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MUNICIPAL SOLID WASTE LANDFILL MASTER FACILITY PLAN APPROVAL No 02615900.04; (LTF 92549, Place ID 1166)

1.0 FACILITY INFORMATION AND APPROVAL SIGNATURE

In accordance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 4:

Facility Name: Lake Havasu City Landfill
3251 E. Chenoweth Drive
Lake Havasu City, Arizona 86403

Landowners: Bureau of Land Management Lake Havasu City
2610 Sweetwater Avenue Public Works Department
Lake Havasu City, Arizona 86406 1845 McCulloch Boulevard, Suite A13
Lake Havasu City, Arizona 86403

Operator: Allied Waste Transportation, Inc.
4811 W Lower Buckeye Road
Phoenix, Arizona 85043

is authorized to operate with all approvals granted, and not previously amended or revoked, since the original solid waste facility plan approval under 40 CFR Part 258 on June 15, 1999, and specifically described in the Master Facility Plan Approval (MFPA) that follows. Lake Havasu City Landfill is located in Mohave County, approximately 5 miles north of Lake Havasu City, Arizona, and 2.5 miles east of State Route 95 at 3251 E. Chenoweth Drive, Lake Havasu, Arizona, and lies within Sections 13, 14, 23 and 24, in Township 14 North, Range 20 West, of the Gila and Salt River Base and Meridian.

Latitude: 34° 32' 57" North
Longitude: 114° 19' 04" West

This MFPA is effective on the date of the Waste Programs Division Director's signature below, provided that the facility is operated and maintained in accordance with all conditions described in this approval document.

Approved on behalf of the Arizona Department of Environmental Quality:

Laura L. Malone, Director
Waste Programs Division

Signed this _____ day of _____, 2022

1.1 Approval

This Municipal Solid Waste Landfill (MSWLF) Master Facility Plan Approval (MFPA) for Lake Havasu City Landfill (LHCL) incorporates a Type IV change in accordance with the Solid Waste Facility Plan, Lake Havasu City Landfill, Lake Havasu City, dated December 21 2021, revised April 25, 2022, prepared by Civil & Environmental Consultants, Inc. that allows Allied Waste Transportation, Inc., (AW) to:

- a. vertically expand the LHCL to a maximum final elevation of 1,279.4 feet and thereby increase the landfill capacity by 3,692,037 cubic yards, and
- b. Incorporate a groundwater monitoring system to monitor the groundwater at the LHCL according to Groundwater Monitoring Plan dated September 17, 2021, prepared by Brown and Caldwell.

1.2 Type III Change – (approved on May 28, 2013)

This Municipal Solid Waste Landfill MFPA for LHCL incorporated a Type III change in accordance with the Modification Lake Havasu City Landfill, dated March 2013, prepared by Geologic Associates that allows AW to:

- c. Revise the landfill disposal footprint to include approximately 4.9 acres in the northwest corner of the site that were not previously acknowledged in the original SWFP, and remove approximately 4.9 acres from the permitted landfill disposal footprint located at the southwestern corner of the site that are not intended for waste disposal.
- d. Revise the final fill grades to transition from 5% to 4% at approximately the 1160-foot contour.
- e. Utilize soils with construction debris (SCD) as alternate daily cover (ADC).

This MFPA allows AW to operate the existing Subtitle D regulated MSWLF designated as LHCL at the location described in Part 1.0 of this approval. The permitted waste footprint occupies approximately 97 acres of the entire 225-acre LHCL facility, with a disposal capacity of 6,713,000 CY. The original permitted footprint occupied approximately 97 acres of an entire 180-acre LHCL facility as set forth in the *Solid Waste Facility Plan, Lake Havasu City Landfill (SWFP)*, dated September 12, 1997. The LHCL facility currently includes four (4) parcels. Parcel #120-01-014, that encompasses 180 acres of the LHCL facility, is leased by Lake Havasu City from the Bureau of Land Management. The three (3) remaining parcels that encompass the LHCL facility storm water control structures, and total approximately 45 acres, are owned by Lake Havasu City. They include Parcel #'s 120-01-039, 120-01-041, and 120-01-043 located at the eastern, southeastern, and southwestern boundaries of the 180-acre LHCL facility, respectively.

2.0 STATUTORY PROVISIONS

AW shall not operate LHCL in a manner inconsistent with the *SWFP* and this approval pursuant to A.R.S. § 49-791(A)(5).

