COMMONWEALTH OF PUERTO RICO/ OFFICE OF THE GOVERNOR

DRAFT TITLE V OPERATING PERMIT
AIR QUALITY AREA
ENVIRONMENTAL QUALITY BOARD

Permit Number:	PFE-TV-4953-65-1101-2326
Operating Permit application received:	December 2, 2000
Issue and/or Effective Date:	[Date]
Expiration Date:	[Date]

In accordance with the provisions of Part VI of the Regulation for the Control of Atmospheric Pollution (RCAP) for Puerto Rico and the provisions of the 40 CFR part 70,

MUNICIPALITY OF SAN JUAN LANDFILL
SAN JUAN, PUERTO RICO

hereinafter referred to as The Permittee, or **MSJL** is authorized to operate a stationary source of air contaminants consisting of emissions units described in this permit. Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air pollutants from those processes and activities directly related to or associated with air contaminant source(s) in accordance with the requirements, limitations, and conditions of this permit. All conditions in this permit are federally enforceable and state enforceable unless otherwise specified. Requirements, which are only state enforceable are identified in the permit. A copy of this permit shall be kept on-site at the above named facility at all times.

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Section I - General Information

A. Facility Information

Company Name:	Municipality of San Juan Landfill
Mailing Address:	P.O. Box 13487
City: San Juan	State: P.R. Zip Code: 00908
Plant Name:	Municipality of San Juan Landfill
Plant Location:	Kennedy Avenue, Puerto Nuevo San Juan, Puerto Rico
Responsible Official:	José J. Rodríguez Torres, Director of Department of Environmental Management
Phone:	787-273-7639
Technical Contact:	Rey O. Contreras, Executive Vice President Landfill Technologies Corp.
Phone:	787-273-7639
Fax:	787-273-8315
Primary SIC Code:	4953

B. Process Description

The Municipality of San Juan Landfill (**MSJL**) is a closed municipal solid waste landfill which accepted municipal solid waste since 1964, and was closed on December 17, 2000 and after that, no more refuse has been received.. The **MSJL** is located at Kennedy Avenue, Puerto Nuevo in San Juan. Landfill Technologies Corp. administers the Municipal Sanitary Landfill System of San Juan.

The facility consists of three closed mounts ("montes"), the "Monte A", "Monte B" and "Monte C". These mounts were used to deposit municipal solid waste. The maximum design capacity is 10.26 millions of megagrams.
When the Landfill received waste, the refuse was dumped from the hauling vehicle, spread and compacted by a compactor.

Closure and post-closure care include a final cover of the landfill and long-term provisions to care for theclosed landfill. To close a Municipal Solid Waste Landfill,

requires that the final cover system be composed of an infiltration layer, overlaid by an erosion layer. Design criteria for a final cover system should be selected to do the following:

- Minimize infiltration of precipitation into the waste
- Promote good surface drainage
- Resist erosion
- Prevent slope failure
- Restrict landfill gas migration or enhance recovery
- Separate waste from vectors (animals and insects)
- Improve aesthetics
- Minimize long-term maintenance
- Otherwise protect human health and the environment.

In the **MSJL** the final cover consists of, from bottom to top: a sub-base, an infiltration layer (minimum thickness of 18 inches and a maximum permeability of 1×10^{-5} cm.sec) and an erosion layer with a minimum thickness of 6 inches.

The decomposition of encapsulated wastes in the municipal solid waste landfill facility produces gas (landfill gases) consisting of methane, carbon dioxide (CO_2) and other non-methane organic compounds (NMOC).

The landfill gas (LFG) generated by the facility is collected in a landfill gas collection system. The collected gas is combusted by one Enclosed Ground Flare (CD-1) which has a NMOC destruction efficiency of 98%. This control device operates continuously (8,760 hours/year). The fuel used is propane at a rate of 0.014 pounds per hour. The fuel takes a maximum content of sulfur of 1×10^{-6}% by weight.

The vehicles and equipment operating on the closed Landfill will consist only of the following: trucks (e.g. pickups) used by the maintenance crews and equipment (e.g. mowers) used to maintain the closed Landfill. The maintenance work will consist of the following: mowing of vegetation approximately once each month, removal of silt and debris from the storm water system channels and down chutes as required, and repairs to the landfill gas collection system and flare.

Municipality of San Juan Landfill is subject to the Title V permit requirements for being a major source of atmospheric pollutants, because it has the potential to emit more than 100 ton/año of CO. Also, it has a Design Capacity greater than 2.5 million megagrams and 2.5 million cubic meters.

Section II - Emission Units and Control Device Descriptions

The emissions units regulated by this permit issuance are the following:

Emission Units	Description	Control Equipment
EU-01	**Municipal Sanitary Landfill System** Closed Landfill The landfill accepted municipal solid waste. The annual average refuse acceptance rate was 314,222 ton/year. The NMOC emission rate is 897.34 megagrams for year (Mg/yr), calculated by Tier 1. It received 11,312,017.64 tons of waste during his active period.	CD-1
CD-1	**Landfill active gas collection system routed to an Enclosed Ground Flare** Manufacturer: Perennial Energy, Inc. Model: EGF – 10-14202133-11-14202134-00 ▪ Heat input rate: 90 MMBtu/hr ▪ Minimum Temperature: 1,400 °F ▪ Fuel use: Propane 0.014 lb/hr ▪ Velocity: 1000 ft^3/min ▪ Stack: Height = 40' Diamenter = 10' ▪ Operating schedule: 8,760 hr/yr ▪ NMOC destruction efficiency: 98%	–

Section III General Permit Conditions

1. **Sanctions and Penalties: MSJL** is obligated to comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Any violation of the terms of this permit will be subject to administrative, civil or criminal penalties as established in the Puerto Rico Environmental Public Policy Act, Article 16 (Act Number 416, September 22, 2004, as amended).

2. **Right of Entry:** As specified under Rules 103 and 603(c)(2) of the RCAP, **MSJL** shall allow the Board or an authorized representative, upon presentation of credentials and other documents as may be required by law, to perform the following activities:

a. Enter upon **MSJL** premises where an emission source is located or where emissions related activities are conducted, or where records must be kept under the conditions of this permit, under the RCAP, or under the Clean Air Act;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit, under the RCAP, or under the Clean Air Act;

c. Inspect and examine any facility, equipment (including monitoring and air pollution control equipment), practices or operations (including QA/QC methods) regulated or required under this permit; as well as sampling emissions of air quality and fuels; and

d. As authorized by the Clean Air Act and the RCAP, to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

3. **Sworn Statement:** All reports required pursuant Rule 103(D) of the RCAP (i.e., semiannual monitoring reports and annual compliance certification) should be submitted together with a sworn statement or affidavit by the Responsible Official or a duly authorized representative. Such sworn statement shall attest to the truth, correctness and completeness of such records and reports.

4. **Data Availability:** As specified under Rule 104 of the RCAP, all emission data obtained by or submitted to the Board, including data reported pursuant to Rule 103 of the RCAP, as well as that obtained in any other way, shall be available for public inspection and may also be made available to the public in any additional manner that the Board may deem appropriate.

5. **Emergency Plan**: As specified under Rule 107 of the RCAP, MSJL shall have available an Emergency Plan which must be consistent with adequate safety practices, and provides for the reduction or retention of the emissions from the plant during periods classified by the Board as air pollution alerts, warnings or emergencies. These plans shall identify the emission sources; include the reduction to be accomplished for each source, and the means by which such reduction will be accomplished. These plans will be available for any representative of the Board at any time.

