



State of Utah

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Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL

Ty L. Howard
Director

June 6, 2019

Alysen Tarrant, Environmental Manager
Lisbon Valley Mining Co., LLC
P.O. Box 400
Moab, UT 84532

RE: Finding of Completeness and Draft Permit
Lisbon Valley Class IVb Landfill – SW429

Dear Ms. Tarrant:

The Division of Waste Management and Radiation Control has completed its review of the permit application for the Lisbon Valley Class IVb Landfill. The permit application has been determined to be complete. Enclosed is a draft permit and associated attachments

The required public comment period will begin June 14, 2019 and will end on July 15, 2019. Notice of the public comment period will be published in the Moab Times Independent and the San Juan Record. Following the public comment period and resolution of any comments, final action will be taken on the draft permit.

If you have any questions, please call Rob Powers at (801) 536-0255.

Sincerely,

T. Allan Moore, Solid Waste Program Manager
Division of Waste Management and Radiation Control

TAM/RDP/kl

Enclosure: Draft Permit (DSHW-2019-002261)

c: Kirk Bengé, Health Officer, San Juan Public Health Department
Rick Meyer, Environmental Health Director, San Juan Public Health Department
Scott Hacking, P.E., DEQ District Engineer

DSHW-2019-003963

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UTAH DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL
SOLID WASTE LANDFILL PERMIT

CLASS IVb SOLID WASTE PERMIT

LISBON VALLEY MINING COMPANY CLASS IVb LANDFILL

Pursuant to the provisions of the *Utah Solid and Hazardous Waste Act*, Title 19, Chapter 6, Part 1, Utah Code Annotated (Utah Code Ann.) (the Act) and the *Utah Solid Waste Permitting and Management Rules*, Utah Administrative Code R315-301 through 320 adopted thereunder, a Permit is issued to

Lisbon Valley Mining Company as owner and operator,

to own, construct, and operate the Lisbon Valley landfill located San Juan County, Utah as shown in the Permit Application that has been determined complete.

The Permittee is subject to the requirements of R315-301 through 320 of the Utah Administrative Code and the requirements set forth herein.

All references to R315-301 through 320 of the Utah Administrative Code are to regulations that are in effect on the date that this Permit becomes effective.

This Permit shall become effective _____ 2019.

This Permit shall expire at midnight _____ 2029.

Closure Cost Revision Date: _____ 2024.

Signed this _____ day of _____, 2019.

Ty Howard, Director
Division of Waste Management and Radiation Control

FACILITY OWNER/OPERATOR INFORMATION

LANDFILL NAME: Lisbon Valley Mining Class IVb Landfill

OWNER NAME: Lisbon Valley Mining Company

OWNER ADDRESS: P.O. Box 400, Moab, Utah 84532

OWNER PHONE NO.: 435-686-9950 ext. 126

OPERATOR NAME: Lisbon Valley Mining Company

PHYSICAL ADDRESS: 920 South County Road 313
La Sal, Utah 84532

OPERATOR PHONE NO.: 435-686-9950 ext. 126

TYPE OF PERMIT: Class IVb Landfill

PERMIT NUMBER: 1902

LOCATION: Landfill site is located in Township 30 south, Range 25 east, SW ¼ Section 36., SLMB; San Juan County, Lat. 38° 7' 51.783", Long. 109° 8' 8.1456"

PERMIT HISTORY: Permit signed insert **date signed**

The term, "Permit," as used in this document is defined in R315-301-2(55) of the Utah Administrative Code. "Director" as used throughout this Permit refers to the Director of the Division of Waste Management and Radiation Control.

This Permit consists of the signature page, Facility Owner/Operator Information section, Sections I through V, and all Attachments to this Permit.

The facility as described in this Permit consists of a Class IV disposal cell, Compliance with this Permit does not constitute a defense to actions brought under any other local, state, or federal laws. This Permit does not exempt the Permittee from obtaining any other local, state or federal permits or approvals required for the operation of the landfill.

The issuance of this Permit does not convey any property rights, other than the rights inherent in this Permit, in either real or personal property, or any exclusive privileges other than those inherent in this Permit. This Permit does not authorize any injury to private property or any invasion of personal rights, or any infringement of federal, state or local laws or regulations, including zoning ordinances.

