



**TECHNICAL REVIEW AND EVALUATION  
OF APPLICATION FOR  
AIR QUALITY PERMIT No. 92694**

**I. INTRODUCTION**

This Class I renewal permit is for the continued operation of Copper Mountain Landfill Inc.'s Copper Mountain Landfill. Permit No. 92694 renews and supersedes Permit No. 66292

**A. Company Information**

Facility Name: Copper Mountain Landfill  
Mailing Address: 34853 E County 12<sup>th</sup> St, Welton, AZ 85356  
Facility Location: 34653 E County 12<sup>th</sup> St, Welton, AZ 85356

**B. Attainment Classification**

The Copper Mountain Landfill is located in an area of Yuma County that is designated attainment/unclassified for all criteria pollutants.

**II. PROCESS DESCRIPTION**

**A. Process Equipment**

The primary activities at the Copper Mountain Landfill are the transportation and disposal of refuse and the excavation and stockpiling of cover material. Excavated soil from cell construction is used for daily, intermediate, and final cover. The landfill accepts the following waste materials:

- Green Waste
- White Goods (large appliances that are void of chlorinated fluorocarbons)
- Construction and Demolition Debris
- Asbestos
- Sewage Sludge
- Petroleum-Contaminated Soil
- Fly Ash

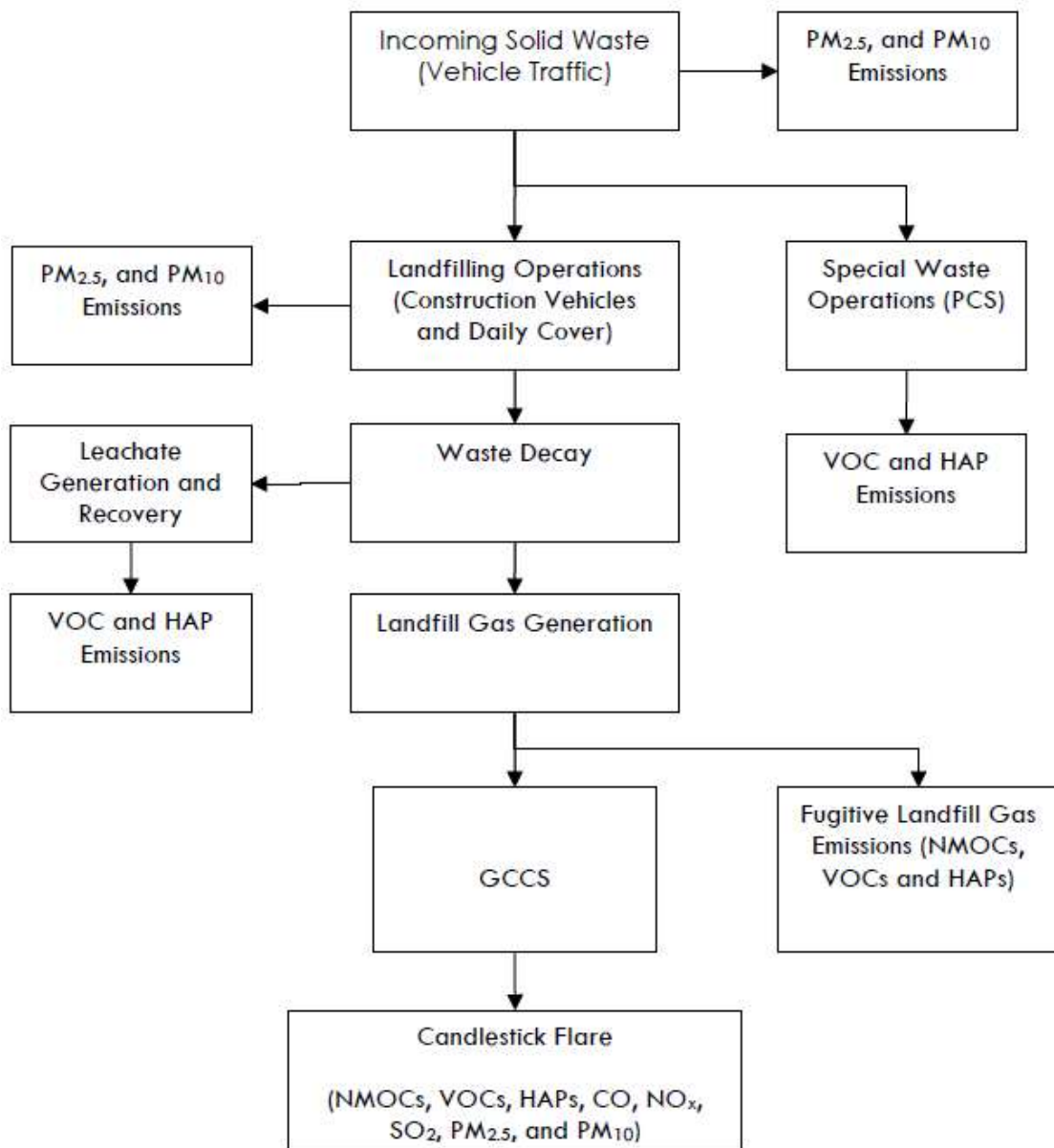
The Copper Mountain Landfill's design capacity is estimated at 54.5 million cubic meters, or 61.4 million tons. As of the end of the 2020 calendar year, 4,853,023 megagrams of waste was in place, with the capacity expected to be reached in the year 2285.