6. **Control Equipment: MSJL** shall comply with Rule 108 of the RCAP, as follows:

a. All air pollution control equipment or control measures shall provide for continuous compliance with applicable Rule s and regulations. Such equipment or measures shall be installed, maintained, and operated according to those conditions imposed by the Board, within the specified operating limitations of the manufacturer.

b. The collected material from air pollution control equipment shall be disposed in accordance with applicable rules and regulations. The removal, manipulation, transportation, storage, treatment or disposal will be done in such or manner that shall not

to produce environmental degradation, and in accordance with applicable Rule s and regulations.

c. The Board may require, when deemed appropriate to safeguard the health and welfare of human beings, the installation and maintenance of additional, complete and separate air pollution control equipment of a capacity equal to the capacity of the primary control equipment. Furthermore, the Board may require that such additional air pollution control equipment be operated continuously and conjunctionally with the primary air pollution control equipment.

d. All air pollution control equipment shall be operated at all times while the source being controlled is in operation.

e. In the case of a shutdown of air pollution control equipment for the necessary scheduled maintenance, the intent to shutdown such equipment shall be reported to the Board at least three days prior to the planned shutdown. Such prior notice shall include, but is not limited to the following:

   i. Identification of the specific source to be taken out of service with its location and permit number.

   ii. The expected length of time that the air pollution control equipment will be out of service.

   iii. The nature and quantity of emissions of air pollutants likely to be permitted during the shutdown period.

   iv. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.

   v. The reasons why it will be impossible or impractical to shutdown the operating source during the maintenance period.

f. **MSJL** shall to the extent possible, maintain and operate at all times, including periods of start-up, shutdown and malfunction, any affected source and the associated air pollution control equipment, in a manner consistent with the original manufacturers design specifications and in compliance with applicable rules and regulations and permit conditions.

7. **Compliance Certification:** As specified under Rule 602(c)(2)(ix)(C) of the RCAP, **MSJL** shall submit each year a compliance certification. This certification must be submitted to

both the Board and the EPA[1] no later than April 1st of each year. The compliance certification shall include, but is not limited to, the information required under Rule 603(c) of the RCAP as follows:

a. The identification of each term or condition of the permit that is the basis of the certification; and

b. The compliance status. Each deviation shall be identified and taken into account in the compliance certification; and

c. A statement indicating whether the compliance was continuous or intermittent; and

d. The methods or other means used for determining the compliance status with each term and condition, currently and over the reporting period consistent with sections (a)(3)-(5) of Rule 603 of the RCAP; and

e. Identification of possible exceptions to compliance, any periods which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (CAM) occurred; and

f. Such other facts as the Board may require to determine the compliance status of a source.

8. **Regulation Compliance:** As specified under Rule 115 of the RCAP, any violation to the RCAP, or to any other applicable rule or regulation, may be grounds for the EQB to suspend, modify, or revoke any relevant permit, approval, variance or other authorization issued by the EQB.

9. **Location Approval:** As specified under Rule 201 of the RCAP, nothing in this permit shall be interpreted as authorizing the location or construction of a major stationary source, or the modification of a major stationary source, without obtaining first an authorization from the EQB and without first demonstrating compliance with the National Ambient Air Quality Standards (NAAQS). This permit does not allow the construction of new minor sources without the required permit under Rule 203 of the RCAP.

10. **Objectionable Odors:** As specified under Rule 420 of the RCAP, the permittee may not cause or permit emissions to the atmosphere of any matter which produces an *objectionable* odor that can be perceived in an area other than that designated for industrial purposes. **MSJL** shall demonstrate compliance with Rule 420 (A)(1) as follows: if malodors are detectable beyond **MSJL** property perimeter, and complaints are received, **MSJL** shall

[1] The certification to the EQB shall be mailed to: Manager, Air Quality Area, P.O. Box 11488, San Juan, P.R. 00910. The certification to the EPA shall be mailed to: Chief, Enforcement and Superfund Branch CEPD, US EPA – Region II, Centro Europa Building, 1492 Ponce de Leon Ave. Stop 22, Santurce PR 00909.

investigate and take measures to minimize and/or eliminate the malodors, if necessary. [This condition is enforceable only by the State].

11. **Permit Renewal Applications:** As established under Rule 602 (a)(1)(iv) of the RCAP, **MSJL**'s applications for permit renewal shall be submitted at least 12 months prior to the date of permit expiration. A responsible official must certify all required applications consistent with paragraph (c)(3) of Rule 602.

12. **Permit Duration:** As specified under Rule 603 of the RCAP, the following terms will apply during the duration of this permit:

    a. Expiration: This authorization shall have a fixed term of 5 years. The expiration date will be automatically extended until the Board approves or denies a renewal application (Rule 605(c)(4)(ii) of the RCAP) but only in those cases where **MSJL** submits a complete renewal application at least 12 months before the expiration date. [Rules 603 (a)(2), 605 (c)(2), and 605(c)(4) of the RCAP]

    b. Permit Shield: As specified under Rule 605 (c)(4)(i) of the RCAP, the permit shield may be extended until the time the permit is renewed if a timely and complete renewal application is submitted.

    c. In case that this permit is subject to any challenge by third parties, the permit shall remain in effect until the time it is revoked by a court of law with jurisdiction in the matter.

13. **Recordkeeping Requirement:** As established under Rule 603(a)(4)(ii) of the RCAP, **MSJL** shall retain records of all required monitoring data and support information for a period of 5 years from the date of the monitoring sample, measurement, report, or application.

14. **Reporting Requirement:** As established under Rule 603(a)(5)(i) of the RCAP, **MSJL** shall submit reports of all required monitoring every 6 months, or more frequently if required by the Board or any other underlying applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. All required a responsible official as established under Rule 602(c) (3) of the RCAP must certify reports.

15. **Deviations Reporting due to Emergencies:** As specified under Rule 603(a)(5)(ii)(a) of the RCAP, any deviation resulting from an upset (such as sudden malfunction or break-down) or emergency conditions, as defined in Rule 603(e) of the RCAP, must be reported within the next 2 working days. Such notification may be used to assert an affirmative defense upon an enforcement action against **MSJL**. If **MSJL** raises the emergency defense upon an enforcement action, **MSJL** shall demonstrate that such deviation happens due to an emergency and that the Board was adequately notified. If such emergency deviation last for more than 24 hours, the affected units may be operated until the end of the cycle or 48 hours, what occurs first? The Board may only extend the operation of an emission source in excess of 48 hours, if the source demonstrates to the Board's satisfaction that the National Air Quality Standards have not been exceeded and that there is no risk to the public health.

16. **Deviation Reporting (Hazardous Atmospheric Pollutants):** The source shall shut down its operations immediately or shall act as specified in its Emergency Response Plan (established in Rule 107 (C) of the RCAP), when such Plan has demonstrated that there is no significant impact at the fence line. [This condition is enforceable only by the State]. Pursuant to Rule 603 (a)(5)(ii)(b), a notification will be required if a deviation occurs that results in the release of emissions of hazardous air pollutants for more than an hour in excess of the applicable limit. **MSJL** shall notify the Board within 24 hours of the deviation. For the discharge of any regulated air pollutant that continues for more than 2 hours in excess of the applicable limit, **MSJL** shall notify the Board within 24 hours of the deviation. **MSJL** shall also submit to the Board, within 7 days of the deviation, a detailed written report, which includes probable causes, time and duration of the deviation, remedial action taken, and steps, which are being taken to prevent a reoccurrence.

17. **Severability Clause:** As established under Rule 603(a)(6) of the RCAP, the clauses in this permit are severable. In the event of a successful challenge to any portion of the permit in an administrative or judicial forum, or in the event any of its clauses is held to be invalid, all other portions of the permit shall remain valid and effective, including those related to emission limits, terms and conditions, be they specific or general, as well as monitoring, recordkeeping and reporting requirements.

18. **Permit Noncompliance:** As established under Rule 603(a)(7)(i) of the RCAP, **MSJL** must comply with all conditions of this permit. Permit noncompliance constitutes a violation of the RCAP and will be grounds for taking the appropriate enforcement action, impose sanctions, revoke, terminate, modify, and/or reissue the permit, or to deny a permit renewal application.

19. **Defense not Allowed:** As specified under Rule 603(a)(7)(ii) of the RCAP, 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.

20. **Permit Modification and Revocation:** As specified under Rule 603(a)(7)(iii) of the RCAP, the permit may be modified, revoked, reopened, reissued, or terminated for cause. The filing of a request by **MSJL** for a permit modification, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

21. **Property Rights:** As specified under Rule 603(a)(7)(iv) of the RCAP, this permit does not create or convey any property rights of any sort, nor does it grant any exclusive right.