The provisions of this Permit are severable. If any provision of this Permit is held invalid for any reason, the remaining provisions shall remain in full force and effect. If the application of any provision of this Permit to any circumstance is held invalid, its application to other circumstances shall not be affected.

By this Permit, the Permittee is subject to the following conditions.

PERMIT REQUIREMENTS

I. GENERAL COMPLIANCE RESPONSIBILITIES

I.A. General Operation

I.A.1. The Permittee shall operate the landfill in accordance with all applicable requirements of R315-304 of the Utah Administrative Code that are in effect as of the date of this Permit unless otherwise noted in this Permit. Any permit noncompliance or noncompliance with any applicable portions of Utah Code Ann § 19-6-101 through 126 and applicable portions of R315-301 through 320 of the Utah Administrative Code constitutes a violation of the Permit or applicable statute or rule and is grounds for appropriate enforcement action, permit revocation, modification, or denial of a permit renewal application.

I.B. Acceptable Waste

I.B.1. Construction/demolition waste as defined in R315-301-2(17) of the Utah Administrative Code;

I.B.2. Yard waste as defined in R315-301-2(87) of the Utah Administrative Code;

I.B.3. Inert waste, as defined in R315-301-2(37) of the Utah Administrative Code;

I.B.4. Waste tires, may be accepted and managed following the requirements of R315-320 of the Utah Administrative Code; and

I.B.5. Petroleum contaminated soils as allowed in R315-315-8(3) of the Utah Administrative Code.

I.C. Prohibited Waste

I.C.1. Hazardous waste as defined by R315-1 and R315-2 of the Utah Administrative Code;

I.C.2. PCBs as defined by R315-301-2(53) of the Utah Administrative Code, except PCB's specified by R315-315-7(2)(a) and (c) of the Utah Administrative Code;

I.C.3. Household waste, except waste resulting from the abatement, rehabilitation, renovation and remodeling of homes and other residences;

I.C.4. Municipal waste;

I.C.5. Special waste except as specified in this Permit;

I.C.6. Regulated asbestos-containing material;

I.C.7. Industrial solid waste as defined in R315-301-2(35) of the Utah Administrative Code;

I.C.8. Commercial solid waste as defined in R315-301-2(14) of the Utah Administrative Code;

- I.C.9. Containers larger than household size (five gallons) holding any liquid, non-containerized material containing free liquids or any waste containing free liquids in containers larger than five gallons
- I.C.10. Dead animals.
- I.C.11. Any prohibited waste received and accepted for disposal at the facility shall constitute a violation of this Permit, of 19-6-101 through 125 and of R315-301 through 320 of the Utah Administrative Code.

I.D. Inspections and Inspection Access

I.D.1. The Permittee shall allow the Director of the Division of Waste Management and Radiation Control or an authorized representative, or representatives from the Southwest Utah Health Department, to enter at reasonable times and:

I.D.1.a Inspect the landfill or other premises, practices or operations regulated or required under the terms and conditions of this Permit or R315-301 through 320 of the Utah Administrative Code;

I.D.1.b Have access to and copy any records required to be kept under the terms and conditions of this Permit or R315-301 through 320 of the Utah Administrative Code;

I.D.1.c Inspect any loads of waste, treatment facilities or processes, pollution management facilities or processes, or control facilities or processes required under this Permit or regulated under R315-301 through 320 of the Utah Administrative Code; and

I.D.1.d Create a record of any inspection by photographic, video, electronic, or any other reasonable means.

I.E. Noncompliance

I.E.1. If monitoring, inspection, or testing indicates that any permit condition or any applicable rule under R315-301 through 320 of the Utah Administrative Code may be or is being violated, the Permittee shall promptly make corrections to the operation or other activities to bring the facility into compliance with all permit conditions or rules.

I.E.2. In the event of noncompliance with any permit condition or violation of an applicable rule, the Permittee shall promptly take any action reasonably necessary to correct the noncompliance or violation and mitigate any risk to the human health or the environment. Actions may include eliminating the activity causing the noncompliance or violation and containment of any waste or contamination using barriers or access restrictions, placing of warning signs or permanently closing areas of the facility.