2.1 General Provisions

- a. This MFPA, issued pursuant to A.R.S. § 49-762, § 762.03, § 762.04, § 762.06 and § 857, grants permission to operate a municipal solid waste landfill as defined in A.R.S. § 49-701(20) at the location referenced in Part 1.0. Federal regulations governing the design and operation of landfills, codified in 40 CFR § 258, are also applicable to this approval pursuant to A.R.S. § 49-761(B). This approval is granted under the conditions listed herein to protect human health and the environment.
- b. This MFPA does not relieve AW of its responsibility to comply with federal, state, county or local requirements or ordinances adopted under A.R.S. § 49-704 and shall not be construed as permission to create a public health hazard, environmental nuisance or cause contamination to the environment.
- c. Specific words related to landfill design, construction and operations used throughout this MFPA have the same meaning as defined in 40 CFR § 258, Subpart A, Arizona Administrative Code (A.A.C.) R18-13-701, A.A.C. R18-13-1301, A.A.C. R18-13-1401, or A.R.S. §§ 49-701 and 701.01 unless otherwise defined.
- d. Design, construction, operation, and monitoring conditions listed in this MFPA have the same meaning as referenced in either 40 CFR § 258; A.A.C. Title 18, Chapter 13; or A.R.S. Title 49, unless otherwise specified.

2.2 General Limitations

This MFPA is applied to the landfill elements and facility structures as set forth in the *SWFP*, the existing landfill elements and structures as of the date of this approval, and components that have already received ADEQ approval prior to this MFPA. Any additions to the approved facility structures and any modification to the approved facility operations plan, closure and post-closure care, corrective action and monitoring plans shall require prior approval by ADEQ pursuant to A.R.S. § 49-762.06.

- a. LHCL is not permitted to accept the following:
 1. Hazardous waste as defined in 40 CFR Part 261 and A.R.S. § 49-921 except for conditionally exempt small quantity generator hazardous waste as set forth in 40 CFR § 261.5 and A.R.S. § 49-922(E), and household hazardous waste as described in 40 CFR § 261.4(b)(1).
 2. Waste that contains radioactive materials subject to the Atomic Energy Act of 1954 (42 United States Code §§ 2011 through 2297, 68 Stat. 919) or Title 30, Chapter 4, as defined in A.R.S. § 49-701.01(B)(2).
 3. Biohazardous medical waste as defined in A.A.C. R18-13-1401(5) and radioactive medical wastes, except for household generated biohazardous medical waste as set forth in A.A.C. R18-13-1403(A)(4).
 4. Bulk or non-containerized liquid waste as defined in 40 CFR § 258.28 (c)(1).
 5. Polychlorinated biphenyl (PCB) waste as defined in 40 CFR § 761, except as allowed under 40 CFR § 761.61 (PCB remediation waste), 40 CFR § 761.62 (PCB bulk product waste) and 40 CFR § 761.63 (PCB household waste).

6. Automobile and other lead-acid batteries.
7. Used oil as defined in 40 CFR Part 279.
8. Waste Tires (shredded or unshredded).
9. Septage.
10. Any other waste prohibited by federal or State of Arizona statute or regulation from disposal at any municipal solid waste landfill.

2.3 Notifications

- a. AW shall submit a notification of any Type II, III, or IV change to the approved solid waste facility plan in accordance with A.R.S. § 49-762.06. AW shall not implement any Type III or IV change prior to ADEQ approval.
- b. The following notifications are required if there is a methane gas exceedance:
 1. Within twenty-four (24) hours or one (1) business day of any methane gas exceedance where the gas concentration in facility structures exceeds 25% of the lower explosive limit (LEL) or gas levels at the landfill boundary exceed the LEL, AW shall notify ADEQ.
 2. Within seven (7) calendar days of detection, AW shall place in the operating record a description of the steps taken to protect human health. A copy of this description shall be sent to the ADEQ Solid Waste Plan Review Unit.
 3. Within sixty (60) calendar days of detection of any methane gas exceedance, a remediation plan shall be implemented and a copy of the plan placed in the operating record. A copy of the plan, accompanied by a notification that the plan has been implemented, shall be sent to ADEQ in accordance with 40 CFR § 258.23.
- c. AW shall submit a notification to ADEQ if a regulated hazardous waste as defined in 40 CFR § 261.3 or prohibited PCB waste is discovered at the facility in accordance with 40 CFR § 258.20(a)(4).

2.4 Precautionary Provisions

- a. ADEQ reserves the right to issue administrative orders pursuant to A.R.S. §§ 49-781 and 862 or to seek other legal remedies as provided by law if the LHCL creates a public health hazard, safety hazard, or environmental nuisance, if violation of State law occurs, or if the LHCL is in violation of the MFPA.
- b. ADEQ reserves the right to conduct inspections of LHCL pursuant to A.A.C. R18-13-304, A.R.S. §§ 49-763, 860 and 865. During the inspection, the ADEQ inspector may take photographs of activities, take samples and/or conduct other recognized monitoring activities.

- c. Pursuant to A.R.S. § 49-782(A), ADEQ reserves the right to suspend, amend, withdraw, condition, or revoke this MFPA if it is determined that the facility is in violation of A.R.S. Title 49, Chapter 4, or any rule adopted thereunder.