22. **Obligation to Furnish Information:** As specified under Rule 603(a)(7)(v) of the RCAP, **MSJL** must furnish to the EQB, within a reasonable time, any information that the EQB may request in writing to determine whether cause exists for modifying, revoking and reissuing,

or terminating the permit or to determine compliance with the permit. Upon request, **MSJL** shall also furnish to the EQB copies of records required to be kept by the permit.

23. **Changes in Operating Scenarios:** As specified under Rule 603(a)(10) of the RCAP, the permittee shall record in a logbook, contemporaneously with making a change from one operating scenario to another, the scenario under which it is operating. This logbook must be kept at the facility at all times.

24. **Prohibition on Default Issuance:** As specified under Rule 605(d) of the RCAP, it shall never be considered that a permit has been issued by default as a result of the Board's failure to take final action on a permit application within 18 months as of the application completeness date. The Board's failure to issue a final permit within 18 months should be treated as a final action solely for the purpose of obtaining judicial review in a state court.

25. **Administrative Permit Amendments and Permit Modifications:** As specified under Rule 606 of the RCAP, the permit shall not be amended nor modified unless **MSJL** complies with the requirements for administrative permit amendments and permit modifications as described in the RCAP.

26. **Permit Reopening:** As specified under Rule 608(a)(1), this permit shall be reopened and revised under the following circumstances:

    a. Whenever additional applicable requirements under any law or regulation become applicable to **MSJL**, when the remaining permit term is of 3 or more years. Such reopening shall be completed 18 months after promulgation of said 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 have been extended pursuant to Rule 605(c)(4)(i) or Rule 605(c)(4)(ii) of the RCAP.

    b. Whenever the Board or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit.

    c. Whenever the Board or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

27. **Changes in Name or Responsible Official:** This permit is issued to **Municipality of San Juan Landfill.** In the event that the company and/or installation change its name, the responsible official must submit an administrative amendment to this permit to reflect the change in name. If the event that the responsible official changes, the new responsible official must submit no later than 30 days after the change, an administrative amendment including a sworn statement in which he/she accepts and promises to comply with all the conditions of this permit.

28. **Changes in Ownership**: This permit is issued to **Municipality of San Juan Landfill.** In the event that the company and/or installation is transferred to a different owner or change operational control and the Board determines that no other change in the permit is necessary, the new responsible official must submit an administrative amendment. The administrative amendment shall include a sworn statement in which the new responsible official accepts and promises to comply with all the conditions of this permit, and a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee. This is not applicable if the Board determines that changes to the permit are necessary.

29. **Renovation/Demolition Work**: **MSJL** shall comply with the provisions set forth in 40 CFR §61.145 and §61.150, and Rule 422 of the RCAP when conducting any renovation or demolition activities of asbestos containing materials at the facility.

30. **Risk Management Plan:** If during the effectiveness of this permit, **MSJL** is subject to the 40 CFR part 68, **MSJL** shall submit a Risk Management Plan according with the compliance schedule in the 40 CFR part 68.10. If during the effectiveness of this permit, **MSJL** is subject to the 40 CFR part 68, **MSJL** shall submit a compliance certification with the requirements of part 68 as part of the annual compliance certification required under 40 CFR part 70, including the recordkeeping and the Risk Management Plan.

31. **General Duty Requirements:** **MSJL** has the general obligation of identifying hazards which may result from accidental releases of any controlled substance under section 112(r) of the Clean Air Act or any other extremely hazardous substance in a process, using appropriate hazard assessment techniques, designing, maintaining, and operating a safe facility and minimizing the consequences of accidental releases if they occur as required in section 112(r)(1) of the Act and Rule 107(D) of the RCAP.

32. **Requirements for Refrigerants (Climatologic and Stratospheric Ozone Protection):**

    a. In the event that **MSJL** has equipment or appliances, including air conditioning units, which use Class I or II refrigerants as defined in 40 CFR part 82, subpart A, Appendices A and B, he/she shall take the necessary measures to ensure that all maintenance, service or repair services performed are done so according to the practices, certification and personnel requirements, disposition requirements, and recycling and/or recovery equipment certification requirements specified under 40 CFR part 82, subpart F.

    b. Owners/ operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166 of the 40 CFR.

    c. Service on Motor Vehicles: If **MSJL** performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), **MSJL** is subject to all the applicable requirements as specified in 40 CFR part 82, subpart B, Servicing of Motor

Vehicle Air Conditioners. The term motor vehicle as used in subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term MVAC as used in subpart B does not include the airtight sealed refrigeration system used as refrigerated cargo or system used on passenger buses using HCFC-22 refrigerant.

33. **Labeling of Products Using Ozone-Depleting Substances**: **MSJL** shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR part 82, subpart E.

    a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106 of the 40 CFR.

    b. The placement of the required warning statement must comply with the requirements pursuant to §82.108 of the 40 CFR.

    c. The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110 of the 40 CFR.

    d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112 of the 40 CFR.

34. **Emergency Electric Generators:** The operation for each emergency electric generator identified as insignificant activities in Section VI of this permit is limited to 100 hours per year [PFE-16-043-0563-I-C]. **MSJL** shall keep a record of the hours of operation and fuel consumption for each emergency electric generator. It shall be kept available at any time for inspection by EQB and EPA personnel.

35. **Roof Surface Coating**: As specified in Rule 424 of the RCAP, **MSJL** shall not cause or permit the roof surface coating by applying hot tar or any other coating material containing organic compounds without previous notification to the Board. The use of used oil or hazardous waste for roof surface coating is prohibited. This rule will not apply to activities where tar or sealing materials applied without heat and such material is asbestos-free. [This is a state-only requirement]

36. **Storage Tanks: MSJL** shall keep records of all distillate fuel oil (diesel) storage tanks listed as insignificant activities showing the dimensions of each tank and an analysis showing the capacity of each tank pursuant to the 40 CFR §60.116b. This documentation shall be readily available at any time for inspection of EQB personnel and shall be kept onsite for the life of the tank.

37. **Compliance Clause**: Under no circumstances does compliance with this permit exempt **MSJL** from complying with all other applicable state or federal laws, regulations, permits, administrative orders or applicable court orders.

38. **Emissions Calculations**: **MSJL** shall submit, on the first day of April each year, the actual or permissible emissions calculations for the previous natural year. The emissions calculations shall be submitted on the forms prepared by the Board for this purpose and the responsible official must certify all the information submitted as true, correct and representative of the permitted activity.

39. **Annual fee:** As specified under Rule 610 of the RCAP, **MSJL** must submit an annual payment based on the emissions calculations for each regulated pollutant. The payment will be based on their actual emissions at a rate of $37.00 per ton, unless the Board decides otherwise as permitted under Rule 610(b)(2)(iv) of the RCAP. This payment for the previous year must be made on or before June 30 of each year.

40. **New or Amended Regulation:** Whether a federal or state regulation is promulgated or amended and the facility is affected by it, the owner or operator shall comply with the requirements of the new or amended regulation

41. **Reports:** Any requirement of information submittal to the Board shall be addressed to: Manager, Air Quality Area, PO Box 11488, San Juan, P.R. 00910.

42. **Reservation of Rights:** Except as expressly provided in this Title V permit:

    a. Nothing herein shall prevent EPA or the Board from taking administrative enforcement measures or seeking legal or equitable relief to enforce the terms of the Title V permit, including but not limited to the right to seek injunctive relief, and imposition of statutory penalties, and/or fines.

    b. Nothing herein shall be construed to limit the rights of EPA or the Board to undertake any criminal enforcement activity against **MSJL** or any person.

    c. Nothing herein shall be construed to limit the authority of EPA or the Board to undertake any actions in response to conditions that present an imminent and substantial endangerment to public health or welfare, or the environment.

    d. Nothing herein shall be construed to limit **MSJL**'s rights to administrative hearing and judicial appeal of termination/ revocation/ disputes over modification/ denial actions in accordance with regulations and the Environmental Public Policy Act.

Section IV Permissible Emissions

A. The emissions described on the following table represent the facility permissible emissions[2] at the moment of the permit application and will be used only for payment purposes.