## B. Control Devices

The Copper Mountain Landfill's uncontrolled emissions of nonmethane organic compounds (NMOCs) exceeded the 50 megagram per year threshold required by New Source Performance Standards (NSPS) Subpart WWW and Permit No. 66292 during the previous permit term and was required to install an operational gas collection and control system. The landfill's gas collection and control system consists of an active collection system and an unenclosed flare.

## C. Process Flow Diagram

**Figure 1: Process flow diagram for landfill operations**



*Note: Only non-fugitive emissions from the candlestick flare are evaluated for permitting purposes.*

### 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.

This permit renewal will not result in any increase in emissions as there are no changes to any equipment. Hence the facility is exempt from the learning sites evaluations.

### IV. COMPLIANCE HISTORY

#### A. Inspections and Compliance Reporting

The Copper Mountain Landfill received three full inspections and submitted 9 semiannual compliance certifications during the permit term. The Department also reviewed the Tier 2 NMOC sampling report, gas collection and control system design plan, revised gas collection and control system design plan, liquid addition and leachate recirculation reports during this permit term.

The Permittee did not submit any excess emission or permit deviation reports and was not subject to any enforcement actions.

#### B. Performance Testing

The Copper Mountain Landfill conducted initial performance testing on the candlestick flare on April 2, 2021, as required by National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart AAAA and NSPS Subpart XXX for unenclosed flares. The results of the performance test are detailed in Table 1 below:

**Table 1: Performance Test Results**

Emission Unit	Test Criteria	Date of Test	Results	Threshold	Pass/Fail
Visible Emissions	Visible Emissions	4/2/2021	0 minutes	5 minutes	Pass
Heating Value	Heating Value	4/2/2021	18.76 Megajoules per standard cubic meter	>7.45 Megajoules per standard cubic meter	Pass
Exit Velocity	Exit Velocity	4/2/2021	10.43 feet per second	80.53 feet per second	Pass
Heat Sensing Device	Heat Sensing Device	4/2/2021	Pass	Not Applicable	Pass

### V. POTENTIAL TO EMIT

The Copper Mountain Landfill is a non-categorical source, consequently, only non-fugitive emission sources are evaluated when determining potential to emit. Non-fugitive emission sources at the landfill are limited to: (1) landfill gases emissions being collected and controlled by the gas collection and control system, (2) combustion of landfill gases by the flare, and (3) operation of the flare generator. The Copper Mountain Landfill's landfill gas emissions were evaluated using EPA Landfill Gas Emissions Model (LandGEM) Version 3.03 and AP-42 Chapter 2.4 for Municipal Solid Waste Landfills. LandGEM was used to determine total landfill gas generation using the methane generation rate constant for areas receiving less than 25 inches of rainfall per year, the methane generation potential recommended in AP-42 Chapter 2.4, and the landfill's annual refuse acceptance rate. The Copper Mountain Landfill's NMOC emissions were calculated based on the 2018 Tier 2 NMOC sampling concentration and total landfill gas generation rate. Volatile organic compound (VOC) emissions were calculated using the recommended value for VOC concentration from AP-42 Chapter 2.4. Emissions of carbon monoxide (CO) and nitrogen oxides (NO<sub>x</sub>) from the candlestick flare's combustion of landfill gases were evaluated using emission factors for industrial flares from AP-42 Chapter 13.5. The facility's gas collection and control system is assumed to collect 75% of landfill gases generated, as recommended by AP-42 Chapter 2.4, with a control efficiency of 98%. Emissions from the flare generator were evaluated using emission factors from AP-42 Chapter 3.3 for Gasoline and Diesel Industrial Engines.

