TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NO. 53226

I. INTRODUCTION

This Class I Air Quality Control Permit #53226 is issued to Mohave County Public Works Department for the continued operation of the Mohave Valley Landfill. The landfill is operated by Allied Waste Transportation, Inc. This is a renewal of Permit #36285.

Company Information

Facility Name:	Mohave Valley Landfill
Facility Address:	3999 El Rodeo Road Fort Mohave, Arizona 86426
Mailing Address:	Allied Waste Transportation, Inc 1855 East Deer Valley Road Phoenix, Arizona 85024

Attainment Classification

The facility is located in an area which is designated attainment/unclassified for all criteria pollutants.

Background

This source is a municipal solid waste landfill and has been in operation since 1990 being designed as an area fill landfill. A Class I permit is required because an applicable regulation, New Source Performance Standard Subpart WWW "Standards of Performance for Municipal Solid Waste Landfills", requires the Permittee to obtain a Title V permit.

II. FACILITY DESCRIPTION

Process Description

The primary activities at the Mohave Valley Landfill are the transportation and disposal of refuse. Excavated soil from cell construction is used for daily, intermediate and final cover. The landfill accepts the following materials:

- Municipal refuse and other wastes from household or commercial facilities
- White goods
- Construction debris and demolition material
- Dead animals
- Shredder fluff/residue
- Incinerator ash
- Non-infectious medical waste
- Waste and water treatment plant sludge which pass the paint filter test
- Industrial waste

The design capacity for the facility is estimated to be approximately 14.9 million cubic yards. With a compaction ratio of 900 to 1000 pounds be cubic yard this results in a design capacity of 7 to 7.5 million tons of waste. At the end of 2010, the facility has approximately 1.16 million tons of waste in place. At an assumed growth rate of 3%, the facility is like to achieve the design capacity by year 2051.

The natural decomposition of the waste materials, and to some extent the evaporation of volatile organic compounds (VOCs) in the waste materials, constitutes the primary sources of emissions. The landfill gas (LFG) that is emitted from the landfill is fundamentally 50 percent methane (CH_4) and 50 percent carbon dioxide (CO_2), with a fraction containing non-methane organic compounds (NMOCs) and hazardous air pollutants (HAPs). Fugitive particulate matter (PM) emissions are due to traffic on unpaved roads, application of a cover layer of soil, soil stockpiling, cover layer distribution, and wind erosion.

III. LEARNING SITES POLICY

In accordance with ADEQ's Environmental Permits and Approvals near Learning Sites Policy, the Department conducted 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 at 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 the facility.

IV. EMISSIONS

Table 1, below, shows the uncontrolled non-fugitive emissions from the Mohave Valley Landfill as a maximum at the end of the five year renewal period.

Table 1

Pollutant	Emissions tons/year
CO	**1.33**
NO_x	**6.07**
SO_2	**0.40**
Non-Methane Organic Compounds (NMOC)	**23.04**
$PM_{10/2.5}$	**0.43**
Single HAP	**1.94**
Total HAPS	**5.84**
Total Greenhouse Gas Emissions*	**140,860**

- *This is the Total GHG Equivalent Emissions including fugitive and non-fugitive emissions.
- Detailed emission calculations are included in the permit application

V. APPLICABLE REGULATIONS

Table 2 displays the applicable requirements for each piece of equipment under this proposed permit.

Table 2: Verification of Applicable Regulations

Unit	Control Device	Rule	Verification
MSW Landfill	Required when NMOC > 50 Mg/yr	40 Code of Federal Regulation (CFR) Part 60 Subpart WWW 40 CFR Part 63 Subpart AAAA	Subpart WWW regulates emissions of landfill gas from MSW landfills and Subpart AAAA is triggered if size and emissions exceed threshold levels requiring a collection system as set forth in WWW.
Generator	N/A	R18-2-719 40 CFR Part 63 Subpart ZZZZ	These standards apply to the stationary diesel-fired non-emergency engine at the facility because it was manufactured before April 1, 2006.
Fugitive dust sources	Water and other reasonable precautions.	Article 6 of the Arizona Administrative Code(A.A.C)	These standards are applicable to all fugitive dust sources.
Asbestos Handling	N/A	40 CFR Part 61.154 (Subpart M)	Standards for disposal of asbestos-containing waste
Mobile sources	Water Sprays/Water Truck for dust control	Article 8 of the AAC	Opacity requirements for smoke and dust for mobile sources (construction equipment, etc.).
Abrasive Blasting	Wet blasting; Dust collecting equipment; Other approved methods	A.A.C.R-18-2-702.B 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.B A.A.C. R-18-2-727.	This standard is applicable to any spray painting operation.
Demolition-Renovation Operations	N/A	A.A.C. R18-2, Article 11	This standard is applicable to any asbestos related demolition or renovation operations that occur on-site

VI. MONITORING AND RECORDKEEPING REQUIREMENTS

A. NMOC Emissions

The Permittee is required to monitor and estimate NMOC emissions on an annual basis, per 40 CFR Part 60, Subpart WWW, to determine if and when the 50 Mg/yr threshold will be reached. When the threshold is reached, then a collection and control system is required, and additional monitoring requirements are triggered. It is anticipated that Mohave Valley Landfill will not reach the 50 Mg/yr threshold during the next five year permitting period.

