



**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 92597**

I. INTRODUCTION

This Class I Renewal permit is for the continued operation of Allied Waste Systems of Arizona, LLC's La Paz County Regional Landfill. Permit No. 92597 renews and supersedes Permit No. 65873. Permit No. 65873 had an expiration date of September 11, 2022, and the application for this permit renewal was submitted on January 3, 2022. This submission satisfied the permit condition requiring that a complete and timely application be submitted by the Permittee at least six (6) months, but no earlier than eighteen (18) months, prior to the expiration date of the current permit.

A. Company Information

Facility Name: La Paz County Regional Landfill
Mailing Address: 26999 Highway 95 Mile Post 128, Parker, AZ 85344
Facility Location: 26999 Highway 95 Mile Post 128, Parker, AZ 85344

B. Attainment Classification

This facility is located in La Paz County which is designated as attainment or unclassified for all criteria pollutants.

II. PROCESS DESCRIPTION

A. Process Description

The La Paz County Regional Landfill (LPCL) is an active municipal solid waste (MSW) landfill owned by La Paz County and operated by Allied Waste Systems of Arizona, LLC (Allied). The LPCL began operation in 1991 and was designed as an area fill landfill. The primary activities of LPCL are the transportation and deposition of refuse along with the excavation and stockpiling of cover material and soil. A defined area of the landfill is excavated, lined, and prepared to receive waste prior to the acceptance of refuse. Cell construction will continue as a cut-and-fill operation, and excavated materials will be used for daily, intermediate, and final cover. Existing site development and ancillary operations may include access roads, an office/scalehouse building, truck scale, fuel storage tank(s), water storage tank(s), stormwater retention pond(s), temporary hazardous waste storage, utilities, septic evaporation ponds, truck shop, maintenance facility, perimeter berms, and security fencing.

The design capacity for the landfill is estimated at 22 million cubic yards (yd³), or 16.8 million cubic meters (m³). As of the end of the 2020 calendar year, approximately 697,359 Megagram (Mg) of waste was in place at the LPCL. Assuming a constant growth rate of 3 percent per year, the Landfill's capacity would be reached in the year of 2056.

The LPCL accepts non-hazardous industrial and solid wastes, construction and demolition debris, white goods and other non-hazardous wastes such as sewage sludge. Wastes that are conditionally accepted for disposal at the site include the following:

- Typical Residential Waste – Household garbage, yard clippings and other green waste.
- White Goods – The LPCL accepts large appliances that are void of chlorinated fluorocarbons (CFCs) or will be evacuated prior to disposal.
- Construction and Demolition Debris – The LPCL accepts construction and demolition debris (i.e., waste building materials, packaging and rubble from construction, remodeling, and repair and demolition operations of pavements, houses, buildings and structures).
- Sewage Sludge – The LPCL conditionally accepts sewage sludge. The LPCL requires the generator, or an agent for the generator, to provide documentation that adequately profiles the waste. Wastes will be disposed of if it is a solid and the generator has provided documentation that the waste is not a hazardous waste. The LPCL retains the option to use sludge as daily cover material, provided it meets the required performance standards and receives ADEQ Solid Waste Unit approval.

B. Control Devices

No control device currently exists at the LPCL. The projected 2025 non-methane organic compound (NMOC) emission rate is below 34 Mg/yr, so no gas collection and control system (GCCS) is required at this time.

C. Process Flow Diagram

A process flow diagram can be found in Appendix A.

III. LEARNING SITE EVALUATION

In accordance with ADEQ's Environmental Permits and Approvals near Learning Sites Policy, the Department is required to conduct an evaluation to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

The Department did not identify any learning sites within two miles of this facility.

IV. COMPLIANCE HISTORY

A. Physical Inspections and Compliance Certification Review

During the five-year permit term that LPCL operated under Permit No. 65873, this facility had nine (9) physical inspections and nine (9) compliance certification reviews. No deficiencies were noted during these inspections or compliance certification report reviews.

B. Excess Emissions and Permit Deviation Report Review

During the five-year permit term that LPCL operated under Permit No. 65873, one (1) deviation and no excess emissions has been reported.