[2] Based on emission factors from Section 2.4 Municipal Solid Waste Landfills of the Compilation of Air Pollution

Pollutants	Permissible Emissions (tons/year)
PM_{10}	4.65
SO_2	4.13
NO_X	10.95
CO	220.31
NMOC	26.60
VOC	14.14
HAP's	5.17

B. According to EQB's resolution RI-06-02[3], for the annual certification the emission calculations shall be based on **MSJL** actual emissions; although calculations based on the facility permissible emissions will be accepted. If **MSJL** decides to realize the calculations based on permissible emissions, **MSJL** shall pay the same charge per ton as the facilities that decide to do the calculations based on actual emissions.

C. According to Rule 610(a) of the RCAP, when **MSJL** applies for a modification, administrative change or minor modification to its Title V permit, the source will pay only those charges related with any emission increase (if any) per tonnage, based on the change and not based on the total fees paid previously according to Rule 610(a) of the RCAP.

According to EQB's resolution R-04-04-1[4], to determine the modification and renovations fees, **MSJL** shall calculate the permissible emissions with the k, Lo, and C_{NMOC} factors established on Rule 704(a) of the RCAP or the specific values of k and C_{NMOC} as determined by Rule 704(c) and (d) of the RCAP.

Emission Factors (AP-42).

[3] EQB Resolution Payment procedure of Title V operation fees and charges for Title V renewal permits (Procedimiento de Pago de los cargos de operación de Título V y Cargos por renovación de permiso Título V) issued on March 20, 2006.

[4] EQB Resolution for Annual Calculation of gas emissions to the atmosphere for Sanitary Landfills. (Consulta a la Junta de Gobierno sobre el cálculo anual de las emisiones de gases a la atmosfera para Rellenos Sanitarios) issued on February 27, 2004.

Section V Specific Permit Conditions

A. Compliance with Rule 402 of the RCAP (Open Burning) for EU-01:

1. Pursuant to Rule 402(D) of the RCAP, **MSJL** shall not allow the open burning of refuse, tires or other solid waste disposed at EU-01. In order to comply, **MSJL** must prepare and obtain approval of the following operating procedures, within 90 days of the effective date of this permit:

   a. A fire abatement plan to control any open burning in the property or by the sanitary landfill boundaries.

   b. The fire abatement plan must have the concurrence of the State and Municipal Fire Department.

B. EU-01

1. **MSJL** shall not cause or permit visible emissions of fugitive dust beyond the boundary line of the property on which the emissions originate. [Rule 404(B) of the RCAP]

2. **MSJL** shall perform daily visual observations during the SLS operation to determine compliance with the visible emissions limitations mentioned in condition B.1. of this section.

3. **MSJL** shall employ dust suppression measures as needed to meet the emission limitation mentioned in condition B.1. of this section.

4. **MSJL** shall record daily each use of dust suppression equipment for processes, which are manually operated and are intermittent. For example: operation of a water truck to spray roads. This record shall be kept readily accessible at any time at the facility for the revision of technical personnel of EQB and EPA.

5. **MSJL** shall maintain at the SLS appropriate equipment for dust suppression and in working order at all times of operation of the SLS.

6. **MSJL** shall cover, at all times when in motion, of open bodied trucks transporting materials likely to give rise to airborne dusts. [Rule 404(A)(4) of the RCAP]

7. Every area, lot, or part of a piece of land intended for parking with a capacity greater than 900 square feet must be paved with concrete, asphalt, equivalent hard surface or chemical stabilization on all its access and internal roads where unpaved traffic adjoin paved roadways and parking areas. [Rule 404(D) of the RCAP]

8. **MSJL** shall all required records and support information for a period of 5 years from the date of the record.

C. Compliance with the Emission Guidelines for Municipal Sanitary Landfill System (Part VII of the RCAP).[5]

For EU-01 & CD-1:

1. **MSJL** shall comply with dispositions in Part VII of the Regulations for the Control of Atmospheric Pollution (RCAP) 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 control devices (CD-1).

[Rule 701 of the RCAP]

2. The active collection system shall effectively captures the gas generated within the **MSJL** and meet the following requirements:

   a. Be designed to handle the maximum expected gas flow rate from the entire area of the **MSJL** that warrants control over the intended use period of the gas control or treatment system equipment;

   [Rule 702(f)(1)(iv)(A)(1) of the RCAP]

   b. Be designed and operated to collect gas from each area, cell, or group of cells in the **MSJL** in which the initial solid waste has been placed for a period of:

      i. 5 years or more if active; or

      ii. 2 years or more of closed or at final grade.

   [Rules 702(f)(1)(iv)(A)(2) and 703(a)(1) of the RCAP]

   c. Collect gas at sufficient Extraction rate;

   [Rule 702(f)(1)(iv)(A)(3) of the RCAP]

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

   [Rule 702(f)(1)(iv)(A)(4) of the RCAP]

3. **MSJL** shall route all the collected gas to the enclosed flare (CD-1) that shall be operated to reduce NMOC by 98% by weight or to less than 20 ppm as hexane by volume, dry basis at 3% oxygen. The control device (CD-1) shall be operated

[5] Note that the state or federal applicable requirement is cited at the right side immediately below the requirement.

within the parameter ranges established during the initial[6] or more recent performance test. The operating parameters to be monitored are specified in Rule 706 of the RCAP.

[Rule 702(f)(2)(ii) and (iii)(b) of the RCAP]

4. **MSJL** shall cap or remove the collection and control system when all the followings conditions are met:

   a. The **MSJL** shall be no longer accepting solid waste and be permanently closed under the requirements of the 40 CFR Section 258.60 and contained in the Appendices of Part VII of the RCAP. A closure report shall be submitted to the Board as provided in Rule 707(d) of the RCAP;

   [Rule 702(f)(4)(i)of the RCAP]

   b. The collection and control system shall have been in operation a minimum of 15 years; and

   [Rule 702(f)(4)(ii)of the RCAP]

   c. Following the procedures specified in Rule 704(f) of the RCAP, the calculated NMOC gas produced by the **MSJL** 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.

   [Rule 702(f)(4)(iii)of the RCAP]

OPERATIONAL REQUIREMENTS

5. **MSJL** shall operate the collection system with negative pressure at each wellhead except under the following conditions:

   [Rule 703(a)(2) of the RCAP]

   a. There is a fire or increased well temperature. MSJL shall record the instances when positive pressure ocurrs in order to avoid a fire. These records shall be submitted with the annual reports as provided under Rule 707(f)(1) of the RCAP.

   [Rule 703(a)(2)(i) of the RCAP]

   b. Use of geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan.

   [Rule 703(a)(2)(ii) of the RCAP]

[6] The initial performance test for MSJL's enclosed flare CD-1 was performed on January 13, 2006.

c. A decommissioned well. A well may experience static positive pressure after shutdown to accomodate for declining flows. All these design changes shall be approved by the EPA.

[Rule 703(a)(2)(iii) of the RCAP]

6. **MSJL** shall operate the interior wellhead in the collection system with a SLS gas temperature of less than 55°C with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen or oxygen value at any well. A high operating value demonstration shall show supporting data that the elevated parameter shall not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. **MSJL** shall use the methods described below to establish the operational parameters.

[Rule 703(a)(3) of the RCAP]

a. The nitrogen level shall be determined using Method 3C in Appendix A of 40 CRF Part 60, unless an alternative method is established and approved by EPA.

[Rule 703(a)(3)(i) of the RCAP]

b. Unless an alternative method is established, the oxygen level shall be determined by an oxygen meter using Method 3A in Appendix A of 40 CRF Part 60, except that:

(a) The span shall fluctuate between 20 and 50 percent of the regulatory limit;

(b) A data recorder is not required;

(c) Only 2 calibration gases are required for *zero* and the span and the ambient air may be used as the span;

(d) A calibration error check is not required;

(e) The standard drift is more or less 10 percent.