B. Internal Combustion Engines

The permit requires quarterly surveys of visual emissions from the internal combustion engine to be performed by a certified Method 9 observer if the engine is in operation. The Permittee is required to record the date, time, results of the survey, and the name of

the observer. If the opacity of the emissions observed appears to exceed the standard, then the observer is required to conduct a certified EPA Reference Method 9 observation and record the results. In the event that opacity exceeds the limit, the Permittee will take and record corrective action to bring the opacity below the standard, record the results of the observation, and report it as an excess emission.

After October 19, 2013, the permit requires the generator to be operated and maintained according to the manufacturer's emission-related written instructions. If such instructions are not available, the Permittee is required to develop and follow an operation and maintenance plan which shall to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

C. Fugitive Dust

The Permittee is required to follow an ADEQ approved visible observation plan for monitoring sources of fugitive dust.

The Permittee is required to maintain records of the date on which any of the activities listed in Condition VI.A of Attachment "B" of the permit were performed along with the control measure that was adopted.

The permit requires bi-weekly surveys of fugitive emissions to be performed by a certified Method 9 observer. The Permittee is required to record the fugitive emissions being observed, date, time and the results of all observations made, as well as the name of the observer who conducted the test. If the opacity of the emissions observed appears to exceed the standard, then the observer is required to conduct a certified EPA Reference Method 9 observation and record the results. In the event that opacity exceeds the limit, the Permittee will take and record corrective action to bring the opacity below the standard, record the results of the observation, and report it as an excess emission.

D. Mobile Sources

The Permittee is required to keep records of all emission related maintenance performed on the mobile sources.

E. Periodic Activities

1. The Permittee is required to record the date, duration and pollution control measures of any abrasive blasting project.

2. The Permittee is required to record the date, duration, and quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.

3. The Permittee is required to maintain records of all asbestos related demolition or renovation projects. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

VII. COMPLIANCE HISTORY

Notice of Violations

An NOV was issued on December 17, 2010 for deficiencies in Water Truck Logs and a failure to apply water on haul roads during landfill operations; Resolved: March 11, 2011.

VIII. PREVIOUS PERMIT CONDITIONS

The Renewal Permit No. 36285 was issued on March 23, 2006, for the continued operation of this facility. Table 3 below illustrates if a section in the prior Permit No. 36285 was revised, kept, or deleted.

Table 3: Permit No. 36285

Section No.	Determination			Comments
	Revised	Keep	Delete	
Summary	X			Shorten and Streamline with focused verbiage concerning air permit only
Att. A.		X		General Provisions - Revised to represent most recent permitting language.
Att. B. I	X			Facility Wide Requirements - Modified with some additions referencing other sections of the permit.
Att. B. II		X		Landfill Requirements – Minor Nomenclature changes
Att. B. III		X		Collection and Control System - Minor Nomenclature changes
Att. B. IV		X		Asbestos Requirements - Minor Nomenclature changes
Att. B. V	X			Internal Combustion Engine Requirements – Added New language to cover NESHAP; Subpart ZZZZ requirements.
Att. B. VI	X			Fugitive Dust Sources – Added Standard Language with reformatting
Att. B. VII		X		Mobile Sources – No Changes
Att. B. VIII		X		Other Periodic Activities – Added this entire Section
Att. C.	X			Equipment List – Remove all Mobile Equipment & add information for stationary Non-Emergency diesel engine
Att D.			X	Reporting Form Removed

IX. LIST OF ABBREVIATIONS

A.A.C ..... Arizona Administrative Code
ADEQ ..... Arizona Department of Environmental Quality
CFR ..... Code of Federal Regulations
CH_4 ..... Methane
CO ..... Carbon Monoxide
CO_2 ..... Carbon Dioxide
EPA ..... Environmental Protection Agency
GHG ..... Greenhouse Gas Emissions
HAP ..... Hazardous Air Pollutants
LFG ..... Landfill Gas
MG/yr ..... Megagram per Year
MSDS ..... Material Safety Data Sheet
MSW ..... Municipal Solid Waste (Landfill)
NESHAP ..... National Emission Standards for Hazardous Air Pollutants
NMOC ..... Non Methane Organic Compounds
NO_x ..... Nitrogen Oxides
NOV ..... Notice of Violation
NSPS ..... New Source Performance Standard
$PM_{2.5}$ ..... Particulate Matter Smaller than 2.5 Microns
PM_{10} ..... Particulate Matter Smaller than 10 Microns
PM ..... Particulate Matter
PTE ..... Potential to Emit
SO_2 ..... Sulfur Dioxide
VEOP ..... Visible Emissions Observation Plan
VOC ..... Volatile Organic Compounds