2.5 Financial Assurance

- a. LHC shall continue to meet closure and post-closure care financial assurance requirements for the LHCL pursuant to A.R.S. § 49-770 and 40 CFR Part 258, Subpart G until released by notification from ADEQ.
- b. The cost estimate for landfill closure and post-closure care shall be updated annually:
 1. By a new cost estimate sealed by an Arizona registered professional engineer; or
 2. If no changes have occurred since the preceding year's submittal, by use of an approved or demonstrated inflation factor that modifies the existing cost estimates.
- c. Landfill cost estimates for closure and post-closure care shall be updated whenever a Type III or Type IV change to the solid waste facility will result in an increase in either closure or post-closure costs.

3.0 OPERATIONAL APPROVALS AND CONDITIONS

3.1 Approval of the Facility Plan

This MFPA, issued pursuant to A.R.S. §§ 49-762, 762.03, 762.04, 762.06 and 857, grants permission to operate LHCL as set forth in the *SWFP*.

- a. The following wastes may be accepted at LHCL:
 1. Municipal solid waste as defined in 40 CFR § 258.2 which includes household waste [A.R.S. § 49-701(14)], household hazardous waste [A.R.S. § 49-401(13)] commercial solid waste, non-hazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste.
 2. Construction debris and demolition debris as defined in A.R.S. §§ 49-701(5) and 49-701(7), respectively.
 3. Inert materials as defined in A.R.S. § 49-701(15).
 4. Landscape rubble as defined in A.R.S. § 49-701(17).
 5. Animal carcasses, except those that meet the definition of biohazardous medical waste pursuant to A.A.C. R18-13-1401(5)(e). All animal carcasses shall be covered immediately.
 6. Vegetative (green) waste as defined in A.R.S. § 49-701(36).
 7. Non-hazardous solid wastes which have not been exempted from the definition of solid waste pursuant to A.R.S. § 49-701.01 and 40 CFR § 261.

8. Household-generated untreated biohazardous medical waste when commingled with regular household wastes.
9. Industrial and municipal wastewater treatment plant sludge that passes the EPA Method 9095 Paint Filter Liquids Test.
10. Regulated and non-friable asbestos-containing material (ACM):
 - i. The acceptance and disposal of regulated asbestos-containing materials (RACM) shall be in accordance with 40 CFR § 61.154.
 - ii. Non-friable ACM shall be accepted and disposed of as construction and demolition debris.
 - iii. In the event non-friable ACM becomes RACM, the handling and disposal shall be conducted in accordance with 40 CFR § 61.154.
11. Special wastes as defined in A.R.S. § 49-852 if the following conditions are met:
 - i. Special waste receiving facility manifesting requirements as set forth in A.A.C. R18-13-1304.
 - ii. Recordkeeping requirements as set forth in A.A.C. R18-13-1305.
 - iii. Reporting of special waste receipt as set forth in A.R.S. § 49-860(B).
 - iv. Payment of special waste fees as set forth in A.R.S. §§ 49-855(C)(2) and 49-863.
 - v. Procedures, as set forth in 40 CFR § 258.20, for detecting and preventing the disposal of regulated hazardous waste as defined in 40 CFR § 261 and unacceptable PCB wastes as defined in 40 CFR § 761.
12. Non-hazardous, non-infectious, treated, biomedical waste.
13. Household and commercial appliances. Appliances with cooling elements, such as motor vehicle air conditioners, refrigerators, freezers, window air conditioning units, water coolers, vending machines, ice makers, and dehumidifiers must be handled and disposed in accordance with EPA requirements as specified in 40 CFR § 82, Subparts E and F.

3.2 Approved Alternative Daily Cover (ADC)

This MFPA grants permission to apply alternative daily covers (ADC) at LHCL. The following conditions shall govern all ADC use at LHCL:

- a. Should the application of any ADC become impracticable or contribute to conditions hazardous to public health, safety, or the environment, then AW shall terminate such use and revert to using compacted earthen material or other approved ADC.

- b. AW shall place compacted earthen material over the entire working face at the end of any operating day preceding a period of time when the facility is closed for more than twenty-four (24) hours unless otherwise specified.
- c. All waste-derived materials used as ADC shall be subject to solid waste landfill disposal fees.
- d. A minimum of a one (1) day stockpile of earthen cover material and required equipment shall be available to ensure a corrective response to any violation of performance of any ADC.
- e. The following are approved landfill ADC:
 1. Tarps (approved 06/15/1999, and revised in the current MFPA):
 - i. Tarps may only be used for a 24-hour period before additional waste or other approved cover materials must be applied.
 - ii. Tarps shall not be used during adverse weather.
 - iii. Frayed, torn, ripped or otherwise ineffective tarps shall not be used.
 2. Chopped or shredded vegetative waste as defined in A.R.S. § 49-701(36) (approved 09/20/2004):
 - i. Chopped/shredded vegetative waste may be applied to the inclined slope of the working face and on the flat portions of the working face on days when the full thickness of the waste lift is not achieved, and shall be covered within 48 hours with additional waste and/or six (6) inches of soil cover.
 - ii. Chopped/shredded vegetative waste materials shall be of a size that can pass through a five (5) inch equivalent debris screen, and shall be compacted to a minimum thickness of six (6) inches.
 - iii. Vegetative waste that is exposed for more than seven (7) days and less than 21 days shall be wetted with water as necessary to ensure that the material is maintained at a minimum moisture content of fifteen (15) percent.
 - iv. Chopped/shredded vegetative waste shall not be exposed for more than 21 days.
 3. Soils with Construction Debris (approved in current MFPA);
 - i. Soils with construction debris (SCD) shall consist of the following:
 - a. Soil content of 40 percent (%) to 100%.
 - b. Content of 0% to 30% inert materials, as defined by A.R.S. § 49-701(15). Material dimensions shall be limited to what passes through a five (5)-inch equivalent debris screen.