1. Deviations

a. Inspection ID: 362202

This deviation reported expiration of EPA Method 9 Certifications caused by classes being canceled due to COVID-19. ADEQ decided not to take further action on permit deviations due to expirations of EPA Method 9 Certifications caused by COVID-19 at that time. The EPA Method 9 Certifications were renewed on October 8, 2020, thereby resolving this permit deviation. This deviation did not result in any enforcement actions.

C. Performance tests conducted and results.

During the five-year permit term that LPCL operated under Permit No. 65873, one (1) performance test has been reported. In June and July 2021, the LPCL conducted Tier 2 NMOC emission rate test and the results are shown in Table 1.

Table 1: Performance Test Results

Emission Unit	Pollutant	Date of Test	Results of Performance Test
MSW Landfill	NMOC	06/08-06/09/2021 and 07/21/2021	Projected 2021 – 2025 NMOC emission rate is below 34 Mg/yr.

V. EMISSIONS

The potential-to-emit (PTE) was calculated based on EPA's Compilation of Air Pollution Emission Factors (AP-42 Section 2.4 and Section 3.3), EPA Landfill Gas Emissions Model LandGEM Version 3.03, and EPA WebFIRE emission factors database. To calculate the total landfill gas emissions, the methane generation rate k of 0.02 per year for areas receiving less than 25 inches/yr rainfall, the potential methane generation capacity L_0 of 100 m³/Mg as recommended by AP-42 Section 2.4, and the waste acceptable rates provided by the LPCL were used in LandGEM Version 3.03. The growth rate of the waste acceptable rates was assumed to be 3% per year, and the Landfill's capacity would be reached in the year of 2056. The closure year 2056 was used in LandGEM Version 3.03 to project the maximum potential landfill gas (LFG) emissions and associated emissions.

The NMOC concentration of 1,865 ppmv as hexane of the total landfill gas from the 2021 Tier 2 NMOC sampling was used to calculate the NMOC emission rate. The volatile organic compounds (VOCs) emission was based on 39% of the NMOC emissions for no or unknown sites as recommended by AP-42 Section 2.4. The PTE also includes the emissions from one stationary internal combustion engine (ICE), a couple of mobile ICEs, and storage tank operation. The operating hours for the stationary ICE was assumed to be 8,760. The mobile ICEs and storage tank operation were identified as insignificant activities. The emission factors for the ICEs were from

AP-42 Section 3.3, and the emission factors for the storage tank operation were from EPA WebFIRE emission factors database.

The LPCL is not a source listed in A.A.C. R18-2-101.23 (non-categorical source) so the PTE only includes non-fugitive emissions and is provided in Table 2 below. As mentioned in AP-42 Section 2.4, only 75% of the total landfill gas is “collectable” and is considered non-fugitive. With that being said, only 75% of the total NMOC emissions and 75% of the total VOC emissions from the landfill is included in the PTE. The emission changes from the last permit renewal are due to the replacement of the engine, increased total waste, and the change of the way to calculate the PTE.

Table 2: Potential to Emit (tpy)

Pollutant	Emissions from LTF # 65873	Change in Emissions	Emissions	Permitting Exemption Threshold	Minor NSR Triggered?
NO _x	13.75	+4.68	18.43	20	No
PM ₁₀	0.98	+0.33	1.31	7.5	No
PM _{2.5}	0.98	+0.33	1.31	5	No
CO	5.64	-1.67	3.97	50	No
SO ₂	0.91	+0.31	1.22	20	No
VOC	26.57	-11.27	15.30	20	No
HAPs	14.00	-12.42	1.58	N/A	N/A
NMOC	27.72	+7.65	35.37	--	--
GHG (CO ₂ e)	41,749	+11,521	53,270	--	--

VI. MINOR NEW SOURCE REVIEW (NSR)

Minor new source review is required if the emissions of any physical change or change in the method of an operation of an emission unit or stationary source that results in an increase in emissions of any regulated minor NSR pollutant by an amount equal to or greater than the permitting exemption threshold (PET). As shown in Table 2 above, the emission increases resulting from this renewal permit are all below the permitting exemption thresholds, so minor NSR is not required at this time.