[Rule 703(a)(3)(ii) of the RCAP]

7. **MSJL** shall operate the collection system so that the methane concentration is less than 500 parts per million above background value at the surface of the SLS. To determine if this level is exceeded, **MSJL** shall conduct surface sampling around the perimeter of the collection area along a pattern that traverses the Sanitary Landfill System at 30 meter intervals and where visual observations permit the detection of elevated concentrations of Sanitary Landfill System gases such as distressed vegetation and cracks or seeps in the cover. **MSJL** may establish an alternative traversing pattern that, **MSJL** has determined, ensures equivalent coverage. A surface sampling plan shall be developed that includes a topographical map with the sampling 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 sampling pursuant to Rule 703(a)(4) of the RCAP.

[Rule 703(a)(4) of the RCAP]

8. **MSJL** shall operate the system so that all collected gases are vented to the control system CD-1 designed and operated in compliance with Rule 702(f)(2) of the RCAP. In the event the collection or control system CD-1 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 as soon as possible, but no later than within 1 hour after detection.

[Rule 703(a)(5) of the RCAP]

9. **MSJL** shall operate the control system CD-1 at all times when the collected gas is routed to the system.

[Rule 703(a)(6) of the RCAP]

CORRECTIVE ACTION

10. **MSJL** shall take corrective action[7] as specified under Rule 705(a)(3) through (5) or Rule 705(c) of the RCAP, if monitoring demonstrates that the operational requirements described in Rule 703(a)(2), (3), (4), or (5) of the RCAP are not met. If corrective action is taken as specified under Rule 705 of the RCAP, the monitored exceedance is not a violation of the operational requirements in Rule 703 of the RCAP. A failure to take the necessary corrective actions will constitute a violation.

[Rule 703(b) of the RCAP]

TEST METHODS AND PROCEDURES

11. Pursuant to Rule 603(a)(3)(iv) of the RCAP, EQB may, at its discretion, require **MSJL** to conduct additional monitoring to ensure compliance with permit terms, and conditions. If EQB requests a performance test to be conducted at **MSJL**, EQB will specify the procedures and methods to be followed.

12. REMOVAL OF CONTROL EQUIPMENT: MSJL shall calculate the NMOC emission rate for the purposes of determining when the system can be removed as provided in Rule 702(f)(4) of the RCAP, using the following equation

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

[7] The monitoring results demonstrating that the operational requirements are not met shall be documented before taking the corrective action. The corrective action taken shall be also documented.

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

[Rule 704(f) of the RCAP]

13. COMPARISON TO PSD LEVELS: **MSJL** shall estimate the NMOC emission rate for comparison to the Prevention of Significant Deterioration (PSD) major source and significance levels as established in 40 CFR section 51.166 or 52.21, using EPA's Compilation of Air Pollutant Emission Factors (AP-42) or other EPA approved measurement procedures. If a collection system, which complies with the provisions in Rule 702(f) of the RCAP, is already installed, **MSJL** shall estimate the NMOC emission rate using the procedures provided in Rule 704(f) of the RCAP.

[Rule 704(g) of the RCAP]

COMPLIANCE PROVISIONS

14. **MSJL** shall use the methods specified below to determine whether the gas collection and control system is in compliance with Rule 702(f)(1)(iv) of the RCAP.

a. For the purposes of calculating the maximum expected gas generation flow rate from the Sanitary Landfill System to determine compliance with Rule 702(f)(1)(iv)(A)(1) of the RCAP, one of the equations established in Rule 705(a) of the RCAP shall be used. The k and L_o kinetic factors should be those published in the most recent Compliance of Air Pollutant Emission Factors (AP-42) or other site-specific values demonstrated to be appropriate and approved by the EPA. If k has been determined as specified in Rule 704(d) of the RCAP, the value of k determined in 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 SLS is the age of the SLS plus the estimated number of years until closure.

[Rule 705(a)(1) of the RCAP]

i. For site with unknown year-to-year solid waste acceptance rate the equation in Rule 705(a)(1)(i) of the RCAP shall be used.

[Rule 705(a)(1)(i) of the RCAP]

ii. For sites with known solid waste acceptance rate the equation in Rule 705(a)(1)(ii) of the RCAP shall be used.

[Rule 705(a)(1)(ii) of the RCAP]

iii. **MSJL** shall use actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the

equations in Rule 705(a)(1)(i) and (a)(1)(ii) of the RCAP. For **MSJL**, which is still accepting waste, the actual measured flow data will not equal the maximum expected gas generating rate, so calculations using the equations in Rule 705(a)(1)(i) or (a)(1)(ii) of the RCAP or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control equipment.

[Rule 705(a)(1)(iii) of the RCAP]

15. SUFFICIENT DENSITY OF GAS COLLECTORS: For the purposes of determining sufficient density of gas collectors for compliance with Rule 702(f)(1)(iv)(A)(2) of the RCAP, **MSJL** shall design a system of vertical wells, horizontal collectors, or other collection devises, satisfactory to the Board, capable of controlling and extracting gas from all portions of the SLS to meet all operational and performance standards.

[Rule 705(a)(2) of the RCAP]

16. SUFFICIENT FLOW RATE: For the purposes of demonstrating whether the gas collection and control system flow rate is sufficient to determine compliance with Rule 702(f)(1)(iv)(A)(3) of the RCAP, **MSJL** shall measure, **on a monthly basis**, gauge pressure in the gas collection header at each individual well. If a positive pressure exists, action[7] shall be initiated to **correct the exceedance within 5 calendar days**, except for the three conditions allowed under Rule 703(a)(2) of the RCAP. If negative pressure cannot be achieved without excess air filtration within 15 calendar days of the fists 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 measurement shall not cause exceedances of other operational or performance standards.

[Rule 705(a)(3) of the RCAP]

17. **MSJL** is not required to install additional wells as required in Rule 705(a)(3) of the RCAP during the first 180 days after gas collection system start-up.

[Rule 705(a)(4) of the RCAP]

18. EXCESS AIR FILTRATION: For the purpose of identifying whether excess air filtration into the Sanitary Landfill System is occurring, the owner or operator shall sample each well monthly for temperature and nitrogen or oxygen as provided in Rule 703(a)(3) of the RCAP. If a well exceeds one of these operating parameters, **action[7] 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.

[Rule 705(a)(5) of the RCAP]

19. To demonstrate that the Active Collection System was designed to minimize off-site migration of subsurface gas in compliance with Rule 702(f)(1)(iv)(A)(4) of the RCAP through the use of a collection system not conforming to the specifications provided in Rule 709 of the RCAP, **MSJL** shall provide information satisfactory to EPA as specified in Rule 702(f)(1)(i)(C) of the RCAP demonstrating that off-site migration is being controlled.

[Rule 705(a)(6) of the RCAP]

COMPLIANCE METHODS AND OPERATION STANDARDS

20. GAS COLLECTION: For purposes of operating the collection system such that the gas is collected from each area, cell, or group of cells in compliance with Rule 703(a)(1) of the RCAP, MSJL shall place each well or design component as specified in the approved design plan as provided in Rule 702(f)(1)(i) of the RCAP. Each well shall be installed within 60 days of the date in which the initial solid waste has been in place for a period of:

    a. 5 years or more if active; or

    b. 2 years or more of closed or at final grade.

[Rule 705(b) of the RCAP]

COMPLIANCE METHODS FOR SURFACE METHANE OPERATION STANDARD

21. **MSJL** shall use the following procedures for compliance with the surface methane operational standard as provided in Rule 703(a)(4) of the RCAP.

[Rule 705(c) of the RCAP]

    a. After installation of the collection system, **MSJL** shall sample surface concentrations of methane along the entire perimeter of the collection area and along a serpentine pattern spaced 30 meters apart (or site-specific established Spacing) for each collection area **on a quarterly basis** using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in Rule 705(d) of the RCAP.

[Rules705(c)(1) of the RCAP]

b. The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the Sanitary Landfill System at a distance of at least 30 meters from the perimeter wells.

[Rule 705(c)(2) of the RCAP]

c. Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of Appendix A of 40 CFR Part 60, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

[Rule 705(c)(3) of the RCAP]

d. **Any reading of 500 parts per million (ppm) or more above background at any location shall be recorded as a monitored exceedance**, and **MSJL** shall take the specified actions herein established. As long as the following specified actions are taken, the exceedance shall not be a violation of the operational requirements of Rule 703(a)(4) of the RCAP.