I.E.3. The Permittee shall:

- I.E.3.a Document the noncompliance or violation in the daily operating record, including the day the event occurred or the day it was discovered;
- I.E.3.b Notify the Director of the Utah Division of Waste Management and Radiation Control by telephone within 24 hours, or the next business day following documentation of the event; and
- I.E.3.c Give written notice of the noncompliance or violation and measures taken to protect human health and the environment within seven days after Director notification.
- I.E.3.d Within thirty days after the documentation of the event, the Permittee shall submit to the Director a written report describing the nature and extent of the noncompliance or violation and the remedial measures taken or to be taken to protect human health and the environment and to eliminate the noncompliance or violation. After review of the assessment report, the Director may order the Permittee to perform appropriate remedial measures including development of a site remediation plan for approval by the Director.
- I.E.3.e In an enforcement action, the Permittee may not claim as a defense that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with R315-301 through 320 of the Utah Administrative Code and this Permit.

I.F. Revocation

- I.F.1. This Permit may be revoked if the Permittee fails to comply with any condition of the Permit. The Director will notify the Permittee in writing prior to any proposed revocation and such action shall be subject to all applicable hearing procedures established under R305-7 of the Utah Administrative Code and the Utah Administrative Procedures Act.

I.G. Attachment Incorporation

- I.G.1. Attachments to the Permit are incorporated by reference into this Permit and are enforceable conditions of this Permit, as are documents incorporated by reference into the attachments. Language in this Permit supersedes any conflicting language in the attachments or documents incorporated into the attachments.

II. DESIGN AND CONSTRUCTION

II.A. Design and Construction

- II.A.1. The landfill shall be constructed according to the design outlined in the Attachment #1 and in the area designated in the Attachment #1, including landfill cells, fences, gates, and berms prior to acceptance of waste.

- II.A.2. The Permittee shall notify the Director upon completion of construction of any landfill cells or run-on and run-off diversion systems. No landfill cells or run-on and run-off diversion system may be used until construction is approved by the Director.
- II.A.3. The Permittee shall notify the Director of the completion of construction of any final cover system and shall provide all necessary documentation and shall apply for approval of the construction from the Director.
- II.A.4. If ground water is encountered during excavation of the landfill, the Director shall be notified immediately, and a contingency plan implemented or alternative construction design developed and submitted for approval.
- II.A.5. All engineering drawings submitted to the Director shall be stamped by a professional engineer with a current registration in Utah.

II.B. Run-On and Run-off Control

- II.B.1. The Permittee shall construct drainage channels and diversions designed so that all run-on and run-off will be redirected with diversion ditches into a sediment pond, where the water will be evaporated. The Permittee shall maintain these ditches and pond at all times to effectively prevent runoff from the surrounding area from entering the landfill.

III. LANDFILL OPERATION

III.A. Operations Plan

- III.A.1. The Permittee shall keep the Operations Plan including the Attachments on site at the landfill or at the location designated in section III-H of this Permit. The Permittee shall operate the landfill in accordance with the operations plan. If necessary, the Permittee may modify the Operations Plan, provided that the modification meets all of the requirements of R315-301 through 320 of the Utah Administrative Code, is as protective of human health and the environment as the Operations Plan approved as part of this Permit. Any modification must be approved by the Director as a permit modification under R315-311-2(1) of the Utah Administrative Code. The Permittee shall note any modification to the Operations Plan in the daily operating record.

III.B. Security

- III.B.1. The Permittee shall operate the Landfill so that unauthorized entry to the facility is restricted. The Permittee shall:
 - III.B.1.a Lock all facility gates and other access routes during the time the landfill is closed.

III.B.1.b Have at least one person employed by the Permittee at the landfill during all hours that the landfill is open.

III.B.1.c Construct all fencing and any other access controls to prevent access by persons or livestock by other routes.

III.C. Training

III.C.1. The Permittee shall provide training for on-site personnel in landfill operation, including waste load inspection, hazardous waste identification, and personal safety and protection.

III.D. Burning of Waste

III.D.1. Intentional burning of solid waste is prohibited and is a violation of R315-303-4(2)(b) of the Utah Administrative Code.