- c. Construction debris content of 0% to 30%, consisting of wood, glass, metal, piping, sheet rock, roofing materials, etc. Material dimensions shall be limited to what passes through a five (5)-inch equivalent debris screen.
- ii. Chemical constituents in SCD shall not exceed non-residential soil remediation levels (SRLs) established in A.A.C. Title 18, Chapter 7, Appendix A.
- iii. All proposed SCD shall be analyzed prior to acceptance at LHCL. If AW proposes to use a specific SCD material routinely, laboratory analysis shall be conducted on representative SCD on a quarterly basis. Analysis shall include TCLP metals and any other constituents of concern using the appropriate EPA-approved testing method. AW shall not accept any SCD at LHCL that exceeds applicable TCLP thresholds or any other regulatory limit.
- iv. AW shall screen incoming SCD for asbestos. If asbestos is detected, the material shall not be used for ADC.
- v. SCD used as ADC must pass the paint filter free liquids test, Method 9095, EPA Publication SW-846.
- vi. SCD used as ADC shall possess the characteristics required to achieve the performance objectives of 40 CFR § 258.2: control of disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment.
- vii. SCD shall be stockpiled in the vicinity of the working face over the lined portion of the landfill.
- viii. Plastic or paper that may result in windblown litter shall be removed by landfill personnel prior to the end of the working day.

3.3 Operations

- a. AW shall implement a special waste control program as in accordance with A.A.C. R18-13-1301, R18-13-1304 and R18-13-1305.
- b. AW shall receive the following documents from the generator of any waste materials to be accepted for disposal at the LHCL that are not listed in Section 3.1(a) of this MFPA (out-of-state special wastes):
 1. A complete list of waste identification information, including waste description, physical and chemical characteristics, and any applicable waste code. The generator shall verify that no EPA hazardous waste codes apply to the waste, and certify that the waste is non-hazardous.
 2. All laboratory analytical data, a copy of the material safety data sheet (MSDS), if applicable, and any other pertinent information about the waste.

3. Any other documents demonstrating that the waste is non-hazardous.
- c. Use of water for dust suppression must be limited to the minimum quantity necessary for dust control. Water shall not be allowed to pond within the roadways or any other areas of the lined footprint that use water to control dust.

3.4 Operational Provisions

Pursuant to A.R.S. Title 49, Chapter 4, Article 4, ADEQ requires that AW must:

- a. Operate LHCL in a manner that protects public health and safety and the environment and prevents and abates environmental nuisances.
- b. Control wind dispersion and other surface dispersions of the landfill materials so that they do not create a public nuisance or pose an imminent and substantial endangerment to public health or the environment.
- c. Visible materials that have dispersed beyond the boundaries of the current work face shall be collected on a regular basis.
- d. Cover disposed solid waste with a minimum of six (6) inches of earthen material or approved ADC at the end of each operating day or as necessary to control vectors, fires, odors, blowing litter, and scavenging.
- e. Prevent or control on-site populations of disease vectors using techniques appropriate for the protection of human health and the environment.
- f. Ensure that the concentration of methane gas generated by the facility does not exceed 25% of the LEL for methane in facility structures or exceed the LEL at the property boundary.
- g. Ensure that the landfill units do not violate any applicable requirements developed under a State Implementation Plan approved by the EPA Administrator pursuant to section 110 of the Clean Air Act, as amended.
- h. Control public access and prevent unauthorized vehicular traffic and illegal dumping of wastes by using artificial barriers, natural barriers, or both, as appropriate.
- i. Ensure that there is no discharge of pollutants into the waters of the United States from the landfill.
- j. Ensure that bulk or non-containerized liquids are not placed in the landfill except liquids that are approved for disposal over the lined areas of the LHCL including liquids commingled with household wastes; conditionally exempt small quantity generator wastes, leachate, condensate and potable water when used as dust control.
- k. Record and retain in a daily operating record for the following items:
 1. Any location restriction demonstrations required under 40 CFR § 258, Subpart B.