[Rule 705(c)(4) of the RCAP]

i. The location of each exceedance[8] shall be marked and recorded.

[Rule 705(c)(4)(i) of the RCAP]

ii. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase 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**.

[Rule 705(c)(4)(ii) of the RCAP]

iii. 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 calendar days of the second exceedance.**

[Rule 705(c)(4)(iii) of the RCAP]

iv. 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 shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 ppm above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month monitoring shows an

[8] The reading (ppm) and the date of the exceedance shall be recorded prior to vacuum adjustment or cover maintenance. The reading after the vacuum adjustment or cover maintenance (re-monitor) and date shall be also recorded.

exceedance, **MSJL** shall take the measures indicated in the next paragraph (same as Rule 705(c)(4)(v) of the RCAP).

[Rule 705(c)(4)(iv) of the RCAP]

v. For any location where monitored methane concentration equals or exceeds 500 ppm above background three times within a quarterly period, a new well or other collection device shall be installed within 120 consecutive days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control instruments, and a corresponding upgrading the blower, header pipes or control devices, and a corresponding timeline for installation may be submitted to EQB, for approval and no further monitoring of the location is required until the action is implemented.

[Rule 705(c)(4)(v) of the RCAP]

e. **MSJL** shall implement a program to sample cover integrity and implement cover repairs, as necessary, on a monthly basis.

[Rule 705(c)(5) of the RCAP]

INSTRUMENTATION SPECIFICATIONS FOR SURFACE METHANE OPERATIONAL STANDARD

22. To comply with the Surface Methane Operation Standard procedures in Rule 705(c) of the RCAP, **MSJL** shall comply with the following instrumentation procedures and specifications for surface emission monitoring instruments, pursuant to Rule 705(d) of the RCAP.

[Rule 705(d) of the RCAP]

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

[Rule 705(d)(1) of the RCAP]

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

[Rule 705(d)(2) of the RCAP]

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

[Rule 705(d)(3) of the RCAP]

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

[Rule 705(d)(4) of the RCAP]

MONITORING OF OPERATIONS

MONITORING FOR ACTIVE GAS COLLECTION SYSTEMS

23. **MSJL** shall install a sampling port and a thermometer or other temperature measuring instrument at each wellhead and:

[Rule 706(a) of the RCAP]

a. **Pressure:** Measure pressure in the gas collection header **on a monthly basis** as provided in Rule 705(a)(3) of the RCAP; and

[Rule 706(a)(1) of the RCAP]

b. **Oxygen:** Monitor oxygen or nitrogen concentration in the SLS gas **on a monthly basis** as provided in Rule 705(a)(5) of the RCAP; and

[Rule 706(a)(2) of the RCAP]

c. **Temperature:** Monitor temperature of the SLS gas **on a monthly basis** as provided in Rule 705(a)(5) of the RCAP.

[Rule 706(a)(3) of the RCAP]

MONITORING FOR ENCLOSED COMBUSTOR (ENCLOSED FLARE CD-1)

24. **MSJL** shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.

[Rule 706(b) of the RCAP]

a. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 deg.C, whichever is greater.

[Rule 706(b)(1) of the RCAP]

b. As gas flow rate measuring device that provides a measurement of gas flow to or bypass of the control device. **MSJL** shall either:

[Rule 706(b)(2) of the RCAP]

i. 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

[Rule 706(b)(2)(i) of the RCAP]

ii. 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.

[Rule 706(b)(2)(ii) of the RCAP]

25. To comply with the Surface Methane Operation Standard procedures in Rule 705(c) of the RCAP, **MSJL** shall monitor surface concentrations of methane according the instruments procedures and specifications provided in Rule 705(d) of the RCAP. Any closed Sanitary Landfill System that has no monitored exceedance of the operational standard in three consecutive quarterly monitoring periods may choose an annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that Sanitary Landfill to quarterly monitoring.

[Rule 706(f) of the RCAP]

REPORTING

DESIGN CAPACITY REPORT

26. **MSJL** shall submit an amended design capacity report to the Board to notify any increase in Design Capacity of the SLS, whether the increase[9] results from an increase in the permitted area or depth of the SLS, a change in the operating procedures, or any other means which results in an increase in the maximum Design Capacity of the SLS from the one approved in this permit. The amended design capacity shall be submitted within 90 days of the issuance of an amended construction permit, the placement of waste in additional land, or the change in operating procedures which will result in an increase in maximum Design Capacity, whichever occurs first.

[Rule 707(a)(3) of the RCAP]

a. The amended design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with such parameters as depth of solid waste, solid waste acceptance rate, and compaction practices as part of the report. The EQB may request other reasonable Information, as may be necessary to verify the maximum Design Capacity of the SLS.

NMOC EMISSION RATE REPORT

27. **MSJL** shall submit an NMOC emission rate report to the Board, initially and **annually thereafter**, except as provided for in Rule 707(b)(1)(ii) or (b)(3) of the

[9] An increase of Design Capacity requires a modified construction permit under Rule 203 of the RCAP.

RCAP. The Board may request such additional information, as may be necessary, to verify the reported NMOC emission rate.

[Rule 707(b) of the RCAP]

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 Rule 704(a) through (f) of the RCAP, as applicable.

[Rule 707(b)(1) of the RCAP]

i. If the estimated NMOC emission rate as reported in the annual report to the Board, is less than 50 megagrams per year in each of the next 5 consecutive years, **MSJL** 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 Board. This 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 Board. 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.

[Rule 707(b)(1)(ii) of the RCAP]

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.

[Rule 707(b)(2) of the RCAP]

c. After the installation of a collection and control system in compliance with Rule 702(f) of the RCAP, **MSJL** shall be exempted from the requirements of Rule 707(b)(1) and (2), during such time as the collection and control system is in operation and in compliance with Rules 703 and 705 of the RCAP.

[Rule 707(b)(3) of the RCAP]

CLOSURE REPORT

28. **MSJL** shall submit a Closure Report to the Board within 30 days of waste acceptance cessation pursuant to Rule 707(d) of the RCAP. The Board may request additional information, as may be necessary, to verify that permanent closure has taken place in accordance with the requirements established in 40 CFR Section 258.60. If a closure report has been submitted to the Board, no

additional wastes may be deposited in the Sanitary Landfill System without filing a notification of modification as described under 40 CFR Section 60.7(a)(4).

[Rule 707(d) of the RCAP]

EQUIPMENT REMOVAL REPORT

29. **MSJL** shall submit an equipment removal report to the Board, 30 days prior the removal or cessation of operations of the control equipment CD-1. The report shall contain all the information established in Rule 707(e)(1) of the RCAP.

[Rule 707(e) of the RCAP]

ANNUAL REPORTS

30. MSJL shall submit to the Board annual[10] reports of the recorded information listed below:

[Rule 707(f) of the RCAP]

a. Value and length of time of exceedance of applicable parameters monitored under Rule 706(a), and (b) of the RCAP. For enclosed flare CD-1, reportable exceedances are defined under Rule 708(c) of the RCAP.

[Rule 707(f)(1) of the RCAP]

b. Description and duration of all periods when the gas stream is diverted from the control device CD-1 through a bypass line or the indication of bypass flow as specified under Rule 706 of the RCAP.

[Rule 707(f)(2) of the RCAP]

c. Description and duration of all periods when the control device CD-1 was not operating for a period exceeding 1 hour, and length of time the control device CD-1 was not operating.

[Rule 707(f)(3) of the RCAP]

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

[Rule 707(f)(4) of the RCAP]

e. The location of each exceedance of the 500 parts per million methane concentration as provided in Rule 703(a)(4) of the RCAP and the concentration recorded at each location for which an exceedance was recorded in the previous month.

[Rule 707(f)(5) of the RCAP]

[10] Although the Emission Guidelines in Part VII of the RCAP requires this report to be submitted annually, the NESHAP regulations requires it to be submitted every six months as established in 40 CFR section 63.1980.

f. The date of installation and the location of each well or collection system expansion added pursuant to Rule 705(a)(3), (b), and (c)(4) of the RCAP.