III.D.2. The Permittee shall extinguish all accidental fires as soon as reasonably possible.

III.E. Cover

III.E.1. The Permittee shall cover the waste as necessary to prevent fires and to control vectors, blowing litter, odor, scavenging, and fugitive dust.

III.E.2. The Permittee may use an alternative cover material when the material and operation meets the requirements of R315-303-4(4)(b) through (e) of the Utah Administrative Code.

III.E.3. The Permittee shall use a minimum of six inches of earthen cover no less than once each month for all wastes received at the landfill. This cover shall consist of soil; no alternative may be used.

III.E.4. The Permittee shall record in the daily operating record and the operator shall certify, at the end of each day of operation when soil or an alternative cover is placed, the amount and type of cover placed and the area receiving cover.

III.F. Waste Inspections

III.F.1. The Permittee shall visually inspect incoming waste loads to verify that no wastes other than those allowed by this permit are disposed in the landfill. The Permittee shall conduct a complete waste inspection at a minimum frequency of 1 % of incoming loads, but no less than one complete inspection per day.. The Permittee shall select the loads to be inspected on a random basis.

III.F.2. The Permittee shall inspect all loads suspected or known to have one or more containers capable of holding more than five gallons of liquid to ensure that each container is empty.

III.F.3. The Permittee shall inspect all loads that the Permittee suspect may contain a waste not allowed for disposal at the landfill.

III.F.4. The Permittee shall conduct complete random inspections as follows:

- III.F.4.a The Permittee shall conduct the random waste inspection at the working face or an area designated by the Permittee.
- III.F.4.b The Permittee shall direct that loads subjected to complete inspection be unloaded at the designated area;
- III.F.4.c Loads shall be spread by equipment or by hand tools;
- III.F.4.d Personnel trained in hazardous waste recognition and recognition of other unacceptable waste shall conduct a visual inspection of the waste; and
- III.F.4.e The personnel conducting the inspection shall record the results of the inspection on a waste inspection form as found in Attachment #2. The Permittee shall place the form in the daily operating record at the end of the operating day.
- III.F.5. The Permittee or the waste transporter shall properly dispose of any waste that is not acceptable at the facility at an approved disposal of that type of waste.

III.G. Self Inspections

- III.G.1. The Permittee shall inspect the facility to prevent malfunctions and deterioration, operator errors, and discharges that may cause or lead to the release of wastes or contaminated materials to the environment or create a threat to human health or the environment. The Permittee shall complete these general inspections no less than quarterly and shall cover the following areas: Waste placement, compaction, adequate cover, fences and access controls, roads, run-on/run-off controls, final and intermediate cover, litter controls, and records. The Permittee shall record the inspections in the daily operating record on the day of the inspection. The Permittee shall correct the problems identified in the inspections in a timely manner and document the corrective actions in the daily operating record.

III.H. Recordkeeping

- III.H.1. The Permittee shall maintain and keep on file at the facility site, a daily operating record and other general records of landfill operation as required by R315-302-2(3) of the Utah Administrative Code. The landfill operator, or other designated personnel, shall date and sign the daily operating record at the end of each operating day. The Daily operating record shall consist of the following two types of documents:
 - III.H.2. Records related to the daily landfill operation or periodic events including:
 - III.H.2.a The number of loads of waste and the weights or estimates of weights or volume of waste received each day of operation and recorded at the end of each operating day;
 - III.H.2.b Major deviations from the approved plan of operation recorded at the end of the operating day the deviation occurred;