2. Random inspection, training, and notification documentation required by 40 CFR § 258.20.
 3. Gas monitoring results and any remediation plans required by 40 CFR § 258.23.
 4. MSWLF unit design documentation for placement of leachate and/or gas condensate in a landfill cell as required by 40 CFR § 258.28(a)(2).
 5. Groundwater monitoring/corrective action sampling, analytical data, demonstrations, certifications, findings, etc. as required under 40 CFR § 258, Subpart E.
 6. Closure and post-closure care plans and monitoring, testing and/or analytical data as required by 40 CFR §§ 258.60 and 258.61.
 7. Financial assurance documentation required by 40 CFR § 258, Subpart G.
- k. Handle regulated asbestos and asbestos-containing material by placing this material in a separate portion of the landfill, or at the toe of the active working face, and handling it in accordance with NESHAP regulations (40 CFR § 61) and ADEQ Air Quality guidelines.

3.5 Excluding the Receipt of Hazardous Waste

Pursuant to 40 CFR § 258.20, AW shall continue its program at the facility for detecting and preventing the disposal of regulated hazardous waste as defined in 40 CFR § 261 and unacceptable PCB wastes as defined in 40 CFR § 761. This program must include at minimum:

- a. Random inspections of incoming loads to ensure that loads do not contain unapproved materials as listed in Section 2.2(a) of this MFPA.
- b. Records of any inspections.
- c. Training of facility personnel to recognize regulated hazardous waste and unacceptable PCB wastes.
- d. Notification of the ADEQ Solid Waste Inspections and Compliance Unit if a regulated hazardous waste or unacceptable PCB waste is discovered at the facility.
- e. Reviewing all industrial and commercial process waste streams prior to acceptance (pre-screening) to ensure proper management and exclude the acceptance of hazardous wastes or unacceptable PCBs.

3.6 Stormwater Management

- a. The proper control of surface water drainage shall be implemented to prevent stormwater from running onto the site. Any soil erosion or ponding of stormwater in the landfill will be corrected to ensure proper coverage of waste and stormwater management in the landfill area pursuant to 40 CFR § 258.26.

- b. The drainage diversion system must be capable of diverting surface water run-on and run-off resulting from a rainfall event equal to a 24-hour, 25-year storm away from the active landfill areas in accordance with 40 CFR § 258.26.
- c. LHCL units shall not cause the discharge of pollutants into waters of the United States.
- d. All surface water collection systems shall be constructed to resist the maximum horizontal acceleration in lithified earth at this site.

3.7 Groundwater Monitoring

- a. In accordance with 40 CFR § 258.51(a), AW shall operate a groundwater monitoring system at LHCL that consists of a sufficient number of wells, installed at appropriate locations, and depths, to yield groundwater samples from the uppermost aquifer.
- b. Groundwater monitoring shall be conducted at a quarterly frequency for the first two (2) years and then semiannually over the life of the landfill and during the post-closure care period in accordance with 40 CFR §§ 258.50 through 258.55. The monitoring network includes three (3) wells: MW-1 (up-gradient, eastern side), MW-2 (down-gradient point of compliance well, west of landfill footprint), and Production well (down/side-gradient, south of landfill footprint). The direction of groundwater flow across the facility site has been estimated as generally to the west-southwest. The depth to groundwater is approximately 600 feet.
- c. Monitoring equipment required by this MFPA shall be installed and maintained so that representative groundwater samples can be collected. Should a new groundwater well(s) be determined to be necessary, a well installation plan shall be submitted within sixty (60) days to the ADEQ Solid Waste Unit for approval as a Type III change pursuant to A.R.S. § 49-762.06(A)(3). Upon installation of the well, the construction details, including the latitude and longitude, shall also be submitted to the ADEQ Solid Waste Unit.
- d. Pursuant to 40 CFR § 258.53(d), groundwater elevations must be measured in each well immediately prior to purging, each time groundwater is sampled. LHCL must determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells that monitor the same waste management area must be measured within 24 hours to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction.
- e. In accordance with 40 CFR § 258.54(c), if LHCL determines, pursuant to 40 CFR § 258.53(g), that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I to 40 CFR Part 258 or in the alternative list approved in accordance with 40 CFR § 258.54 (a)(2), at any monitoring well at the boundary specified under 40 CFR § 258.51(a)(2), LHCL:
 - 1. Must, within fourteen (14) days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify ADEQ;

2. Must establish an assessment monitoring program meeting requirement of 40 CFR § 258.55 within ninety (90) days except as provided in 40 CFR § 258.54(c) (3).

3.8 Landfill Gas Monitoring

- a. AW shall continue its routine methane monitoring program to ensure that the standards of 40 CFR § 258.23(a) are met. Currently, seven (7) gas monitoring probes, GP1 through GP7, are located along the perimeter of the LHCL at spacing's of approximately 1000 feet. Such routine methane monitoring shall be designed to include:
 1. Facility structures (excluding gas control or recovery systems), and
 2. Facility property boundaries.
- b. Routine methane monitoring shall be conducted at least quarterly based on the requirements of 40 CFR § 258.23(b)(2) and may be changed by the Director after a reported landfill gas exceedance.
- c. Pursuant to 40 CFR § 258.23, if a methane gas exceedance occurs at facility structures or at the facility boundaries, AW shall immediately take all necessary steps, as specified in Section 2.3(b) in this MFPA, to ensure protection of human health and the environment.
- d. AW shall operate and maintain gas monitoring equipment after landfill closure as required in 40 CFR § 258.23 and 40 CFR § 258, Subpart F.