[Rule 707(f)(6) of the RCAP]

RECORDKEEPING

DESIGN CAPACITY RECORDS

31. **MSJL** shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum Design Capacity, 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.

[Rule 708(a) of the RCAP]

CONTROL EQUIPMENT RECORDS

32. **MSJL** shall keep up-to-date, readily accessible records for the life of the control equipment CD-1 of the data listed in Rule 708(b) of the RCAP 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 CD-1 control device vendor specifications shall maintained until CD-1 is removed.

[Rule 708(b) of the RCAP]

a. **MSJL** shall record:

i. The maximum expected gas flow generation rate as calculated in Rule 705(a)(1) of the RCAP. **MSJL** may use another method to determine maximum gas generation flow rate if the method has been approved by the EPA.

[Rule 708(b)(1)(i) of the RCAP]

ii. The density of wells, horizontal collectors, surface collectors, or other gas extraction equipment devices determined using the procedures specified in Rule 709(a)(1) of the RCAP.

[Rule 708(b)(1)(ii) of the RCAP]

b. For the enclosed flare CD-1, **MSJL** shall record:[11]

i. The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test.

[Rule 708(b)(1)(i) of the RCAP]

[11] Applicable to enclosed combustion device (enclosed flare) with a design heat input capacity equal or greater than 44 megawatts.

ii. The percent reduction of NMOC determined as specified in Rule 702(f)(2)(ii) and (f)(2)(iii) of the RCAP achieved by the control equipment CD-1.

[Rule 708(b)(2)(ii) of the RCAP]

EQUIPMENT OPERATING PARAMETERS RECORDS

33. **MSJL** shall keep for 5 years up-to-date, readily accessible records of the equipment operating parameters specified to be monitored in Rule 706 of the RCAP 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.

[Rule 708(c) of the RCAP]

a. The following constitute **exceedances** that shall be recorded and reported under Rule 707(f) of the RCAP:

[Rule 708(c)(1) of the RCAP]

i. For enclosed combustion (CD-1), all 3-hour periods of operation during which the average combustion temperature was more than 28 °C below the average combustion temperature during the most recent performance test at which compliance with Rule 702(f) (2) of RCAP was determined.

[Rule 708(c)(1)(i) of the RCAP]

b. **MSJL** shall keep easy to read, accessible continuous, records of the indication of flow to the control device CD-1 or the indication of bypass flow or records of the monthly inspections of the lock-and-key configurations or safety systems used to seal bypass lines specified under Rule 706 of the RCAP.

[Rule 708(c)(2) of the RCAP]

OTHER RECORDS

34. **MSJL** 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.

[Rule 708(d) of the RCAP]

a. **MSJL** shall keep readily accessible records of the installation date and location of all newly installed collectors as specified under Rule 705(b) of the RCAP.

[Rule 708(d)(1) of the RCAP]

b. **MSJL** shall keep readily accessible documentation of the nature, date of disposition, amount, and location of asbestos-containing material or

Nondegradable Waste excluded from collection as provided in Rule 709(a)(3)(i) of the RCAP, as well as any non-productive areas excluded from collection as provided in Rule 709(a)(3)(ii) of the RCAP.

[Rule 708(d)(2) of the RCAP]

EXCEEDANCE OF OPERATIONAL STANDARDS RECORDS

35. **MSJL** shall keep up-to-date, readily accessible records, for at least 5 years, of all collection and control system exceedances of the operational standards in Rule 703 of the RCAP, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

[Rule 708(e) of the RCAP]

SPECIFICATIONS FOR ACTIVE COLLECTION SYSTEMS

36. **MSJL** shall site active collection wells, horizontal collectors, surface collectors or other extraction equipment at a sufficient density throughout all the gas producing areas using the following procedures, unless alternative procedures have been approved by the Board and the EPA as provided in Rule 702(f)(1)(i)(C) y (f)(1)(i)(D) of the RCAP:

[Rule 709(a) of the RCAP]

a. The collection equipment within the interior and along the permitted 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.

[Rule 709(a)(1) of the RCAP]

b. The sufficient density of gas collection equipment determined in Rule 709(a)(1) of the RCAP, shall address SLS gas migration issues and augmentation of the collection system through the use of active or passive systems at the SLS perimeter or exterior.

[Rule 709(a)(2) of the RCAP]

c. The placement of gas collection equipment determined in Rule 709(a)(1) of the RCAP shall control all gas producing areas, except as provided in Rule 709(a)(3)(i) and (a)(3)(ii) of the RCAP.

[Rule 709(a)(3) of the RCAP]

i. Any segregated area of asbestos or non-degradable material may be excluded from collection if documented as provided under Rule 708(d) of the RCAP. The documentation shall provide the nature, the date of disposal, location and amount of asbestos or non-degradable material deposited in the area, and shall be provided to the Board upon request.

[Rule 709(a)(3)(i) of the RCAP]

ii. Any non-productive area of the Sanitary Landfill System 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 Sanitary Landfill System. The amount, location and age of the material shall be documented and provided to the Board 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 Sanitary Landfill System. Emissions for each section shall be computed using the equation specified in Rule 709(a)(3)(ii) of the RCAP.

[Rule 709(a)(3)(ii) of the RCAP]

iii. The values for k, L_o, and C_{CONM} determined in field-testing shall be used, if field-testing has been performed to determine the NMOC emission rate or the radii of influence. If field-testing has not been performed, the base values for k, L_o and C_{CONM} provided in Rule 704(a) of the RCAP shall be used. The mass of non-degradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided that the nature, location, age and amount of the non-degradable material is documented as provided in Rule 709(a)(3)(i) of the RCAP.

[Rule 709(a)(3)(iii) of the RCAP]

37. **MSJL** shall construct the gas collection equipment using the following equipment or procedures:

[Rule 709(b) of the RCAP]

a. The Sanitary Landfill System gas 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 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 need to prevent excessive air filtration.

[Rule 709(b)(1) of the RCAP]

b. Vertical wells shall be placed so as not to endanger basic covers and shall address the occurrence of water of the Sanitary Landfill System. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient sectional thickness so as to allow their 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.

[Rule 709(b)(2) of the RCAP]

c. Collection devices may be connected to the collection header pipes below or above the Sanitary Landfill System surface. The connector assembly shall include a 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.

[Rule 709(b)(3) of the RCAP]

CONVEYING OF SLS GAS

38. **MSJL** shall convey the SLS gas to the control system CD-1 in compliance with Rule 702(f)(2) of the RCAP through the collection header pipe(s). The gas mover equipment shall be sized to handle maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

[Rule 709(c) of the RCAP]

a. For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in Rule 709(c)(2) of the RCAP shall be used.

[Rule 709(c)(1) of the RCAP]

b. For new collection systems, the maximum flow rate shall be in accordance with Rule 705(a)(1) of the RCAP.

[Rule 709(c)(2) of the RCAP]

FAILURE TO COMPLY PENALTIES

39. A failure to comply with any of the requirements established in Part VII of the RCAP will constitute a violation and the owner of the **MSJL** will be subject to an administrative order to comply and/or liable to administrative penalties. The penalties will be imposed in accordance with the Commonwealth of Puerto Rico,

Environmental Public Policy Act, Public Law Number 416 of September 22, 2004, and any other regulation created under it.

[Rule 710 of the RCAP]

D. Conditions according to 40 CFR, Part 63, Subpart AAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills.[12]

For EU-01 & CD-1:

1. **MSJL** shall comply with the requirements established in the EPA approved and effective State plan that implements 40 CFR part 60, subpart Cc (Part VII of the RCAP).

[40 CFR Section 63.1955(a)(2)]

2. **MSJL** shall comply with the requirements established in 40 CFR §§ 63.1960 through 63.1980 and with the general provisions established in Table 1 of the 40 CFR subpart AAAA.