- III.H.2.c Results of monitoring required by this Permit recorded in the daily operating record on the day of the event or the day the information is received;
- III.H.2.d Records of all inspections conducted by the Permittee, results of the inspections, and corrective actions.
- III.H.3. Records of a general nature including:
 - III.H.3.a A copy of this Permit, including the Attachments;
 - III.H.3.b Results of inspections conducted by representatives of the Director and representatives of the local Health Department, when forwarded to the Permittee;
 - III.H.3.c Closure and Post-closure care plans; and
 - III.H.3.d Records of employee training.
- III.I. Reporting
 - III.I.1. The Permittee shall prepare and submit to the Director an Annual Report as required by R315-302-2(4) of the Utah Administrative Code. The Annual Report shall include: the period covered by the report, the annual quantity of waste received, an annual update of the financial assurance mechanism, and all training programs completed.
- III.J. Roads
 - III.J.1. The Permittee shall improve and maintain All access roads within the landfill boundary that are used for transporting waste to the landfill for disposal as necessary to assure safe and reliable all-weather access to the disposal area.
- III.K. Litter Control
 - III.K.1. Litter resulting from operations of the landfill shall be minimized. The Permittee shall implement the following procedures when high wind conditions are present:
 - III.K.1.a Reduce the size of the tipping face;
 - III.K.1.b Reduce the number of vehicles allowed to discharge at the tipping face at one time;
 - III.K.1.c Orient vehicles to reduce wind effects on unloading and waste compaction;
 - III.K.1.d Reconfigure tipping face to reduce wind effect;
 - III.K.1.e Use portable and permanent wind fencing as needed; and
 - III.K.1.f Should high winds present a situation that the windblown litter cannot be controlled; the Permittee shall cease operations of the landfill until the winds diminish.

IV. CLOSURE REQUIREMENTS

IV.A. Closure

IV.A.1. The Permittee shall place the final cover of the landfill as shown in the Attachment #3. The final cover shall meet, at a minimum, the standard design for closure as specified in R315-305-5(5)(b) of the Utah Administrative Code.

IV.B. Title Recording

IV.B.1. The Permittee shall meet the requirements of R315-302-2(6) of the Utah Administrative Code by recording a notice with the Garfield County Recorder as part of the record of title that the property has been used as a landfill. The notice shall include waste disposal locations and types of waste disposed. The Permittee shall provide the Director the notice after recordation.

IV.C. Post-Closure Care

IV.C.1. The Permittee shall perform post-closure care at the closed landfill in accordance with the Post-Closure Care Plan in Attachment #3. Post-closure care shall continue until all waste disposal sites at the landfill have stabilized and the finding of R315-302-3(7)(c) of the Utah Administrative Code is made.

IV.C.2. Financial Assurance

IV.C.3. The Permittee shall establish and fund the approved mechanism, as described in Attachment #4, prior to receipt of waste. The Permittee shall adequately fund and maintain the financial assurance mechanism(s) to provide for the cost of closure and post-closure until termination of financial assurance in accordance with R315-309-11 of the Utah Administrative Code.

IV.D. Financial Assurance Annual Update

IV.D.1. The Permittee shall submit an annual revision of closure and post-closure costs for inflation and financial assurance to the Director as part of the annual report as required by R315-309-2(2) of the Utah Administrative Code.

IV.E. Closure Cost and Post-Closure Cost Revision

IV.E.1. The Permittee shall submit a complete revision of the closure and post-closure cost estimates by the Closure Cost Revision Date listed on the signature page of this Permit and any time the facility is expanded, any time a new cell is constructed, or any time a cell is expanded.

V. ADMINISTRATIVE REQUIREMENTS

V.A. Permit Modification

V.A.1. Modifications to this Permit may be made upon application by the Permittee or by the Director following the procedures specified in R315-310-11-2 of the Utah Administrative Code. The Permittee shall be given written notice of any permit modification initiated by the Director.

VI. Permit Transfer

VI.A.1. This Permit may be transferred to a new Permittee in accordance with R315-310-11 of the Utah Administrative Code.

VI.B. Expansion

VI.B.1. This Permit is for the operation of a Class IVb Landfill according to the design and Operation Plan described and explained in Attachment #1. Any expansion of the current footprint designated in the description contained in Attachment #1, but within the property boundaries designated in Attachment #1, shall require submittal of plans and specifications to the Director. The plans and specifications shall be approved by the Director prior to construction and requires a permit modification in accordance with R315-311-2 of Utah Administrative Code.

VI.B.2. Any expansion of the landfill facility beyond the property boundaries designated in the description contained in Attachment #1 shall require submittal of a new permit application in accordance with R315-310 of the Utah Administrative Code.