VII. APPLICABLE REGULATIONS

Table 3 identifies applicable regulations and verification as to why that standard applies. The table also contains a discussion of any regulations the emission unit is exempt from.

Table 3: Applicable Regulations

Unit & year	Control Device	Rule	Discussion
Municipal Solid Waste (MSW) Landfill	Required when NMOC \geq 34 Mg/yr	A.A.C. R18-2-731; 40 CFR Part 60 Subpart Cf; 40 CFR Part 60 Subpart XXX	<p>A.A.C. R18-2-731 applies to the landfills at which construction, reconstruction, or modification began on or before July 17, 2014; and waste was accepted at any time since November 8, 1987, or additional design capacity is available for future waste deposition, which is applicable to LPCL. Landfills covered by A.A.C. R18-2-731 are required to comply with 40 Code of Federal Regulations (CFR) Part 60, Subpart Cf, effective as of the date of EPA approval of the state plan under section 111(d) of the Act (August 27, 2020). 40 CFR Part 60, Subpart Cf is adopted by ADEQ and hereby incorporated by reference as applicable requirements.</p> <p>40 CFR Part 60 Subpart Cf regulates emissions of landfill gas from MSW landfills for which construction, reconstruction, or modification was commenced on or before July 17, 2014. Under A.A.C. R18-2-731.C, MSW landfills are allowed to meet the requirements of 40 CFR Part 60 Subpart Cf by complying with 40 CFR Part 60 Subpart XXX “Standards of Performance for Municipal Solid Waste Landfills that Commenced Construction, Reconstruction or Modification After July 17, 2014”. LPCL elects to comply with 40 CFR Part 60 Subpart XXX requirements to meet the requirements of 40 CFR Part 60 Subpart Cf. Thus, 40 CFR Part 60 Subpart XXX requirements were incorporated into the permit.</p>

Unit & year	Control Device	Rule	Discussion
		40 CFR Part 60, Subpart WWW	LPCL was subject to Subpart WWW, however, as of August 27, 2020 this rule is no longer applicable since EPA approved Arizona's state plan to promulgate the EPA Emissions Guidelines and Compliance Times for MSW landfills. LPCL is now subject to the more stringent requirements in 40 CFR Part 60 Subpart Cf per 40 CFR 60.750(d)(1).
		40 CFR Part 63, Subpart AAAA	This subpart is not applicable because LPCL does not have a bioreactor, and it is an area source landfill with uncontrolled NMOC emissions less than 50 Mg/yr per 40 CFR 63.1935(a).
		40 CFR Part 62, Subpart OOO	This subpart is not applicable because LPCL is regulated by an EPA-approved and currently effective state plan implementing 40 CFR Part 60, subpart Cf per 40 CFR 62.16711(b).
Asbestos Handling	N/A	40 CFR §61.154 Subpart M	These standards for disposal of asbestos-containing waste are applicable only if asbestos-containing waste materials are accepted.
Non-Emergency ICE	N/A	40 CFR Part 60 Subpart IIII and 40 CFR Part 63 Subpart ZZZZ	The non-Emergency ICE is subject to 40 CFR Part 60 Subpart IIII because it was manufactured after April 1, 2006, and 40 CFR Part 63 Subpart ZZZZ.
Fugitive dust sources	Water Trucks, Dust Suppressants	A.A.C. R18-2 Article 6 A.A.C. R18-2-702	These standards are applicable to all fugitive dust sources at the facility.
Abrasive Blasting	Wet blasting; Dust collecting equipment; Other approved methods	A.A.C. R-18-2-702 A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.
Spray Painting	Enclosures	A.A.C. R18-2-702 A.A.C. R-18-2-727	These standards are applicable to any spray painting operation.

Unit & year	Control Device	Rule	Discussion
Demolition/renovation Operations	N/A	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.

VIII. PREVIOUS PERMIT REVISIONS AND CONDITIONS

A. Previous Permit Revisions

The Permittee has not submitted any permit revision requests during the previous permit term.