[40 CFR Section 63.1955(b)]

3. For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, **MSJL** must follow the procedures in 40 CFR §60.752(b)(2)[13]. If alternatives have already been approved under the EPA approved and effective State plan that implements 40 CFR part 60, subpart Cc (Part VII of the RCAP), these alternatives can be used to comply with 40 CFR part 63 subpart AAAA, **except** that all affected sources must comply with the startup, shutdown and malfunction (SSM) as specified in Table 1 of 40 CFR part 63 subpart AAAA.

   a. **MSJL** sources must submit compliance reports every 6 months as specified in 40 **CFR §63.1980(a) and (b),** including information on all deviations that occurred during the 6-month reporting period.

   b. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour[14] monitoring block average.

[40 CFR Section 63.1955(c)]

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[12] Note that the state or federal applicable requirement is cited at the right side immediately below the requirement.

[13] The citation of the 40 CFR Section 60.752(b)(2) does not means that the New Source Performance Standard (NSPS) of Subpart WWW is applicable. It only cites the requirements, which in this case are equivalent to complying with Rule 702(f) of the RCAP.

[14] The averages are calculated in the same manner as calculated by Part VII of the RCAP, except that the data obtained during the events listed in sections 63.1975(a), (b), (c), and (d) of 40 CFR shall not be included in any average calculated under 40 CFR subpart AAAA.

4. Compliance with 40 CFR part 63 subpart AAAA is determined in the same way it is determined in 40 CFR part 60, subpart WWW[15], including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence.

   a. Continuous parameter monitoring data, collected under 40 CFR §60.756(b)(1)[16] are used to demonstrate compliance with the operating conditions for control systems.

   b. If a deviation occurs, **MSJL** have failed to meet the control device operating conditions described in 40 CFR subpart AAAA and have deviated from the requirements of 40 CFR subpart AAAA.

   c. **MSJL** shall develop a written Startup, Shutdown and Malfunction (SSM) plan according to the provisions in 40 CFR §63.6(e)(3).

   d. A copy of the SSM plan must be maintained on site.

   [40 CFR Section 63.1960]

5. A deviation[17] is defined in 40 CFR §63.1990 and includes the following:

   a. A deviation occurs when the control device operating parameter boundaries described in 40 CFR §60.758(c)(1)[18] are exceeded.

   b. A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.

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[15] The citation of the 40 CFR Part 60 Subpart WWW does not means that the NSPS is applicable. It only cites the requirements, which in this case are equivalent to complying with Part VII of the RCAP.

[16] The citation of the 40 CFR Section 60.756(b)(1) does not means that the NSPS of Subpart WWW is applicable. It only cites the requirement, which in this case is equivalent to complying with Rule 706(b)(1) of the RCAP, which is cited in this permit.

[17] A **deviation** as defined in 40 CFR §63.1990 means any instance in which an affected source subject to 40 CFR Part 63 Subpart AAAA, or an owner or operator of such a source: (1) Fails to meet any requirement or obligation established by this subpart AAAA, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard; (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart AAAA and that is included in the operating permit for any affected source required to obtain such a permit; or (3) Fails to meet any emission limitation, (including any operating limit), or work practice standard in this subpart AAAA during SSM, regardless of whether or not such failure is permitted by this subpart AAAA.

[18] The citation of the 40 CFR Section 60.758(c)(1) does not means that the NSPS of Subpart WWW is applicable. It only cites the requirement, which in this case is equivalent to complying with Rule 708(c)(1) of the RCAP, which is cited in this permit.

c. A deviation occurs when a SSM plan is not developed or maintained on site.

[40 CFR section 63.1965]

6. Averages are calculated in the same way as they are calculated in 40 CFR part 60, subpart WWW[15], except that the data collected during the events listed in paragraphs (a), (b), (c), and (d) of this condition are not to be included in any average computed under this subpart:

   a. Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

   b. Startups.

   c. Shutdowns.

   d. Malfunctions.

[40 CFR section 63.1975]

7. **MSJL** shall keep records and reports as specified in the EPA approved and effective State plan that implements 40 CFR part 60, subpart Cc (Part VII of the RCAP), with one exception: **MSJL** must submit the annual report described in 40 CFR section 60.757(f)[19] **every 6 months.**

[40 CFR section 63.1980(a)]

8. **MSJL** shall also keep records and reports as specified in the general provisions of 40 CFR part 60 and part 63 as shown in Table 1 of 40 CFR part 63 subpart AAAA. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

[40 CFR section 63.1980(b)]

Section VI - Insignificant Emission Units

The following activities will be considered insignificant as long as **MSJL** complies with the descriptions indicated below.

Emission Unit ID	Capacity	Description (Basis for exemption)
Air compressor	11 hp	Appendix B.3.xxiii. of the RCAP
Construction equipment (e.g. bulldozers, excavators, rollers and trucks)	19 units	Appendix B-3iii of the RCAP

[19] The citation of the 40 CFR Section 60.757(f) does not means that the NSPS of Subpart WWW is applicable. It only cites the requirement, which in this case is equivalent to complying with Rule 707(f) of the RCAP, which is cited in this permit.

Emission Unit ID	Capacity	Description (Basis for exemption)
One pump for diesel fuel	8 gal/min	Appendix B.3.xxiii of the RCAP
Air conditioner (refrigerant 134a)	Unspecified	Rule 206 B-1 of the RCAP

Section VII - Permit Shield

As specified under Rule 603(D) of the RCAP, compliance with the conditions of the permit shall be deemed compliance with any applicable requirement as of the date of permit issuance, but only if such applicable requirement is included and specifically identified in the permit.

(1) Non Applicable Requirements

Non-Applicable Requirements	Regulation	Description
Standards of Performance for Municipal Solid Waste Landfill.	40 CFR 60, Subpart WWW.	Waste deposits began in 1973, and it was constructed before May 30, 1991.
Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)	40 CFR 60, Subpart Kb.	Not applicable to tanks with a capacity less than 40 cubic meters.

Section VIII – Permit Approval

By virtue of the authority conferred upon the Environmental Quality Board by the Public Policy Environmental Act, Public Law Number 416 of September 22, 2004, as amended, and after verifying the administrative record and compliance with the Uniform Administrative Procedure Act, Law No. 170, August 12, 1988, as amended, the Clean Air Act, the Public Policy Environmental Act and the Regulation for the Control of Atmospheric Pollution, the Environmental Quality Board approves this permit subject to all the terms and conditions herein established.

In San Juan, Puerto Rico, **[month, day, year]**.

ENVIRONMENTAL QUALITY BOARD

Edwin Irizarry Lugo, Esq.
Vice President

Reynaldo Matos Jiménez
Associate Member

Pedro J. Nieves Miranda, Esq.
President

APPENDIXES

Appendix I - Definitions and Abbreviations

A. Definitions:

1. Act – Clean Air Act, as amended, 42 U.S. 7401, et seq.

2. Responsible Official- see definition of responsible official, as established in the EQB Regulation for the Control of Atmospheric Pollution, (1995).

3. Regulations – Regulations for the Control of Atmospheric Pollution of the Environmental Quality Board.

4. Title V – Title V of the Federal Clean Air Act (42 U.S.C. 7661).

B. Abbreviations

AP-42	Compilation of Air Pollutants Emission Factors of EPA
Btu	British thermal unit
CFR	Code of Federal Regulations
C_{NMOC}	NMOC average concentration
CO	Carbon Monoxide
EPA	Environmental Protection Agency
EQB	Environmental Quality Board
GPH	Gallons per hour
GPY	Gallons per year
HAP	Hazardous Atmospheric Pollutants
k	Methane generation rate constant, $year^{-1}$
MACT	Maximum Available Control Technology
Mg	Megagrams

MMBtu	Million Btu
MSJL	Municipality of San Juan Landfill
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Atmospheric Pollutant
NMOC	Non Methane Organic Compound
NO_x	Nitrogen oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate Matter with a size less than or equal to 10 micrometers in aerodynamic mass median diameter
PSD	Prevention of Significant Deterioration
RCAP	Regulation for the Control of Atmospheric Pollution of the Environmental Quality Board
scfm	cubic feet per minute at standard conditions
SIC	Standard Industrial Classification
SLS	Sanitary Landfill System
SO_2	Sulfur Dioxide
SOx	Sulfur Oxides
VOC	Volatile Organic Compounds