3.9 New Construction

- a. All future construction shall follow ADEQ approved designs, drawings and specifications.
- b. A quality assurance engineer (QAE) shall be responsible for all construction quality assurance (CQA) and construction quality control (CQC) procedures for any construction. The QAE shall be an Arizona registered professional engineer. The QAE shall be responsible for reporting, inspecting, collection and interpretation of field and laboratory results. The QAE shall certify that all construction, including excavation, soil segregation, subgrade preparation, liners and leachate recovery and collection system installation, operation layer construction, and any other construction or installation work, is performed according to the CQA program referenced in the project quality assurance manual, the manufacturer's specifications, engineering testing standards and/or the federal, state, or local regulations that may apply to the work.
- c. AW shall submit the CQA/CQC report, as-built drawings and certifications of completion to the ADEQ Solid Waste Plan Review Unit prior to the beginning of new cell fill operations. The CQA/CQC report may be delayed for up to sixty (60) days by the QAE's temporary certification letter. If the CQA/CQC report is not submitted to ADEQ within sixty (60) days of the temporary certification letter, ADEQ may rescind the approval.
- d. Pursuant to A.R.S. § 49-762.06, AW shall submit a notification to ADEQ of any Type II, III, or IV change to the approved *SWFP*. Type III and IV changes require prior approval from ADEQ before implementation.

- e. The configuration of the final landfill slopes and elevations shall be consistent with the site zoning and the plans that are part of this approval.

3.10 Safety Issues

- a. Access: AW must limit and control public access, unauthorized vehicular traffic, and illegal dumping of wastes by using natural barriers, artificial barriers, or both, as appropriate, to protect human health and the environment pursuant to 40 CFR § 258.25.
- b. Scavenging: No material can be removed or scavenged from the working face except to remove unauthorized waste materials identified after disposal.
- c. Working face: The size of the working face must be limited to the smallest possible area to provide easy manageability, ensure vehicle and public safety and minimize public health nuisances.
- d. Landfill gas: AW must ensure, in accordance with 40 CFR § 258.23 that the concentration of methane gas generated by the facility does not exceed:
 - 1. 25% of the LEL for methane in facility structures, and
 - 2. The LEL for methane at the property boundary.

3.11 Recordkeeping

- a. Landfill gas must be reported as in accordance with 40 CFR § 258.23.
- b. AW shall comply with all other recordkeeping requirements pursuant to 40 CFR § 258.29 for at least three (3) years from the date of occurrence. These records shall be available for ADEQ personnel upon request.
- c. AW shall submit a summary of all Type II change modifications to ADEQ annually, by March 31, for the preceding calendar year.
- d. AW shall maintain any Type I change records in the facility file for a minimum of three (3) years from the date of occurrence in accordance with A.R.S. § 49-762.06(A)(1). These records shall be available to ADEQ personnel upon request. Additional operational records such as landfill fire, visual settlement or subsidence, explosions, discharge of hazardous or other wastes not permitted at the landfill facility, flood damage or erosion shall be placed in a file that is retained on site.

3.12 Annual Registration and Disposal Fees

- a. AW shall comply with A.R.S. § 49-747 and A.A.C. R18-13-2101 through 2103 and shall pay an annual registration fee for LHCL to ADEQ.
- b. AW shall comply with A.R.S. § 49-836 and pay solid waste landfill disposal fees to ADEQ based on the amount of the waste landfilled at LHCL.

- c. AW shall comply with A.R.S. §§ 49-855(C)(2) and 49-863, and pay a fee to ADEQ for each ton of special waste received at LHCL.

4.0 CLOSURE AND POST-CLOSURE PROVISIONS

LHC must update the approved closure plan prior to closure if conditions have changed from the originally approved closure plan. The updated plan requires ADEQ approval if the approved landfill capacity, closure configuration, or storm water management systems are modified.

4.1 Final Closure

The following steps shall occur during the landfill closure process:

- a. In accordance with 40 CFR § 258.60(e), LHC must notify ADEQ of the intent to close the landfill.
- b. In accordance with 40 CFR § 258.60(g), closure activities for LHCL must:
 - 1. Begin no later than thirty (30) days after the date on which LHCL receives its known last receipt of waste or if the landfill has remaining capacity and there is a reasonable likelihood that LHCL will receive additional waste, no later than one (1) year after the most recent receipt of waste, and
 - 2. Follow the approved closure plan that is part of the *SWFP*.
- c. Closure activities must be completed within one hundred eighty (180) days following beginning of closure as specified in paragraph (b) above.
- d. Following closure construction, LHC shall notify ADEQ through a certification document, signed and sealed by an independent Arizona registered professional engineer, that the closure has been completed in accordance with the approved LHCL closure plan and this MFPA.
- e. Upon approval of the closure certification report by ADEQ, a letter will be issued notifying LHC that LHCL is officially closed and released from future annual registration fees and operational financial assurance.