B. Changes to Current Renewal

Table 4 addresses the changes made to the sections and conditions from Permit No. 65873:

Table 4: Previous Permit Conditions

Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "A"		X		General Provisions: Revised to represent the most recent template language
Att. "B" Section I		X		Facility Wide Requirements: Revised to represent the most recent template language
Att. "B" Section I.B.2	X			Reporting Requirements: Added permit conditions, and deviations from these conditions need to be promptly reported in accordance with Condition XI.B.2 of Attachment "A".
Att. "B" Section II		X		Landfill Requirements: Revised to replace 40 CFR Part 60 Subpart WWW language with 40 CFR Part 60 Subpart XXX language
Att. "B" Section V		X		Fugitive Dust Requirements: Revised to represent the most recent template language
Att. "B" Section VI			X	Mobile Source Requirements: Deleted.
Att. "B" Section VII		X		Other Periodic Activities: Revised to represent the most recent template language

Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "C"		X		Equipment List: Revised to reflect the most recent equipment operating at the facility and to include equipment information provided.

IX. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Table 5 contains an inclusive but not an exhaustive list of the monitoring, recordkeeping and reporting requirements prescribed by the air quality permit. The table below is intended to provide insight to the public for how the Permittee is required to demonstrate compliance with the emission limits in the permit. Records are required to be kept for a minimum of 5 years as outlined in Section XII of Attachment “A” of the permit.

Table 5: Permit No. 92597

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Municipal Solid Waste (MSW) Landfill	Tier 1, 2, 3: NMOC Tier 4: Methane	Tier 1, 2, 3: 34 Mg/yr Tier 4: surface methane emissions < 500 ppm	Tier 1, 2, 3: Monitor and estimate NMOC emissions on an annual basis using Tier 1, 2 or 3 procedures. Tier 4: Monitor and estimate surface methane emissions on a quarterly basis using Tier 4 procedures.	Tier 1-4: keep 5 years up-to-date, readily accessible, on-site records of the design capacity report, the current amount of solid waste in-place, and the year-to-year waste acceptance rate; if the Permittee converts the design capacity from volume to mass or mass to volume keep readily accessible, on-site records of the annual recalculation of the site-specific density, design capacity, and the supporting documentation. Tier 4: keep for at least 5 years up-to-date, readily accessible records of all surface emissions monitoring (SEM) and information related to	Submit initial design capacity report; submit amended design capacity report providing notification of any increase in the design capacity within 90 days of the increase. Tier 1, 2, 3: If NMOC < 34 Mg/yr, submit a periodic estimate of the NMOC emission rate report; if NMOC ≥ 34 Mg/yr, use Tier 2 or 3 procedures to recalculate NMOC emission rate or conduct Tier 4 SEM and submit the report, or submit a GCCS design plan within 1 year of the first reported NMOC ≥ 34 Mg/yr and install and operate a collection and control system within 30 months. Tier 4: submit Tier 4 surface emissions report annually,

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
				<p>monitoring instrument calibrations conducted</p> <p>If reports leachate or other liquids addition, keep records of any engineering calculations or company records used to estimate the quantities of leachate or liquids added, the surface areas for which the leachate or liquids were applied, and the estimates of annual waste acceptance or total waste in place in the areas where leachate or liquids were applied.</p>	<p>provide a notification of the date(s) to demonstrate site-specific surface methane emissions are below 500 ppm methane; if there is a delay to the scheduled Tier 4 SEM date, notify the Director by email or telephone no later than 48 hours before any known delay in the original test date, and arrange an updated date with the Director. If surface methane emissions ≥ 500 ppm or Tier 1 or 2 NMOC ≥ 50 Mg/yr, submit Tier 4 surface emissions report and a GCCS design plan within 1 year of the first measured concentration of methane ≥ 500 ppm and install and operate a GCCS within 30 months of most recent Tier 2 NMOC ≥ 34 Mg/yr.</p>
Asbestos-containing Waste Material	Asbestos	None	None	Maintain waste shipment records, retain a copy of all records and reports for at least 2 years; maintain records of the location, depth and area, and quantity of asbestos-containing material within	As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste shipment generator. If the discrepancy between the quantity of waste designated on the waste