The facility has a potential-to-emit (PTE) less than the major source thresholds for all regulated pollutants. The facility's PTE is provided in Table 2 below:

**Table 2: Potential to Emit (tpy)**

Pollutant	Emissions
NO <sub>x</sub>	33.73
PM <sub>10</sub>	1.64
PM <sub>2.5</sub>	1.64
CO	62.80
SO <sub>2</sub>	26.75
VOC	2.59
Pb	0
HAPs	1.35
NMOCs	1.91
GHG (CO <sub>2</sub> e)	1,367

## VI. 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	Control Device	Rule	Discussion
Municipal Solid Waste Landfill	Gas Collection and Control System	<p>A.A.C. R18-2-731</p> <p>40 CFR 60 Subpart Cf</p> <p>40 CFR 60 Subpart XXX</p> <p>40 CFR 63 Subpart AAAA</p>	<p>A.A.C. R18-2-731 applies to MSW landfills that began construction, reconstruction, or modification on or before July 17, 2014 and accepted waste at any time since November 8, 1987 or has capacity available for future waste deposition. This standard requires the Permittee to comply with 40 CFR 60 Subpart Cf, or satisfy the requirements of 40 CFR 60 Subpart Cf by complying with 40 CFR 60 Subpart XXX. The Permittee elected to comply with 40 CFR 60 Subpart XXX to satisfy the requirements of A.A.C. R18-2-731 and 40 CFR 60 Subpart Cf.</p> <p>40 CFR 63 Subpart AAAA applies to MSW landfills that has accepted waste since November 1987, 1987 or has additional capacity for waste deposition, and has a design capacity greater than 2.5 million megagrams and 2.5 million cubic meters with estimated uncontrolled emissions equal to or greater than 50 megagrams per year NMOC.</p>
Asbestos	None	40 CFR 61.154 Subpart M	40 CFR 61.154 Subpart M applies to active waste disposal sites that receive asbestos-containing waste material from asbestos mills; manufacturing, fabricating, demolition, renovation, and spraying operations; and operations that convert asbestos containing waste into nonasbestos (asbestos-free) material.
Generators	None	40 CFR 60 Subpart III	40 CFR 60 Subpart III applies to stationary compression ignition non-emergency internal combustion engines manufactured after April 1, 2006 that are not fire pump engines.
Fugitive dust sources	Water Trucks, Dust Suppressants	<p>A.A.C. R18-2 Article 6</p> <p>A.A.C. R18-2-702</p>	These standards are applicable to all fugitive dust sources at the facility.

Unit	Control Device	Rule	Discussion
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.
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.

**VII. PREVIOUS PERMIT REVISIONS AND CONDITIONS**

**A. Previous Permit Revisions**

Table 4 provides a description of the permit revisions made to Permit No. 66292 during the previous permit term.

**Table 4: Permit Revisions to Permit No. 66292**

Permit Revision No.	Permit Revision Type	Brief Description
82494	Minor Permit Revision	Minor permit revision for the installation of the gas collection and control system and supporting generator.

**B. Changes to Current Renewal**

Table 5 addresses the changes made to the sections and conditions from Permit No. 66292:

**Table 5: 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 II		X		Landfill Operations: Revised to reflect the requirements of NSPS Subpart XXX and NESHAP Subpart AAAA
Att. "B" Section III			X	Collection and Control System: Combined with Section II to better reflect the current operating scenario.