4.2 Final Cover Construction

The approved alternative final cover shall be constructed as follows:

- a. The landfill final cover shall consist of a 36-inch monolithic soil layer with a permeability of 1×10^{-5} cm/sec or less, compacted at optimum density and optimal moisture content with a minimum six-inch daily/intermediate soil cover layer beneath the monolithic layer.
- b. The side slopes of the final cover shall be at a maximum of 3:1. The top deck shall be at a 4-5 % grade.
- c. Any changes to the approved final cover system shall be approved in writing by ADEQ prior to implementation of the changes.

4.3 Post-Closure Care

Post-closure care shall be provided at LHCL for thirty (30) years from the date of final closure acknowledgment by ADEQ under 40 CFR § 258.61(a), except as provided under 40 CFR § 258.61(b), and shall consist of:

- a. Maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of differential settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover.
- b. Maintaining and operating the landfill gas monitoring system in accordance with the requirements of 40 CFR § 258.23 and 40 CFR § 258, Subpart F. The Director may waive this requirement if AW demonstrates that landfill gas production no longer poses a threat to human health and the environment.
- c. Maintaining in good repair all stormwater control structures, internal roads, signs, fences, and any other structures required for monitoring activities and post-closure care of the closed landfill facility.

4.4 Post-Closure Financial Assurance

Yearly financial assurance demonstrations for the thirty (30) years of post-closure care, as required by Section 2.5 of this MFPA, will continue until LHC is notified by ADEQ that it is released from this requirement.

5.0 APPROVAL HISTORY

07/02/1996	Approval of Methane Monitoring Plan
09/29/1998	APP No.100903, Approval to Close and Decommission one (1) Industrial Waste and two (2) Septage Impoundments
10/07/1998	Approval to Suspend Groundwater Monitoring
01/25/1999	Section 404 Jurisdictional Delineation issued, U.S. Army Corps of Engineers
06/15/1999	SWFP Approval No. 02615900.00, Approval to Operate
06/15/1999	Approval to Utilize Nicolon woven polypropylene Tarps for Alternate Daily Cover, included in Technical Review dated 10/07/1998 for SWFP No. 02615900.00
08/03/1999	Coverage under Section 404 NWP 26 Permit No. 974-0609-MB was granted for the Construction of On-Site and Off-Site Drainage Control and Management Facilities per LHCL Status Report from EMCON dated 08/24/1999
05/29/2001	Section 404 NWP 26 Permit No. 974-0609-MB Amended authorizing the change in location and the reduction in volume of the west side retention basin, and replacing the east detention basin with a channel designed for the 100-year event
08/10/2001	SWFP Approval No. 02615900.01, Approval of Off-Site Run-On and On-Site Run-Off Control and Management Structures
09/20/2004	Type III Change Approval to Utilize Processed Green Waste for Alternate Daily Cover
05/28/2013	MFPA No. 02615900.03: Type III Change Approval, incorporating revisions to the disposal footprint and final fill grades, and approving SCD as ADC

07/XX/2022 MFPA No. 02615900.04: Type IV Change Approval, incorporating vertical expansion, and a groundwater monitoring system.