VI.B.3. Any addition to the acceptable wastes described in Section I-B shall require a permit modification in accordance with R315-311 of the Utah Administrative Code.

VI.C. Expiration

VI.C.1. If the Permittee desires to continue operating this landfill after the expiration date of this Permit, the Permittee shall submit an application for permit renewal at least six months prior to the expiration date, as shown on the signature (cover) page of this Permit. If the Permittee submits a timely permit renewal application and the permit renewal is not complete by the expiration date, this Permit shall continue in force until renewal is completed or denied.

Attachment #1

Design and Construction

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Part 3: Facility Technical Information

3.1 Maps

Figure 15: Topographic Map of the Class IVb Landfill Location

Figure 16: Most Recent USGS topo map showing boundary

Figure 17: Surface Water Map

Figure 18: Utilities Map

3.2 Engineering Report – Plans, Specifications, & Calculations

3.2.1 Unit Design

The waste material that will be contained within the Class IVb landfill will be covered in place and leveled periodically. This practice will continue as long as the Class IVb landfill is in use and at the time for closure. The final filled area will be covered with at least the minimum required cap consisting of 24-inches of waste rock and 12 inches of topsoil. The final cap will be contoured to blend with the surrounding Waste Dump 'A'. As stated in LVMC's NOI for LMO with DOGM, the final sloped edge will be a 2.5H:1V. The top will be blended and contoured such that the grade is greater than 2 percent and no ponding will occur on the surface.

As stated previously, the Class IVb landfill will be located on an existing waste rock dump. The elevation of the native earth underlying the Waste Dump 'A' was approximately 6550-6560 feet above mean sea level (amsl). The elevation of the Waste Dump 'A' lift upon which the Class IVb landfill will be situated is 6600 feet amsl. The final elevation of the capped surface of the Class IVb landfill will be no greater than 6620 feet amsl.

3.2.2 Design and Location of run-on and run-off control systems

Run-off from the Class IVb landfill is not expected to occur due to the design of the landfill, which will include berming the perimeter of the Class IVb landfill area. The Class IVb landfill will be designed so that all run-on and run-off will be redirected with diversion ditches into detention basins, where the water will be evaporated. After closure, the absorption and evapotranspiration by the vegetation layer and the absence of any appreciable run-on will ensure the control of run-off. Once the vegetation layer growth is established, most storm events will not result in significant direct run-off from the landfill surface area. Nonetheless, significant percolation through the cover layer is unlikely, thus leachate or seepage from the heap is minimal.

The 25-year 24-hour storm event was determined using NOAA Point Precipitation Frequency Estimates calculated from the NOAA Precipitation Frequency Data Server (PFDS), accessed online at https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html. The program determined that the storm event would produce 2.40 inches of precipitation at latitude 38.1312° and longitude -109.1367° and an elevation of 6600.61 feet amsl.

Because the Waste Dump 'A' provides an elevated platform upon which the Class IVb landfill will be constructed, there is no intercepting watershed.

3.2.3 Anticipated Facility Life and basis for calculation

The estimated life of use for the Class IVb landfill is based upon the current reserve estimate for the LVMC Project. At the time of this application, the life of mine for the Project is approximately five to six years. LVMC anticipates performing final demolition and reclamation of the site in 2024 and 2025. For this reason, the waste quantities reported in **Tables 1 and 2** reflect a larger amount of expected disposal of waste materials in the year 2025. Upon final reclamation, the site will be closed and closure/post-closure inspections and mitigation will start to occur.

3.2.4 Engineering Reports (Not applicable)

Because this application is for a Class IVb landfill, stamped engineering reports are not required. See UAC R315-310-3(1)(b).

3.2.5 Identification of borrow sources for final cover

Within the LVMC Project Area are numerous topsoil stockpiles. These stockpiles were created during the initial disturbance activities related to the open pit mining operations. The purpose of the topsoil stockpiles is to use during final reclamation. The topsoil that will be used for the reclamation of Waste Dump 'A', which will include the Class IVb landfill, is located directly north of Waste Dump 'A' as seen on **Figure 4**.