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Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "B" Section IV		X		Asbestos: Revised to clarify applicability.
Att. "B" Section V		X		Internal Combustion Engines: Revised to reflect the most recent revisions to NSPS Subpart III
Att. "C"		X		Equipment List: Revised to reflect the current equipment operating at the facility and include the equipment information provided.

**VIII. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS**

Table 6 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.

**Table 6: Permit No. 92694**

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
MSW Landfill	NMOC Methane	None	<p>Monitor landfill gas temperature on a monthly basis. Enhanced monitoring is required if well temperature exceeds 63.8 degrees Celsius (145 degrees Fahrenheit) and 73.9 degrees Celsius (165 degrees Fahrenheit.</p> <p>Install, operate, and maintain a heat sensing device at the pilot light or flare, and a device that records flow to the flare and bypass of the flare.</p> <p>Conduct surface emissions monitoring for methane on a quarterly basis.</p>	<p>Keep records of the design capacity report, current amount of solid waste in place, and the year-by-year waste acceptance rate.</p> <p>Keep records of control system equipment data as measured during the initial performance test or compliance determination.</p> <p>Keep records of equipment operating parameters.</p> <p>Keep a readily accessible plot map showing each existing and planned collector in the system.</p> <p>Keep records of exceedances of operational standards and associated corrective actions and monitoring.</p> <p>Keep records of the annual recalculation of site-</p>	<p>Submit an amended design capacity report to provide notification of an increase in design capacity of the landfill within 90 days of the increase.</p> <p>Submit a revised design plan at least 90 days before expanding operations to an area not covered by the previously approved plan, or prior to installing or expanding the system in a way that is not consistent with the previously submitted design plan.</p> <p>Submit a closure report within 90 days of waste acceptance cessation.</p> <p>Submit an equipment removal report 30 days prior to removal or cessation of the control equipment.</p>



Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
				<p>specific density, design capacity, and supporting documentation.</p> <p>Keep records of all collection and control system monitoring data for measured operating parameters.</p>	<p>Submit semiannual reports documenting parameter exceedances, control system bypass, periods the system was not operating, locations of each exceedance of 500-ppm methane concentration standard, date and location of new wells or collection systems, corrective actions taking more than 60 days to correct the exceedance, and enhance monitoring (if applicable).</p> <p>Submit reports of date, time, well identifier, temperature, and carbon monoxide reading within 24 hours if well temperature exceeds 76.7 degrees Celsius and carbon monoxide concentration is greater than or equal to 1,000 ppmv.</p> <p>Submit reports documenting corrective action and corresponding timeline associated with exceedances of well temperature standards.</p>

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
					Submit annual report on leachate recirculation or other liquids addition.
Asbestos Handling	Asbestos	None	None	<p>Maintain waste shipment records for all asbestos-containing material received.</p> <p>Maintain records of location, depth and area, and quantity of asbestos-containing material within the disposal site on a map or diagram of the disposal area.</p>	<p>Submit a copy of records of asbestos waste disposal locations and quantities upon closure.</p> <p>Notify the Director at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited and is covered.</p>
Spray Painting	VOC	<p>20% Opacity</p> <p>Control 96% of the overspray</p>	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"	None

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
				form and all supporting documents	

**IX. 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 considered.

The Copper Mountain Landfill is not subject to Compliance Assurance Monitoring because the facility is not subject to an emission limit or standard, and it does not have potential pre-control device emissions equal to or greater than the major source threshold.

**X. LIST OF ABBREVIATIONS**

A.A.C.	Arizona Administrative Code
A.R.S.	Arizona Revised Statutes
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CH <sub>4</sub>	Methane
CO	Carbon Monoxide
CO <sub>2e</sub>	CO <sub>2</sub> equivalent basis
GHG	Greenhouse Gases
HAP	Hazardous Air Pollutant
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emissions Standard for Hazardous Air Pollutants
NMOC	Nonmethane Organic Compound
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter less than 10 µm nominal aerodynamic diameter
PM <sub>2.5</sub>	Particulate Matter less than 2.5 µm nominal aerodynamic diameter
PSEU	Pollutant-Specific Emission Units
PTE	Potential to Emit
TPY	Tons per Year
VOC	Volatile Organic Compound