such that it falls within the standard.

IV. RECORDKEEPING REQUIREMENTS [PCC 17.12.180.A.4]

A. Airborne Particulate Matter

For each observation made in compliance with III.A of this Section the Permittee shall keep a record of the following:

1. the name of the observer,
2. the date on which the observation was made,
3. the fugitive dust source being observed,
4. the results of the observation, and,
5. corrective action taken if necessary.

V. REPORTING REQUIREMENTS [PCC 17.12.180.A.5]

A. Airborne Particulate Matter

The Permittee shall report all instances of opacity violations recorded in IV.A of this Section as an excess emission.

PART B

SECTION 4 – GENERAL FACILITY-WIDE REPORTING CONDITIONS

I. APPLICABILITY

This Section contains requirements that apply to all facilities and operations on-site.

II. EXCESS EMISSIONS AND PERMIT DEVIATIONS [PCC 17.12.180.A.5.b & 17.12.180.E.3.d]

The Permittee shall report to the Control Officer any emissions in excess of the limits (as defined in 17.04.340, "Excess emissions") established by this Section within 24 hours of the time the Permittee first learned of the excess emissions occurrence. The Permittee shall report other deviations from permit requirements in this Section within two working days of the time the Permittee first learned of the occurrence of the deviation.

(See XI of Part A for detailed information on these two reports).

III. SEMIANNUAL REPORTS OF REQUIRED MONITORING [PCC 17.12.180.A.5.a]

The Permittee shall submit semiannual reports of the following monitoring and/or recordkeeping requirements associated with the LFG collection system. The semiannual report shall only be submitted when there is a deviation during the reporting period.

A. Gauge pressure in the gas collection header (see V.A.1.a of Part B, Section 1).

B. Nitrogen or oxygen concentration in the LFG (see V.A.1.b of Part B, Section 1).

C. LFG temperature (see V.A.1.c of Part B, Section 1).

D. Surface concentrations of methane (see V.A.5 of Part B, Section 1).

The semiannual reports above shall be due by January 31st (covering the period July 1st through December 31st) and July 31st (covering the period January 1st through June 30th) of each year. The first semiannual report due after permit issuance may not cover a 6-month period. All instances of excess emissions and deviations from permit requirements as defined in Section XI of Part A shall be clearly identified in such reports.

IV. COMPLIANCE CERTIFICATION REPORTING [PCC 17.12.220.A.2]

A. The Permittee shall submit an annual compliance certification to the Control Officer and to EPA Region IX. The compliance certification report is due on January 31st of each year (covering the period January 1st through December 31st of the previous year). The first report due after permit issuance may not cover a 12-month period. *(See VII of Part A for detailed information on this report).*

B. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [40 CFR 60.11(g)]

V. EMISSION INVENTORY REPORTING [PCC 17.12.320]

Every source subject to a permit requirement shall complete and submit an annual emissions inventory questionnaire when requested by the Control Officer. The questionnaire is due by March 31st, or 90 days after the Control Officer makes the inventory form available, whichever occurs later, and shall include emission information for the previous calendar year. These requirements apply whether or not a permit has been issued and whether or not a permit application has been filed. (See VI of Part A for additional information on this report).

ATTACHMENT 1: APPLICABLE REGULATIONS

Requirements Specifically Identified as Applicable:

Code of Federal Regulations Title 40:

Part 60 Subpart A	New Source Performance Standards (NSPS) General Provisions
Part 60, Subpart WWW	NSPS for Municipal Solid Waste Landfills
Part 63 Subpart A	National Emissions Standards for Hazardous Air Pollutants (NESHAP) General Provisions
Part 63, Subpart AAAA	National Emissions Standards for Hazardous Air Pollutants (NESHAP): Municipal Solid Waste Landfills
Part 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Pima County State Implementation Plan (SIP):

Rule 224	Fugitive Dust Producing Activities
Rule 315	Roads and Streets parts E, and F
Rule 316	Particulate Materials
Rule 318	Vacant Lots and Open Spaces
Rule 321	Emissions-Discharge: Opacity Limiting Standards and Applicability
Rule 343	Visibility Limiting Standard
Rule 344	Odor Limiting Standard

Pima County Code (PCC) Title 17, Chapter 17.16:

17.16.030	Odor Limiting Standards
17.16.040	Standards and Applicability (Visible Emissions)
17.16.050	Visibility Limiting Standards
17.16.060	Fugitive Dust Producing Activities
17.16.080	Vacant Lots and Open Spaces
17.16.090	Roads and Streets
17.16.100	Particulate Materials
17.16.110	Storage Piles
17.16.340	Stationary Rotating Machinery
17.16.390	Municipal Solid Waste Landfills

ATTACHMENT 2

EQUIPMENT LIST

Name (Equipment ID)	Emission Point	Make	Model	Serial Number	Date of Manufacture	Fuel	Capacity	Type
Candlestick Flare	FL-1	John Zink	ZEF 1030	911468	1998	Propane/ LFG	2690 scfm @ 50% methane	10” diameter x 30’ high
Generator Engine	EG-1	Generac Daewoo	P034TI	EBM0B406047	12/2004	Diesel	81 hp	Emergency