3.2.6 Run-off collection, treatment, and disposal and documentation (if necessary)

As described in Section 3.2.2 above, run-off is not anticipated to occur. If run-off does occur, the run-off will be diverted to a retention basin where it will infiltrate or evaporate. Documentation of run-off controls and quarterly storm water monitoring is included in LVMC's SWPPP. Monthly monitoring of the site for storm water pollutants and run-off controls will include the Class IVb landfill.

Attachment #2

Inspection Forms

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APPENDIX C

Waste Handling Procedures & Inspection Forms

Waste Type	Acceptable Waste Material
Construction / Demolition Debris	Wood, Metal, HDPE & Plastic Piping, HDPE & Plastic liner material, pallets, totes, sidings, miscellaneous construction debris, miscellaneous demolition debris
Yard Waste	trees, shrubs
Inert Waste	concrete, cement, neutralized tailings, neutralized acid-contaminated soils, soils from the Tank Farm
Waste Tires	tires that have been damaged and/or are unfit for recycle
Contaminated Soils	SX clay, crud, contaminated soils from small spills around the Truck Shop

Attachment #3

Closure and Post-Closure Plans

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Part 4: Closure Requirements

4.1 Closure Plan

LVMC will, within 30 days after certification of closure, notify the San Juan County Recorder to file proof of closure. All materials disposed of within the proposed Class IVb landfill will be within the acceptable waste constituents for a Class IVb non-hazardous landfill. The landfill will only accept non-hazardous waste that is generated at the LVMC Project. No waste will be transported into the site from offsite locations. The waste will consist of that described in detail in Section 1.3 above.

4.1.1 Maintenance and Control

Access to the Class IVb landfill will be restricted through mine security and gates/fencing. Signs are posted indicating authorized personnel only are allowed on the access roads leading into the LVMC Project. Wind dispersal of the landfill litter will be minimized by the application of cover.

After cessation of operations at the Project, the Class IVb landfill will be closed with an application of the acid-neutralizing waste rock from the Waste Dump 'A' and a complete inspection of the surface will be performed. Cleanup of the site will be performed concurrently. All remaining visible litter and debris in the immediate vicinity will be placed in the final lift of the landfill unit. At this time, the final cover will be applied. A thorough closure inspection shall consist of observations for erosion, sloping, drainage, surface leachate, and run-on. Areas requiring repairs/modifications will be documented on the Landfill Inspection Form (Appendix C). Necessary modifications will be made using appropriate materials and compacted, as necessary.

4.1.2 Escape of Air Pollutants/Gases

The contents of a Class IVb landfill have no amounts of putrescible materials and the decomposition of organic wastes such as trees/forbs will be minimal. The US EPA reports that methane is generated from "municipal" solid waste only when the moisture content exceeds 40% (US EPA, 1994). Due to the limited moisture at the site and the absence of putrescible wastes to be contained, methane gas generation is not anticipated. Vector, dust, and odors will be effectively controlled so they are not a nuisance or hazard to health, safety or property. None of the waste will be flammable, and a fire or explosion in the landfill area is highly unlikely. The LVMC Project is served by the local fire department, and equipment is located onsite to move soil and waste rock for fire suppression, if necessary.

4.1.3 Control of Run-off

Run-off from the Class IVb landfill is not expected to occur due to the design and location of the landfill. The landfill will be designed so that all run-on and run-off will be redirected with diversion ditches into sediment pond, where the water will be evaporated. After closure, the absorption and evapotranspiration by the vegetation layer and the absence of any appreciable run-on will ensure the control of run-off. Once the vegetation layer growth is established, most storm events will not result in significant direct run-off from the landfill surface area. Nonetheless, significant percolation through the cover layer is unlikely, thus leachate or seepage from the landfill will be minimal. Moreover, the use of acid-neutralizing waste rock as encapsulation material will further assist in the prevention of leachate from forming.

4.1.4 Repairs

During landfill inspections, if any settlements, subsidence or erosion areas are found on the cover, they will be promptly backfilled with onsite waste rock from the surrounding Waste Dump 'A', and re-capped with remaining topsoil. After final re-grading, the area will be re-vegetated with the prescribed native seed mix. If there are areas of inherent erosion it will be documented on the Landfill Inspection Form and addressed by re-grading and placement of appropriate cover material. To prevent integrity breaks in the cover due to mechanical agitation, notices will be posted and access will be limited to inspection, maintenance, and monitoring personnel. Repairs will be made promptly with the appropriate soil, rip rap, or other necessary materials that will be compatible to the immediate environmental factors that cause breaches in the cover integrity.