6.0 REFERENCES

- 06/24/1996 *Submittal of Methane Monitoring (Gas Probe Installation) Plan, Minimum Daily Cover Requirements, Nearest Well Documentation, and Run-on/Run-off Control Description & Site Map, EMCON*
- 07/02/1996 *Corrective Action Notice: Cover all disposed Solid Waste with minimum of 6-inches of Earthen Material, Methane Monitoring Plan Approved, Groundwater Monitoring Required, and Run-on/Run-off Controls Required, ADEQ*
- 03/18/1997 *Request to use Nicolon woven polypropylene Tarps as Alternate Daily Cover (ADC), Allied Waste*
- 04/02/1997 *Letter responding to ADC request indicating must be submitted with SWFP Application, ADEQ*
- 06/09/1997 *Letter by City of Lake Havasu City indicating an agreement with Allied Waste Industries, Inc. to operate Lake Havasu City Landfill*
- 07/10/1997 *Installation of Gas Probes completed, Allied Waste*
- 08/11/1997 *Lake Havasu City Landfill Status Report, Allied Waste*
- 08/15/1997 *Lake Havasu City Landfill Status Report, Allied Waste*
- 09/12/1997 *Application of Solid Waste Facility Plan (SWFP) Approval to operate Lake Havasu City Landfill, EMCON*
- 10/06/1997 *Application for Purchase of State of Arizona Trust Land, City of Lake Havasu City*
- 10/13/1997 *Lake Havasu City Landfill Status Report, Allied Waste*
- 10/16/1997 *1st Administrative Review of Application for SWFP Approval, ADEQ*
- 11/13/1997 *Response Letter to 1st Administrative Review for SWFP Approval, EMCON*
- 11/26/1997 *2nd Administrative Review of Application for SWFP Approval, ADEQ*
- 12/16/1997 *Lake Havasu City Landfill Status Report, Allied Waste*
- 12/31/1997 *Response Letter to 2nd Administrative Review for SWFP Approval, EMCON*
- 01/02/1998 *Application of Aquifer Protection Permit (APP) Approval for Closure of Surface Impoundments, EMCON*
- 01/14/1998 *3rd Administrative Review of Application for SWFP Approval, ADEQ*
- 02/13/1998 *Letter by Arizona State Land Department verifying the Application for the Proposed Purchase of 45.01 acres of State Trust land by the City of Lake Havasu City for Stormwater Control Structures and Management*
- 02/15/1998 *Lake Havasu City Landfill Status Report, Allied Waste*
- 02/17/1998 *Response Letter to 3rd Administrative Review for SWFP Approval, EMCON*
- 02/19/1998 *1st Administrative Review for APP Approval, ADEQ*
- 03/04/1998 *4th Administrative Review of Application for SWFP Approval, ADEQ*
- 03/18/1998 *Response Letter to 1st Administrative Review of APP Approval, EMCON*
- 04/02/1998 *2nd Administrative Review for APP Approval Administratively Complete, ADEQ*
- 06/09/1998 *Reconsidered Determination of Administrative Review for SWFP Approval Conditionally Administratively Complete, ADEQ*
- 06/18/1998 *Lake Havasu City Landfill Status Report, Allied Waste*
- 08/15/1998 *Lake Havasu City Landfill Status Report, Allied Waste*
- 08/18/1998 *Notice of Preliminary Decision for APP Approval, ADEQ*
- 10/07/1998 *Technical Review of Application for SWFP Approval, ADEQ*
- 10/19/1998 *Lake Havasu City Landfill Status Report, Allied Waste*
- 12/17/1998 *Lake Havasu City Landfill Status Report, Allied Waste*
- 01/27/1999 *Purchase of 45.01 acres of State Trust Land by the City of Lake Havasu City*

02/15/1999 *Lake Havasu City Landfill Status Report, Allied Waste*
03/09/1999 *Application of Section 404 Permit Nationwide Permit (NWP) Pre-Construction Notification for the proposed On-Site Retention Basin Project, and Section 404 Permit NWP 26 Notification for the proposed Off-Site Detention Basin Project, EMCON*
03/19/1999 *Response letter to Technical Review for SWFP Approval, EMCON*
06/02/1999 *Proposed relocation of Gas Monitoring Probe 7 (GP7), EMCON*
06/25/1999 *Lake Havasu City Landfill Status Report, EMCON*
08/24/1999 *Lake Havasu City Landfill Status Report, EMCON*
10/27/1999 *Lake Havasu City Landfill Status Report, EMCON*
12/21/1999 *Lake Havasu City Landfill Status Report, EMCON*
02/23/2000 *Lake Havasu City Landfill Status Report, EMCON*
04/24/2000 *Lake Havasu City Landfill Status Report, EMCON*
06/09/2000 *Closure and Post-Closure Cost Estimates, EMCON*
06/30/2000 *Lake Havasu City Landfill Status Report, EMCON*
11/28/2000 *Initial Design Capacity Report for LHCL, EMCON*
12/13/2000 *Request to Modify Section 404 NWP 26 Permit No. 974-0609-MB for Off-Site Detention and On-Site Retention Basin Project, EMCON*
03/09/2001 *Lake Havasu City Landfill Status Report, Allied Waste*
05/29/2001 *Lake Havasu City Landfill Status Report, Allied Waste*
05/15/2001 *Type III Modifications to Solid Waste Facility Plan Approval for Off-Site Run On and On-Site Run Off Control and Management Structures, EMCON*
08/15/2001 *Lake Havasu City Landfill Status Report, Allied Waste*
10/18/2001 *Lake Havasu City Landfill Status Report, Allied Waste*
12/20/2001 *Notice of Intent to Drill a Production Well, Allied Waste*
03/18/2002 *Lake Havasu City Landfill Status Report, Allied Waste*
05/13/2002 *Lake Havasu City Landfill Status Report, Allied Waste*
08/16/2002 *Lake Havasu City Landfill Status Report, Allied Waste*
10/16/2002 *Lake Havasu City Landfill Status Report, Allied Waste*
11/13/2002 *Lake Havasu City Landfill Status Report, Allied Waste*
07/12/2004 *Type III Change Request to utilize Processed Green Waste as an Alternative Daily Cover, Lake Havasu City*
March 2013 *Type III Change – Modification Lake Havasu City Landfill, Geo-Logic Associates, (revised April 30, 2013)*
12/21/2021 *Type IV Permit Modification Submittal, Lake Havasu City Landfill, Lake Havasu City, Civil & Environmental Consultants, Inc., (Revised April 25, 2022)*

End of Master Facility Plan Approval No. 02615900.04