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
				the disposal site on a map of diagram of the disposal area.	shipment records and the quantity actually received is not resolved within 15 days, report in writing to the local, State, or EPA. Submit a copy of records of asbestos waste disposal locations and quantities. Notify the Director in writing at least 45 days prior to excavating or disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered.
Non-Emergency ICE	None	Comply with emission standards in 40 CFR 60.4201 by purchasing a certified engine	None	Keep records of fuel supplier specifications, a copy of the engine instructions or procedures, and maintain a copy of engine certifications or other documentation demonstrating compliance with the applicable standard, and make the documentation available to ADEQ upon request	None
Fugitive Dust	PM	40% Opacity	A Method 9 observer is required to conduct a monthly survey of visible emissions.	Record of the dates and types of dust control measures employed, and if applicable, the results of	None

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
				any Method 9 observations, and any corrective action taken to lower the opacity of any excess emissions.	
Abrasive Blasting	PM	20% Opacity	None	Record the date, duration and pollution control measures of any abrasive blasting project.	None
Spray Painting	VOC	20% Opacity Control 96% of the overspray	None	Maintain records of the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.	None
Demolition/ Renovation	Asbestos	None	None	Maintain records of all asbestos related demolition or renovation projects including the “NESHAP Notification for Renovation and Demolition Activities” form and all supporting documents	None

X. COMPLIANCE ASSURANCE MONITORING (CAM)

The CAM rule applies to pollutant-specific emission units (PSEU) at a major Title V source if the unit meets all of the following criteria:

- A. The unit is subject to an emission limit or standard for the applicable regulated air pollutant;
- B. The unit uses a control device to achieve compliance with the emission limit or standard; and
- C. The unit has "potential pre-control device emissions" of the applicable regulated air pollutant equal to or greater than 100% of the amount (tons/year) required for a source to be classified as a major source. "Potential pre-control device emissions" means potential to emit (PTE, as defined in Title V) except emissions reductions achieved by the applicable control device are not taken into account.

In the specific case of LPCL, none of the above criteria was met. Thus, LPCL is not subject to the CAM rules.

XI. ENVIRONMENTAL JUSTICE ANALYSIS

The United States Environmental Protection Agency (EPA) defines Environmental Justice (EJ) to include the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income. The goal of evaluating EJ in permitting is to provide an opportunity for meaningful participation in the permitting process for overburdened populations or communities to allow for meaningful participation in the permitting process. Overburdened is used to describe the minority, low-income, tribal and indigenous populations or communities that potentially experience disproportionate environmental harms and risks due to exposures or cumulative impacts or greater vulnerability to environmental hazards. This renewal permit has emission increases significantly below the permitting exemption thresholds and will not result in any additional impacts from the time of the initial permitting of the operation.

XII. AMBIENT AIR IMPACT ANALYSIS

The emission increases resulting from this renewal permit are significantly below the permitting exemption thresholds, therefore an ambient air impact analysis is not required for this renewal permit.