4.2 Closure Schedule

It is intended that the usefulness of the landfill will end on or before the year 2026.

4.3 Design and Final Cover

When the operational life of the landfill facility has ended, final capping will be accomplished using acid neutralizing waste rock from the surrounding Waste Dump 'A'. The final cover will be no less than 24-inches in thickness. Following the final capping, topsoil will be spread to a depth of no less than 12-inches on top of the capped landfill. The topsoil will be taken from the topsoil stockpile located north of Waste Dump 'A' (**Figure 4**).

Topsoil placement will likely occur in fall of the reclamation year. This will be done to allow for re-seeding of the area in late fall, which is the preferred re-seeding season. The seed mixture to be used will be approved by DOGM and SITLA.

4.4 Capacity of Site in Volume and Tonnage

The volume of the Class IVb landfill, as calculated by LVMC personnel, totals 57,000 CY; 75 percent of which will be comprised of actual waste material, and 25 percent of which will be comprised of encapsulation/cover material. Therefore, the total amount of waste material that can be placed within the Class IVb landfill will not exceed 42,750 CY.

4.5 Final Inspection

Upon closure of the LVMC Class IVb landfill, a final inspection by the Utah Division of Solid and Hazardous Waste will take place to approve the final cover and release the site for closure. DOGM and SITLA will also perform a subsequent inspection in order to finalize the site for closure. This inspection will examine soil and slope stability, drainage, and vegetation success.

Part 5: Post-Closure Requirements

5.1 Post-Closure Care Plan

LVMC will provide post closure activities that will include, at a minimum, monitoring of land and water, for a period of 15 years, or as long as the Director determines is necessary for the facility or unit to become stabilized and to protect human health and environment.

5.2 Changes to Record of Title, Land Use, and Zoning Restrictions

The title to the property on which the landfill will be situated is held by the State of Utah through its SITLA program. LVMC has a 10-year automatically renewable lease for use of the property that was initiated in 2016. It is estimated that the LVMC Property contains 5-7 years of mineable reserves. Therefore, operations at the LVMC Project will cease prior to the 10-year renewal date of the SITLA lease. LVMC will continue monitoring the site through continued lease terms with SITLA, which would be done for the project per associated State and Federal requirements.

5.3 Maintenance Activities to Maintain cover and run-on/run-off control systems

Post-closure monitoring of the landfill site will be conducted periodically for several years following closure. The site will be monitored to ensure slope and erosional stability. Run-on/run-off structures will also be inspected to ensure proper functioning and stability. As required by DOGM regulations regarding reclamation, inspection of vegetative success will be performed for at least three years following reclamation. After the third year, success of revegetation will be determined.

5.4 Facility Contact Post-Closure

Facility Contact for Post-Closure Activities:

Name:	Lisbon Valley Mining Company, LLC
Contact Information:	Attn: Alysen Tarrant, Environmental Manager Lisbon Valley Mining Company, LLC
Physical Address:	920 South County Road 313 La Sal, Utah 84532
Mailing Address:	PO Box 400 Moab, UT 84532
Phone:	(435) 686-9950 ext. 126
E-mail:	atarrant@lisbonmine.com

Attachment #4

Financial Assurance

DRAFT

Part 6: Financial Assurance

6.1 Closure Costs

A mining reclamation surety of \$6.2 million held by DOGM currently exists for the LVMC Project, including the location of the Class IVb landfill.

6.2 Post-Closure Costs

A mining reclamation surety of \$6.2 million held by DOGM currently exists for the LVMC Project, including the location of the Class IVb landfill.

6.3 Financial Assurance Mechanism

A mining reclamation surety of \$6.2 million held by DOGM currently exists for the LVMC Project, including the location of the Class IVb landfill. LVMC proposes that this surety cover the financial assurance mechanism required under R315-309. This surety amount more than exceeds any closure or post-closure for the landfill facility.