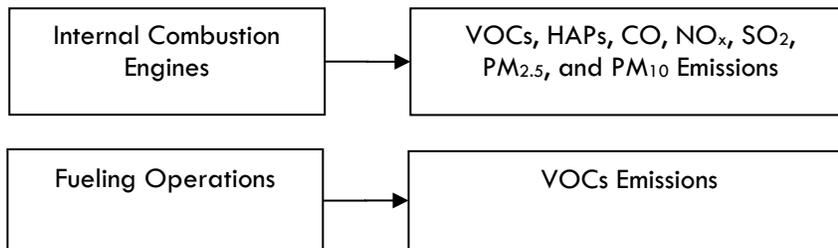
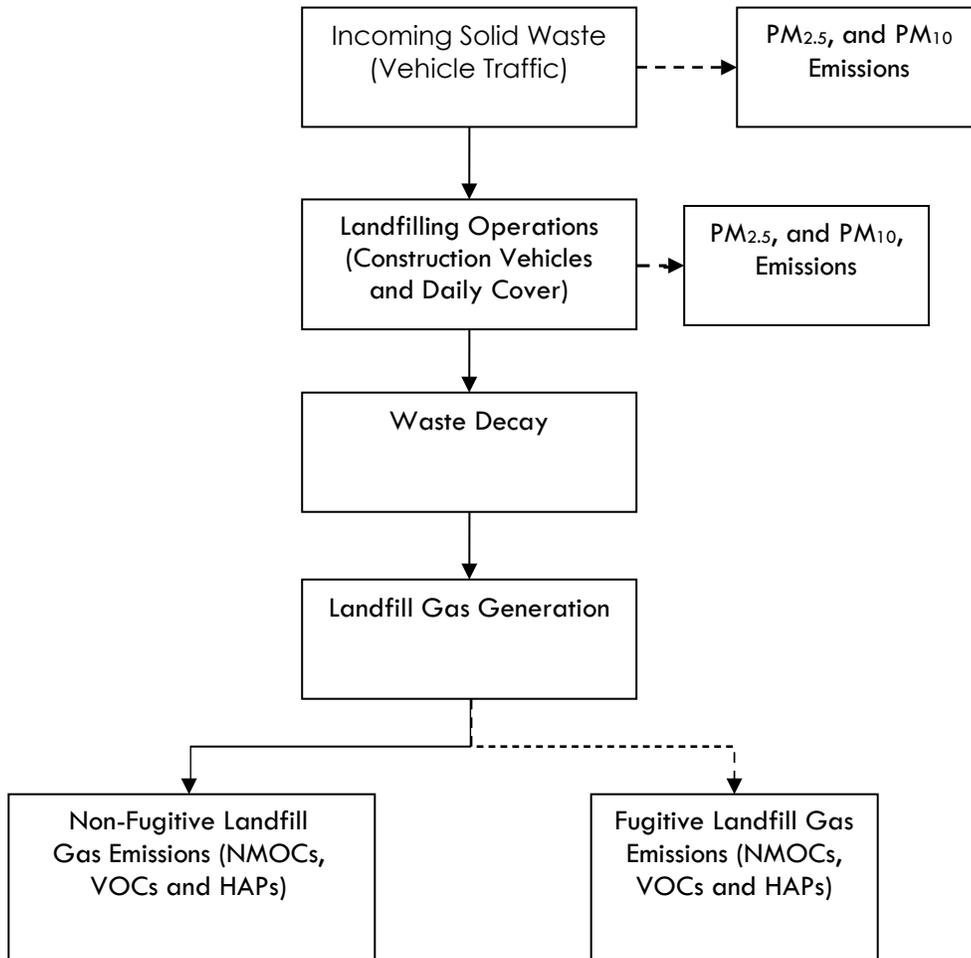
XIII. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
Allied	Allied Waste Systems of Arizona, LLC
CAM	Compliance Assurance Monitoring
CFCs	Chlorinated fluorocarbons
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂ e	CO ₂ equivalent basis
EJ	Environmental Justice
EPA	Environmental Protection Agency

GCCS	Gas Collection and Control System
HAP	Hazardous Air Pollutant
hr	Hour
ICE	Internal Combustion Engine
LFG	Landfill gas
LPCL	La Paz County Regional Landfill
m ³	Cubic meters
Mg	Megagram
MSW	Municipal Solid Waste
NMOC	Non-Methane Organic Compound
NSR	New Source Review
NO _x	Nitrogen Oxides
PET	Permitting exemption threshold
PM ₁₀	Particulate Matter no larger than 10 µm nominal aerodynamic diameter
PM _{2.5}	Particulate Matter no larger than 2.5 µm nominal aerodynamic diameter
PSEU	Pollutant-specific emission units
PTE	Potential to Emit
SO ₂	Sulfur Dioxide Significant Impact Levels
TPY	Tons per Year
VOC	Volatile Organic Compound
yd ³	Cubic yards
yr	Year

Appendix A

Process Flow Diagram



La Paz County Regional Landfill